

The Media Streaming Journal

August 2022



Covering Audio and Video Internet
Broadcasting

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RADIOSOLUTION

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Welcome to The Media Streaming Journal

Welcome to the latest edition of The Media Streaming Journal.

Software based multimedia editors have increased in their value over the years. Open Source multimedia editor applications have nudged proprietary software applications to improve their effectiveness and ease of use. Kdenlive performs non-destructive editing on the source material and has been around since 2000 with constant updates.

Please feel free to contact either the Publication Director (Derek Bullard) or myself if you have any questions or comments regarding The Media Streaming Journal.

Namaste

David Childers

The Grand Master of Digital Disaster
(Editor In Chief)



www.linkedin.com/pub/david-childers/4/736/72a

David Childers

The Grand Master of Digital Disaster

Current Member: International Association Of Internet Broadcasters

Current Member: Society of Motion Picture and Television Engineers

Published Author

Introduction To Internet Broadcasting
Amazon Publishing

30 Creative Commons Computer, Technical and Internet Broadcasting Guides

Newspaper Interviews

New York Times

Lagniappe - "Something Extra for Mobile"

Internet TV: Don't Touch That Mouse!
Tim Gnatek
July 1, 2004

Mobile Gets Hoaxed
Rob Holbert
Mar 16, 2016

Cited By

Five Essays on Copyright In the Digital Era
Ville Oksanen
2009

Turre Publishing
Helsinki Finland

Open Source Developer

Developed software architecture to continuously source multimedia content to Youtube Live servers.
Scenic Television - The sights and sounds of nature on the Internet.

<http://www.ScenicTelevision.com>

Projects

Researched and developed documentation for Peercast P2P multimedia streaming project.

<http://en.wikipedia.org/wiki/PeerCast>

Researched and developed technical documentation for NSV / Winamp Television.

http://web.archive.org/web/20080601000000*/http://www.scvi.net

MidSummer Eve Webfest

A virtual International festival focusing on Digital art and Free Software that was coordinated by OrganicaDTM Design Studio.

Presentation and discussion regarding Internet multimedia content distribution.

<http://web.archive.org/web/20061104230522/http://www.organicadtm.com/index.php?module=articles&func=display&catid=37&aid=61>

LinkedIn Contact Information

<http://www.linkedin.com/pub/david-childers/4/736/72a>

The Media Streaming Journal

What is in this edition of the Media Streaming Journal

Kdenlive Manual



Join our technical discussion on Facebook

<http://www.facebook.com/groups/internetradiosupport/>

Magazine cover:

https://en.wikipedia.org/wiki/File:AVS_Video_Editor_logo.png

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RADIO SOLUTION

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Let our friendly, knowledgeable staff assist you to build your project, such as an online radio station using our high end reliable video and audio streaming technologies. We want to become your partner for all your hosting needs, as well as your one stop shop for radio products such as custom DJ drops and radio ID's.

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Whatever you need to start Internet radio station, we will deliver! We provide high quality Internet Radio services to make your music radio project a success. We can provide Wowza, Icecast, SHOUTcast hosting and internet radio services to hobbyists, deejays, amateurs and established professionals. No radio station client is too big or too small for Radiosolution.

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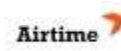
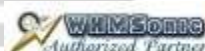
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Launch your internet, digital, satellite or AM/FM radio station anywhere in the world with all of the right tools. A broadcasting specialist is on standby to help you get started with an SHOUTcast or Icecast hosting package. We have servers ready for reliable streaming in North America and Europe. Our hosting packages have all the features you need to make your radio station project a success.

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Radiosolution is a SHOUTcast hosting provider located in Quebec Canada. We also offer Icecast, Wowza and Web Hosting services. Contact us to discuss the best option available as you start internet radio station. Radiosolution can provide personalized service in English, Dutch, and French. Starting an internet radio station can be intimidating, many people want to start one, but have no idea where to start. Radiosolution will be there for you every step of the way. Everyday people are searching the internet for free SHOUTcast servers. With Radiosolution SHOUTcast hosting we will allow you to try our services for FREE. By trying our services, you can be confident that you have chosen the best radio server hosting provider. You have nothing to loose because we offer a 30 day satisfaction guarantee. What are you waiting for? Contact us now! Radiosolution offers everything you need to start internet radio station. You will not need to go anywhere else. We can create your website, market your station and help you submit your station to online directories. We also feature the voice of Derek Bullard aka Dibblebee He can create affordable commercials, DJ intros, sweepers, jingles, ids and so much more.



The Order of the Iron Test Pattern is an association of people who have had the opportunity to work in or around the television and broadcast / cable industry. People who have an interest in television broadcasting are also welcome.



<https://www.facebook.com/Order-Of-The-Iron-Test-Pattern-103689774780581/>

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Do you need compelling, clever copy or catchphrases for your Internet station? If you do, please visit and let's talk!

<http://www.ielectrify.com/work-with-me/>

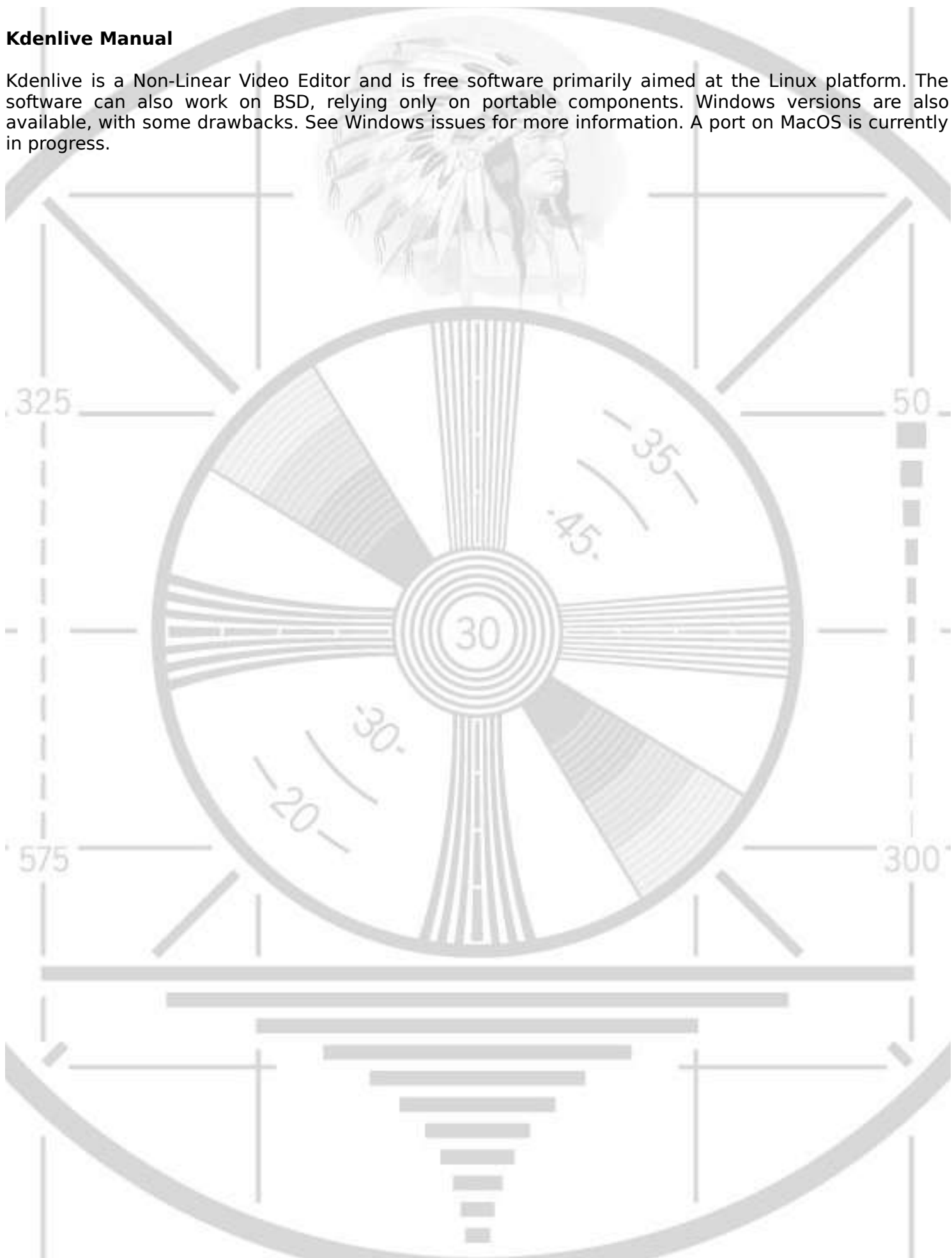
I am a professional writer with 15+ years of experience creating high-converting copy, for a variety of radio, broadcasting and marketing applications.



https://www.wpclipart.com/people/professions/professions_3/radio_announcer.png.html

Kdenlive Manual

Kdenlive is a Non-Linear Video Editor and is free software primarily aimed at the Linux platform. The software can also work on BSD, relying only on portable components. Windows versions are also available, with some drawbacks. See Windows issues for more information. A port on MacOS is currently in progress.



Kdenlive Manual

Welcome to the manual for [kdenlive](https://kdenlive.org) [https://kdenlive.org], the free and open source video editor.

You can download this manual as an [EPUB](https://docs.kdenlive.org/en/epub/KdenliveManual.epub) [https://docs.kdenlive.org/en/epub/KdenliveManual.epub].

Getting started

[Introduction](#)

[Installation](#)

[Quick Start](#)

Basic workflow with a video example.

[Tutorials](#)

User Interface

[User interface](#)

Introduction to Kdenlive's window system and widgets

[Project Settings Dialog](#)

Setting the correct project values

Key components

[The Project Bin](#)

[Timeline](#)

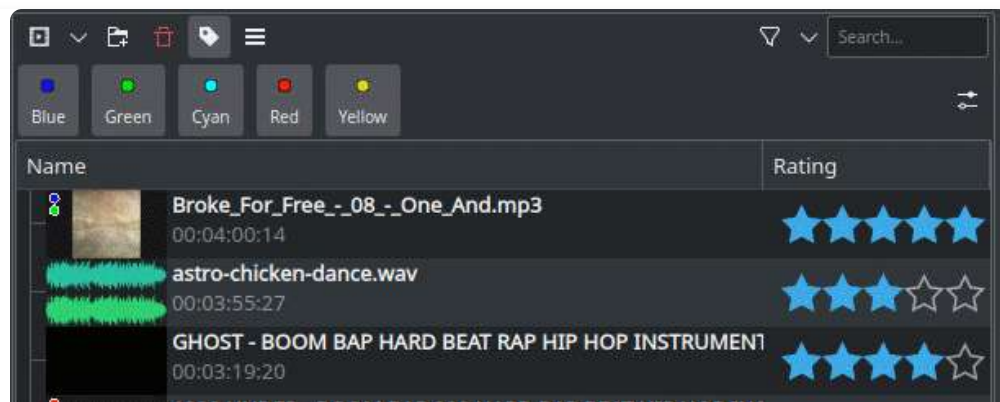
[Monitors](#)

[Toolbars](#)

[Keyboard Shortcuts](#)

Improve your workflow by using the keyboard

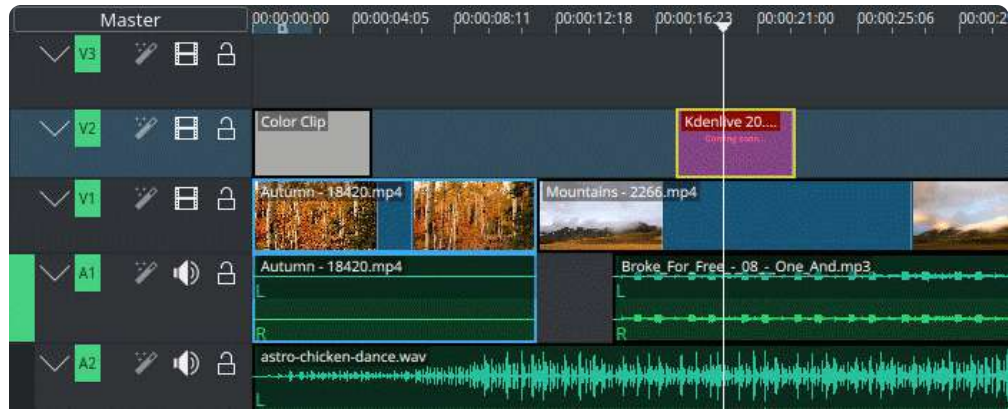
Workflow



[Importing and assets management](#)

Load files into Kdenlive and be prepared

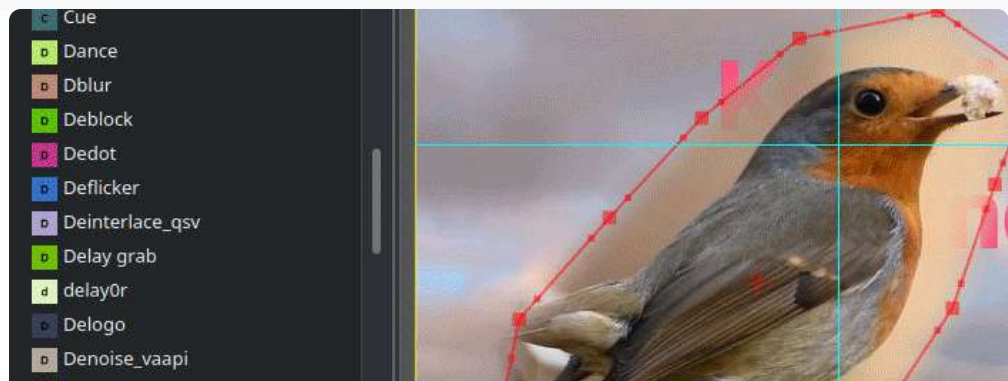
Starting video editing



Cutting and assembling

Start editing in the Timeline

See how the time line and the monitors are working

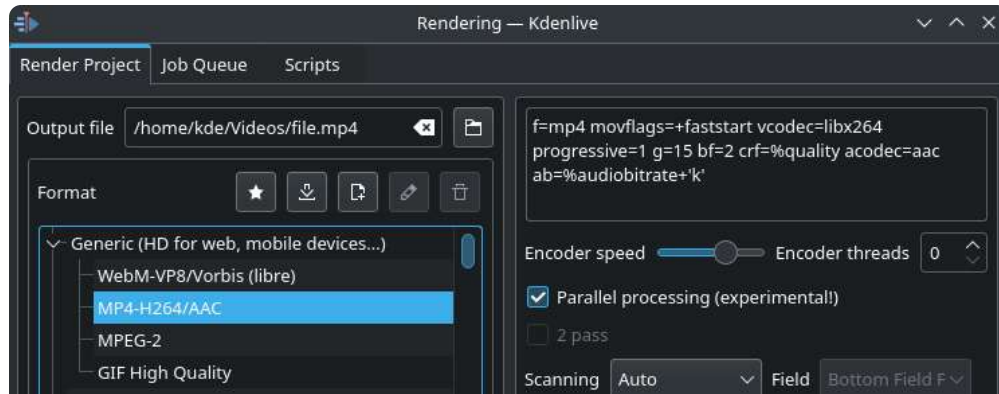


Effects

Add video and audio effects and compositions.

Create Titles and Subtitles and use Speech to Text.

Make color correction.



[Exporting](#)

Render out your final video for distributing.

Troubleshooting, Glossary, Get Involved

[Troubleshooting](#)

Solving specific [Windows issues](#)

General problem solving

[Bug Reports](#)

[<https://kdenlive.org/en/bug-reports/>]

How to file a bug.

[Glossary](#)

References and further information.

[Get Involved](#)

[<https://community.kde.org/Kdenlive/Workgroup/Documentation>]

Contribute to this Manual.

Getting started

A short overview to start with Kdenlive.

Contents:

- [Installation](#)
 - [Minimum system requirements](#)
 - [Non-KDE Desktops](#)
 - [Kdenlive on Windows](#)
 - [Kdenlive in a Windows domain](#)
 - [Kdenlive on macOS](#)
 - [Configuration Information](#)
- [Introduction](#)
 - [Video editing features](#)
- [Quick Start](#)
 - [Creating a new project](#)
 - [Adding clips](#)
 - [Timeline](#)
 - [Rendering](#)
 - [References and notes](#)
- [Tutorials](#)
 - [Written Tutorials](#)
 - [Video Tutorials](#)

Installation

Visit the [download](https://kdenlive.org/download/) [https://kdenlive.org/download/] page of the Kdenlive Web site for up to date information on installing Kdenlive.

Minimum system requirements

Operating system: 64-bit Windows 7 or newer, Apple macOS 10.13.6 (High Sierra) or newer, 64-bit Linux. Details see below.

CPU: x86 Intel or AMD; at least one 2 GHz core for SD-Video, 4 cores for HD-Video, and 8 cores for 4K-Video. Details see below.

GPU: OpenGL 2.0 that works correctly and is compatible. On Windows, you can also use a card with good, compatible DirectX 9 or 11 drivers.

RAM: At least 4 GB for SD-Video, 8 GB for HD-Video, and 16 GB for 4K-Video.

Note

If your computer is at the lower end of CPU and RAM requirements, you should use both the [Preview Resolution](#) and [Proxy](#) features to help reduce preview lag.

Non-KDE Desktops

Kdenlive can be installed on non-KDE Desktops without any issues.

Kdenlive on Windows

Kdenlive runs only on 64bit version of Windows. Kdenlive runs on Windows 7 and newer. We cannot guarantee that Kdenlive runs on server or embedded Windows version.

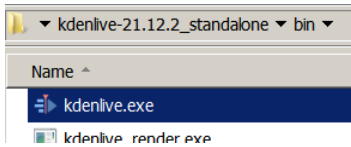
Kdenlive is available as an install and as a standalone version.

- Install version: Needs administrator rights and gets installed on your local machine. It's also listed as a program.
 - It's available for all users on your computer.
 - The Kdenlive files are always located in the same folder.
- Standalone version: **Doesn't** need administrator rights and isn't installed. It's **not** listed as a program. Is only accessible for the user who has downloaded the file.
 - If you work with a normal user on your computer, you can use Kdenlive.
 - You can copy the Kdenlive folder on any external drive and run it on a different computer without installing it. However, your personal settings and downloads within Kdenlive are related to the computer you work on.

Double click the downloaded file.



Point to the folder you like to store the Kdenlive folder



To start Kdenlive navigate to the *bin* folder and double click Kdenlive

Kdenlive in a Windows domain

If you want to use Kdenlive with domain users with using Windows Active Directory and/or Group Policies (GPOs) make sure all users have read/write rights to the following folders:

%AppData%\kdenlive

%LocalAppData%\kdenlive

%LocalAppData%\kdenliverc

%LocalAppData%\kdenlive-layoutsrc

%LocalAppData%\kxmlgui5\kdenlivekdenliveui.rc

%AppData%\kdenlive\backup

%LocalAppData%\knewstuff3

Do also make sure no GPO is blocking the access to these folders.

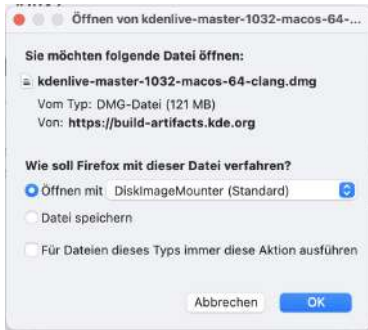
Kdenlive on macOS

Kdenlive runs with Intel based Mac's on macOS 10.14 (Mojave) and newer (available on the [download](https://kdenlive.org/download/) [https://kdenlive.org/download/] page).

New in version 22.04.0.

Kdenlive is running with Intel based Mac's not older than 10.13.6 (High Sierra) and on M1.

Install procedure



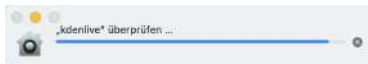
Choose the option *Open with DiskImageMounter (Default)*.



When the dmg file is downloaded, the *DiskImageMounter* will open. Drag the *Kdenlive* Logo into the *Applications* Folder.



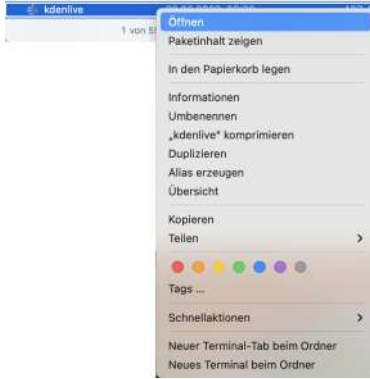
The files get copied.



MacOS will try to check the files for malware.



The message *“kdenlive” cannot be opened, because Apple cannot search for malware in it* will appear. Here you have to click *Show in Finder*.



The Finder opens. Now right click on *Kdenlive* and choose *Open*.



The message that Apple can't search for malware will appear again. Just click on *Open* and Kdenlive will open up.

Configuration Information

Kdenlive's application-wide persistent settings are stored in the following locations, depending on your platform.

Linux

`~/ .config/kdenliverc`

Windows

`%LocalAppData%\kdenliverc`

Linux

Windows

~/.config/kdenlive-appimagerc

~/.config/session/kdenlive_*

~/.cache/kdenlive

%LocalAppData%\kdenlive

~/.local/share/kdenlive

%AppData%\kdenlive

~/.local/share/kdenlive/lumas

%LocalAppData%\kdenlive\lumas

~/.local/share/kdenlive/.backup

%AppData%\kdenlive\.backup

~/.config/kdenlive-layoutsrc

%LocalAppData%\kdenlive-layoutsrc

Linux

Windows

~/.local/share/kxmlgui5/kdenlive/kdenliveui.rc %LocalAppData%\kxmlgui5kdenlive\kdenliveui.rc

~/.local/share/knewstuff3

%LocalAppData%\knewstuff3

Windows

To reach above folders: windows + r then copy above path into the window.

Introduction

Contents

- [Introduction](#)
 - [Video editing features](#)

Kdenlive is an acronym for [KDE](http://www.kde.org) [\[http://www.kde.org\]](http://www.kde.org) **Non-Linear Video Editor**. It is a free software ([GPL licensed](http://www.fsf.org/licensing/licenses/gpl.html) [\[http://www.fsf.org/licensing/licenses/gpl.html\]](http://www.fsf.org/licensing/licenses/gpl.html)) primarily aimed at the Linux platform, but it also works on BSD [\[1\]](#) as it relies only on portable components ([Qt](https://www.qt.io/) [\[https://www.qt.io/\]](https://www.qt.io/) and [MLT](http://www.mltframework.org/) [\[http://www.mltframework.org/\]](http://www.mltframework.org/) framework). Windows versions are also available, with some drawbacks. See [Windows issues](#) for more information. A port on MacOS is [currently in progress](https://invent.kde.org/multimedia/kdenlive/-/issues/993) [\[https://invent.kde.org/multimedia/kdenlive/-/issues/993\]](https://invent.kde.org/multimedia/kdenlive/-/issues/993).

Non-linear video editing is much more powerful than beginners' (linear) editors, hence it requires a bit more organization before starting. However, it is not reserved to specialists and can be used for small personal projects.

Through the MLT framework, **Kdenlive** integrates many plugin effects for video and sound processing or creation. Furthermore **Kdenlive** brings a powerful titling tool, a subtitling feature with automatic speech to text conversion, and can then be used as a complete studio for video creation.

Video editing features

- Multitrack edition with a timeline and virtually unlimited number of video and audio tracks, plus facilities for splitting audio and video from a clip in multiple tracks
- Non-blocking rendering. You can keep working on a project at the same time a project is being transformed into a video file
- Effects and transitions can be used with ease, and you can even create some wipe transitions of your own!

- Simple tools for easy creation of color clips, text clips and image clips
- Automatic [Clips](#) creation from pictures directories, with crossfade transitions among the images
- Configurable keyboard shortcuts and interface layouts
- and much more!

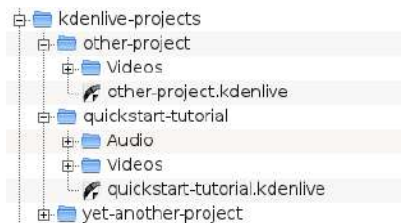
[1] Berkeley Software Distribution

Quick Start

Contents

- [Quick Start](#)
 - [Creating a new project](#)
 - [Adding clips](#)
 - [Timeline](#)
 - [Effects](#)
 - [Music](#)
 - [Rendering](#)
 - [References and notes](#)

Creating a new project

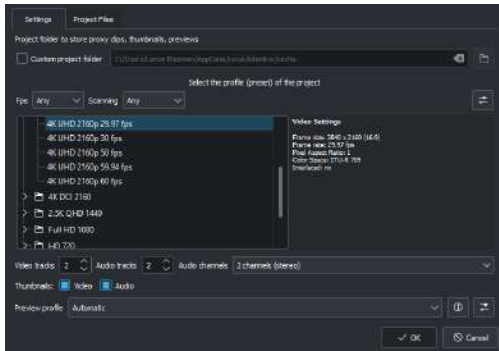


Kdenlive directory structure

The first step is creating a new (empty) folder for our new project. I will call it `quickstart-tutorial/` in this tutorial. Then get some sample video clips, or download them from here [kdenlive-tutorial-videos-2011-avi.zip \(7 MB\) \[1\]](#) , and extract them to e.g. a `quickstart-tutorial/Videos/` subfolder inside the project folder.

The image on the left shows the suggested directory structure: Each project has its own directory, with video files in the `Videos` subdirectory, audio files in the `Audio` directory, etc. ([Project and File management](#))

(The tutorial from now on assumes that you use the sample videos provided, but it works with any.)



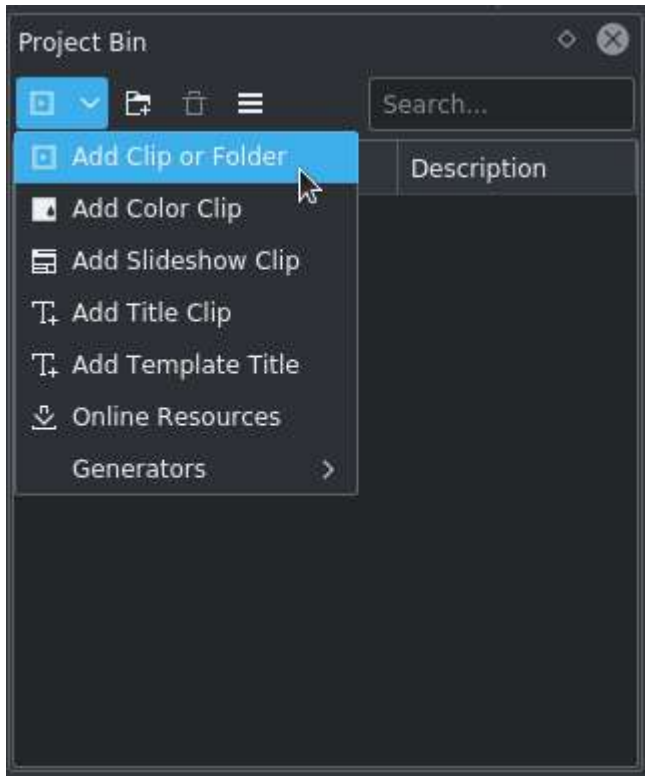
New Project dialog

Open **Kdenlive** and create a new project *File* ▶ *New*.


Choose the previously created project folder (`quickstart-tutorial/`) and select an appropriate project profile. The video files provided above are 720p, 23.98 fps. [2] If you are using your own files and don't know which one to use, **Kdenlive** will suggest an appropriate one when the first clip is added [3], so you can leave the field on whatever it is.

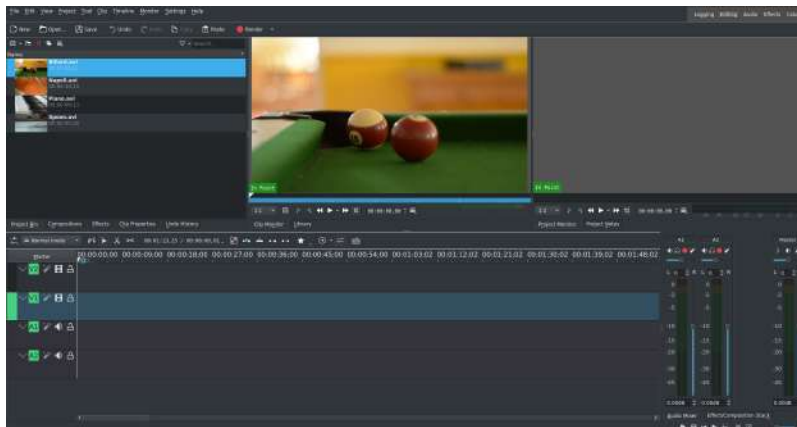
If you like you can change to the dark theme: *Settings* ▶ *Colour Theme* i.e Breeze-Dark

[Adding clips](#)



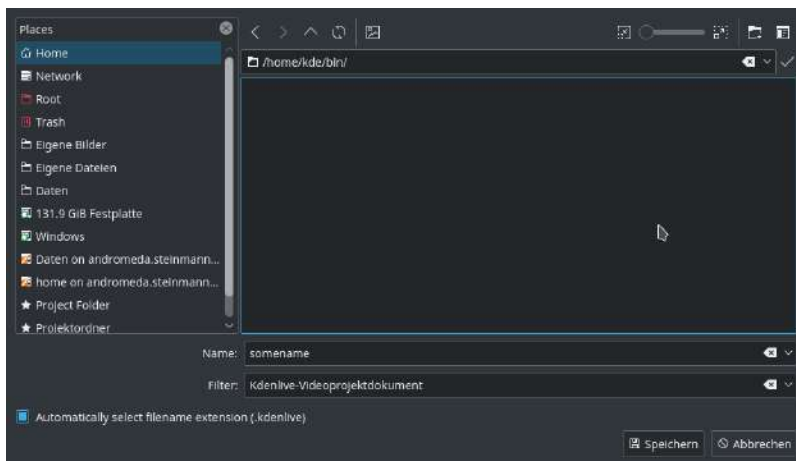
Project Bin: Adding video clips

Now that the project is ready, let's start adding some clips (i.e. the ones you downloaded). This works via the *Project Bin widget*; a click on the *Add Clip or Folder* icon  directly opens the file dialog, a click on the small arrow shows a list of additional clip types that can be added as well. Video clips, audio clips, images, and other **Kdenlive** projects can be added via the default *Add Clip or Folder* dialog.



Kdenlive window with the tutorial files

After loading the clips, **Kdenlive** will look similar to this. On the top left there is the already known Project Bin. Right of it are the monitors that show video; The clip monitor displays video from the original clips, the project monitor shows how the output video will look, with all effects, transitions, etc. applied. The third, also very important, item is the timeline (below the monitors): This is the place where the video clips will be edited. There are two different types of tracks, Video and Audio. Video tracks can contain any kind of clip, audio tracks as well – but when dropping a video file to the audio track, only the audio will be used.



Saving a Kdenlive project

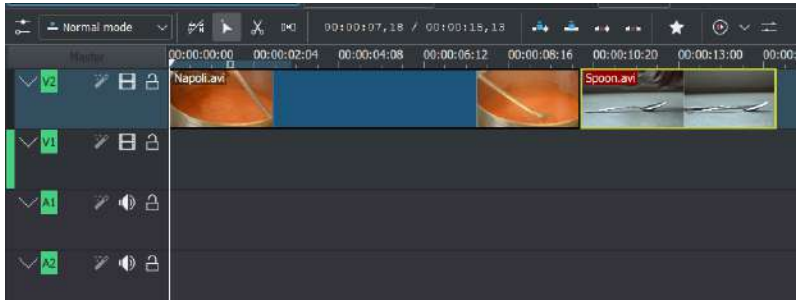
Let's save the work via *File* ▶ *Save*. This saves our project, i.e. where we placed the clips on the timeline, which effects we applied, and so on. It can *not* be played. [4] The process of creating the final video is called *Rendering*.

Timeline

See also [Timeline](#)

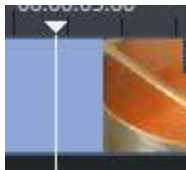
Now comes the actual editing. Project clips are combined to the final result on the timeline. They get there by drag and drop: Drag some Napoli (assuming you are using the files provided above, as in the rest of this quick

start tutorial; If not, please make sure your screen is waterproof, and perhaps tomatoproof) from the project bin, and drop it onto the first track in the timeline. In this case track V2.



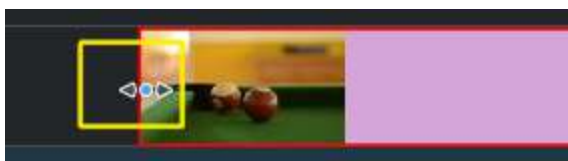
First clips in the timeline

Since some cutlery is needed as well, grab the spoon clip and drop it on the first track as well (track V2). Then drag the Napoli to the beginning of the timeline (otherwise the rendered video would start with some seconds of plain black), and the Spoon right after the Napoli, such that it looks like in the image on the left. (Where I have zoomed in with `Ctrl + Wheel`.)



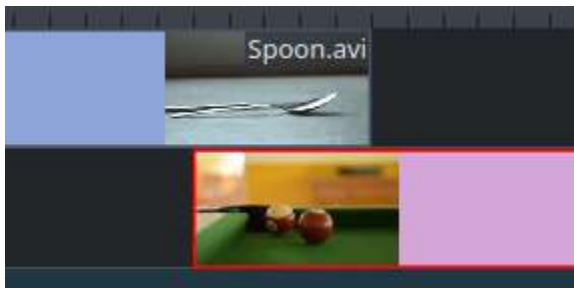
Timeline cursor

The result can already be previewed by pressing `Space` (or the *Play* button in the project monitor). You will see the Napoli directly followed by a Spoon. If the timeline cursor is not at the beginning, the project monitor will start playing somewhere in the middle; you can move it by dragging it either on the timeline ruler or in the project monitor. If you prefer keyboard shortcuts, `Ctrl + Home` does the same for the monitor that is activated. (Select the *Project Monitor* if it is not selected yet before using the shortcut.)



Resize marker

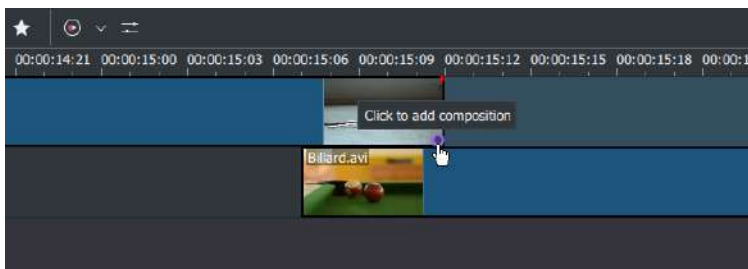
Since after eating comes playing, there is a Billiards clip. Add it to the timeline as well (track V1). For the first 1.5 seconds nothing happens in the clip, so it should perhaps be **cut** to avoid the video becoming boring. An easy way [5] for this is to move the timeline cursor to the desired position (i.e. the position where you want to cut the video), then drag the left border of the clip when the resize marker appears. It will snap in at the timeline cursor when you move close enough.



Overlapping clips

To add a *transition* between eating (the Spoon) and playing billiards, the two clips need to overlap. To be precise: place the second clip above or below the first one. The first clip should end some frames after the second one begins. Zooming in until the ticks for single frames appear helps here; it also makes it easy to always have the same transition duration, five frames in this case.

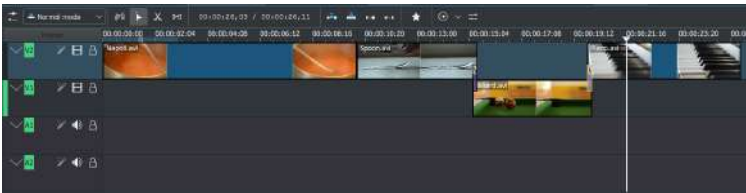
You can zoom in by either using the *zoom slider* at the bottom right corner of the **Kdenlive** window, or with `Ctrl + Mousewheel`. **Kdenlive** will zoom to the timeline cursor, so first set it to the position which you want to see enlarged, then zoom in.



Transition marker

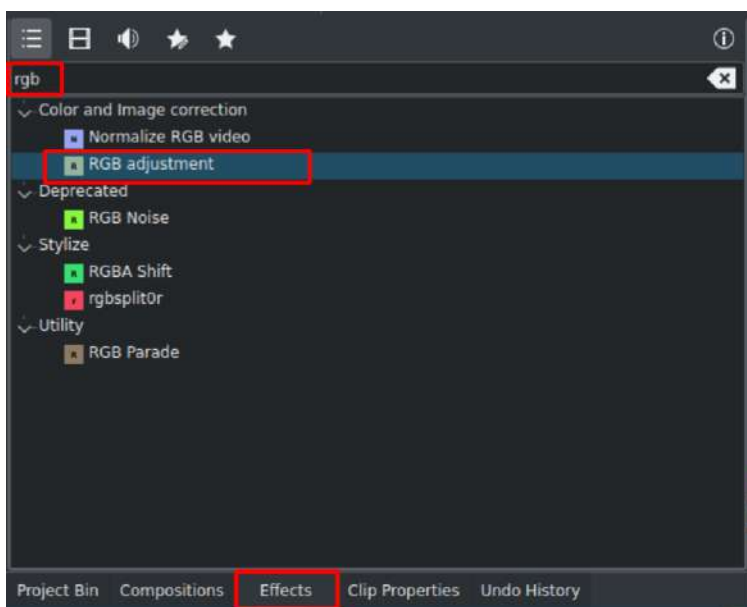
Now that the clips overlap, the transition can be added. This is done either by right-clicking on the upper clip and choosing *Insert a Composition* and choose *Wipe* or, easier, by hovering the mouse over the lower right corner of the Spoon clip until the pointing-finger pointer is shown and the message “Click to add composition” appears. The latter, by default, adds a wipe transition, which is in this case the best idea anyway since the Spoon is not required for playing.

The wipe transitions fades the first clip into the second one. See also [Transitions](#).



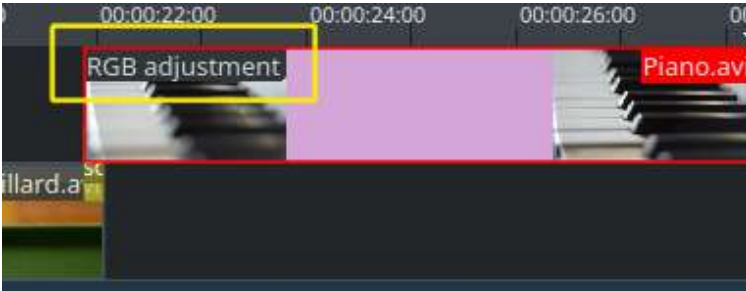
Let's now add the last clip, the Piano, and again apply a wipe transition. When adding it on the first track of the timeline (track V2), you need to click on the new clip's lower left edge to add the transition to the previous clip.

[Effects](#)

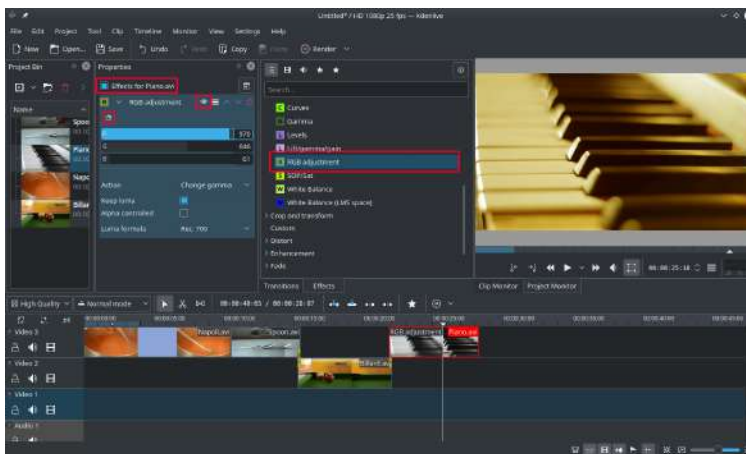


Effect List

The Piano can be colourized by adding an *effect* to it. Click on the effect view (if effect view is not visible enable the view: *View* ▸ *Effects*). Type *rgb* in the search field then double-click the *RGB Adjustment* effect.



Once the effect has been added, click on an empty part in the timeline and you see its name on the timeline clip. It will also be shown in the *Effect/Composition Stack* widget.



Effect Stack with RGB adjustment

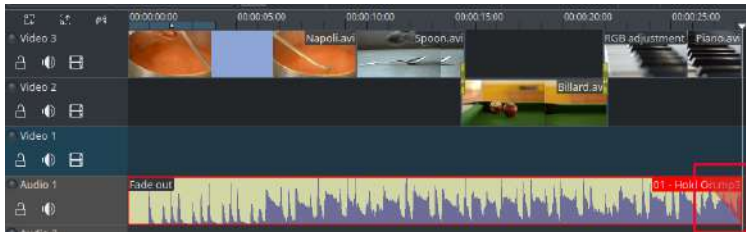
To get a warm yellow-orange tone on the image, fitting the comfortable evening, blue needs to be reduced and red and green improved.

The values in the Effect/Composition Stack widget can be changed by using the slider (middle mouse button resets it to the default value), or by entering a value directly by double-clicking the number to the right of the slider.

Keyframing was the hardest part of this tutorial. If you managed to do it, you will master **Kdenlive** easily!

See also [Effects](#).

Music

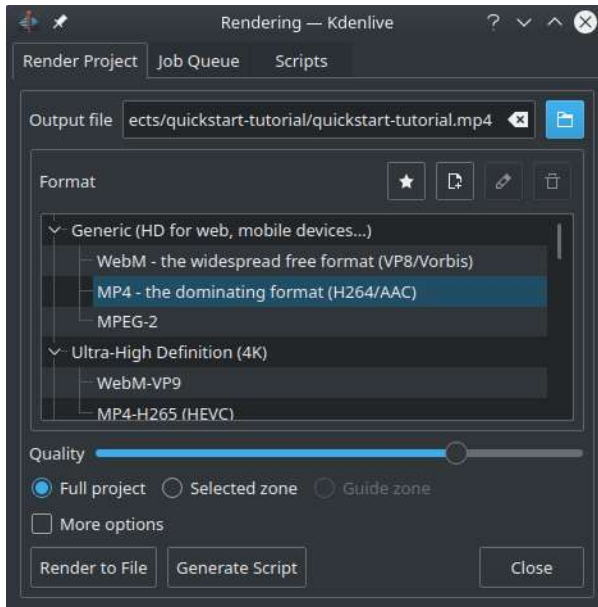


Audio fadeout

Since the clips do not provide any audio, let's search for some nice piece of music, from your local collection or on web pages like [Jamendo](http://www.jamendo.com) [http://www.jamendo.com]. The audio clip should, after adding it, be dragged to an audio track on the timeline.

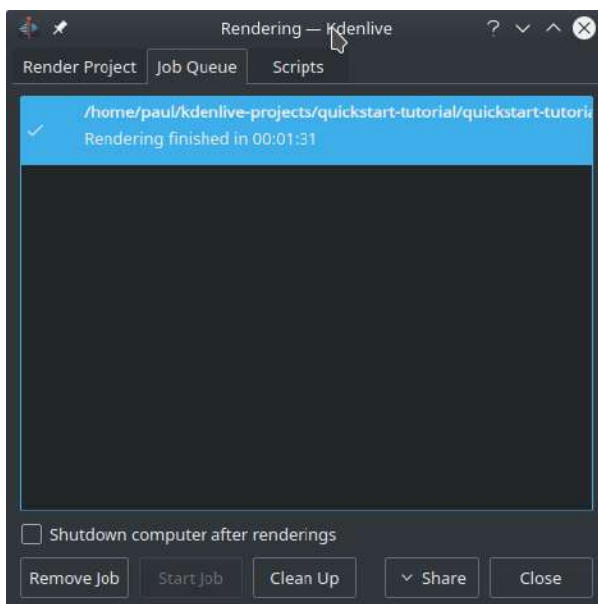
The audio clip can be resized on the timeline the same way as video clips are. The cursor will snap in at the end of the project automatically. To add a fade out effect at the end of the audio clip (except if you found a file with exactly the right length) you can hover the top right (or left) edge of the timeline clip and drag the red shaded triangle to the position where fading out should start. [6]

Rendering



Rendering dialog

A few minutes left, and the project is finished! Click the Render button (or go to *Project* ▶ *Render*, or press `Ctrl + Enter`) to get the dialog shown on the left. Select the desired output file for our new video with all effects and transitions, choose MP4 (works nearly everywhere), select the output file location and press the *Render to File* button.



Rendering progress

After some seconds rendering will be finished, and your first **Kdenlive** project completed. Congratulations!

References and notes

- [1] If you prefer Theora (which you probably don't since Ogg Video usually causes problems), you can alternatively download `kdenlive-tutorial-videos-2011-ogv.tar.bz2`.
- [2] [720](http://en.wikipedia.org/wiki/720p) [http://en.wikipedia.org/wiki/720p] is the video height, p stands for [progressive scan](http://en.wikipedia.org/wiki/Progressive_scan) [http://en.wikipedia.org/wiki/Progressive_scan] in contrast to [interlaced video](http://en.wikipedia.org/wiki/Interlaced_video) [http://en.wikipedia.org/wiki/Interlaced_video], and the fps number denotes the number of full frames per second.
- [3] Provided Configure Kdenlive Settings under [Configure Kdenlive](#) is set to *Check if first added clip matches project profile*
- [4] To be correct, it *can* be played using `melt yourproject.kdenlive`, but this is not the way you would want to present your final video since it is (most likely) too slow. Additionally, it only works if melt is installed.
- [5] Writing it this way suggests that there are several ways of cutting a clip. This is in fact true.
- [6] This shaded triangle is a shorthand for adding the effect *Fade ▸ Fade out*. Both ways lead to the same result.

Tutorials

Contents

- [Tutorials](#)
 - [Written Tutorials](#)
 - [Video Tutorials](#)

Written Tutorials

- See [Quick Start](#) for a step-by-step introductory tutorial

Contents:

- [How To Do Split Screen Effect](#)
- [Introduction to Kdenlive](#) [<http://opensource.com/life/11/11/introduction-kdenlive>] by Seth Kenlon
- [10 tools for visual effects with Kdenlive](#) [<https://opensource.com/life/15/12/10-kdenlive-tools>] by Seth Kenlon
- [Basic masking in Kdenlive](#) [<https://opensource.com/life/15/11/basic-masking-kdenlive>] by Seth Kenlon
- [Kdenlive Challenge \(Multiple Masks & Tracks\)](#) [<http://www.ocsmag.com/2015/12/22/the-video-editing-challenge-part-i-kdenlive/>] by Paul Browns
- [Wikibooks Kdenlive manual](#) [<http://en.wikibooks.org/wiki/Kdenlive>]

Video Tutorials

[Image and Title Layers Transparency Tutorial - Open Source Bug](#)

[<https://www.youtube.com/watch?v=f6VHIOZutm8>]

[How to do pan and zoom with Kdenlive video editor - Peter Thomson](https://www.youtube.com/watch?v=B8ZPoWaxQrA)

[<https://www.youtube.com/watch?v=B8ZPoWaxQrA>]

[Keyframe Animation - Linuceum](https://www.youtube.com/watch?v=M8hC5FbIzdE) [<https://www.youtube.com/watch?v=M8hC5FbIzdE>]

[Kdenlive Tutorials by Arkengheist 2.0](https://www.youtube.com/channel/UCtkSBZ0x71aeHmR3NNBTWwg)

[<https://www.youtube.com/channel/UCtkSBZ0x71aeHmR3NNBTWwg>] : Many tutorials including Text effects, Transitions, Timelapse, Animation, Lower Thirds, Rotoscoping, and more.

More videos can be found using a [YouTube search](https://www.youtube.com/results?search_query=kdenlive+tutorials) [https://www.youtube.com/results?search_query=kdenlive+tutorials] and on the [Vimeo Kdenlive Tutorial Channel](https://vimeo.com/groups/kdenlivetutorials/videos)

[<https://vimeo.com/groups/kdenlivetutorials/videos>]

How To Do Split Screen Effect

Contents

- [How To Do Split Screen Effect](#)

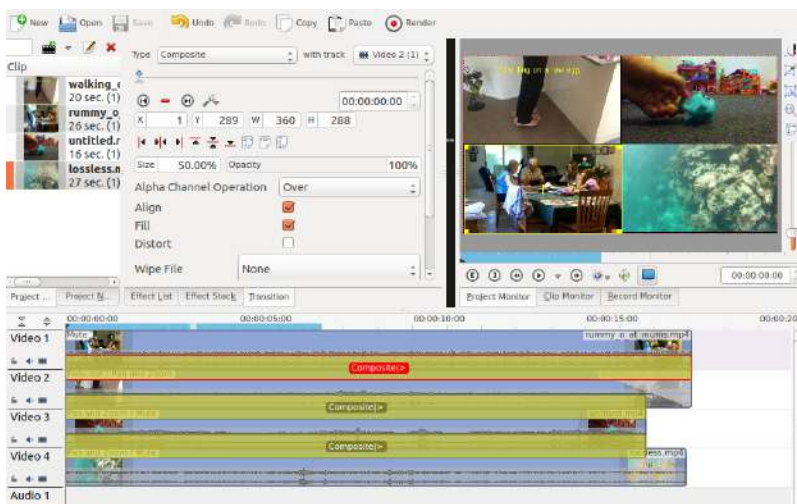
This effect is also known as picture in picture effect or PIP.

In this example we will see how to have 4 screens playing at once in the video.

[Example - 4 screens in one\(YouTube\)](#) [<https://youtu.be/YRs5UDuCVJg>]

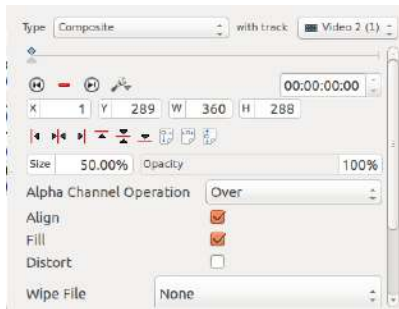
To create this effect you need 4 video tracks on the time line. Add extra tracks to the time line from the [Tracks](#) menu.

You create a project/timeline like that shown in Figure 1 and described in detail below.

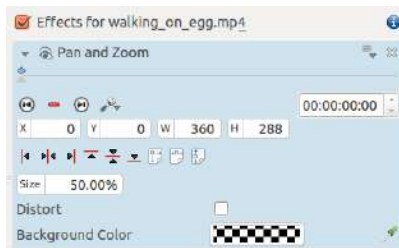


Time Line Setup

Video 1 (appears in bottom left in the result) has no effects added to it.

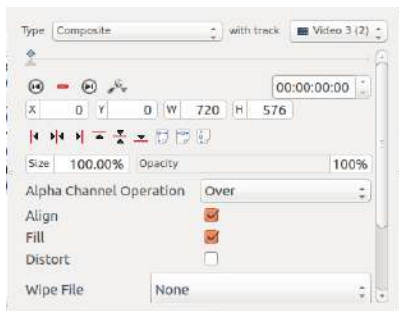


Transition 1

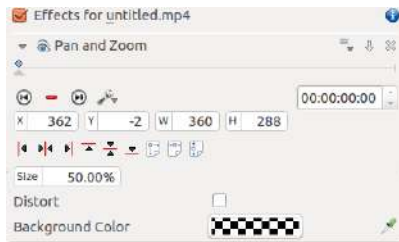


Effect on Video 2

Video 2 (appears top left in result) has a [Position and Zoom](#) effect added to it (See Figure 3). This effect has a sizing and positioning effect as part of it that causes the Video on Video Track 2 to be scaled down 50% and be positioned in the top left corner.

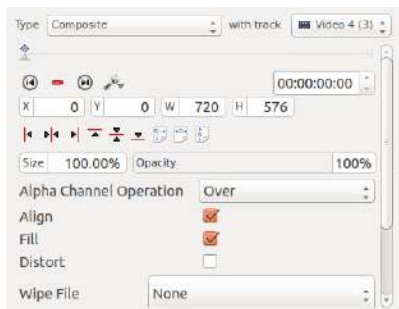


Standard composite transition between Video track 2 and Video track 3.

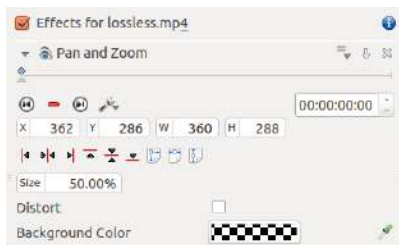


Effect on Video 3

Video 3 (appears top right in result) has a pan and zoom effect added to it (See Figure 5). This effect has a sizing and positioning effect as part of it that causes the Video on Video Track 3 to be scaled down 50% and be positioned in the top right corner.



Standard composite transition between Video track 3 and Video track 4.



Effect on Video 4

Video 4 (appears bottom right in result) has a pan and zoom effect added to it (See Figure 7). This effect has a sizing and positioning effect as part of it that causes the Video on Video Track 4 to be scaled down 50% and be positioned in the bottom right corner.

User interface

After starting Kdenlive the Kdenlive window should look something similar to the image below; as Kdenlive's user interface is consistent across all platforms.

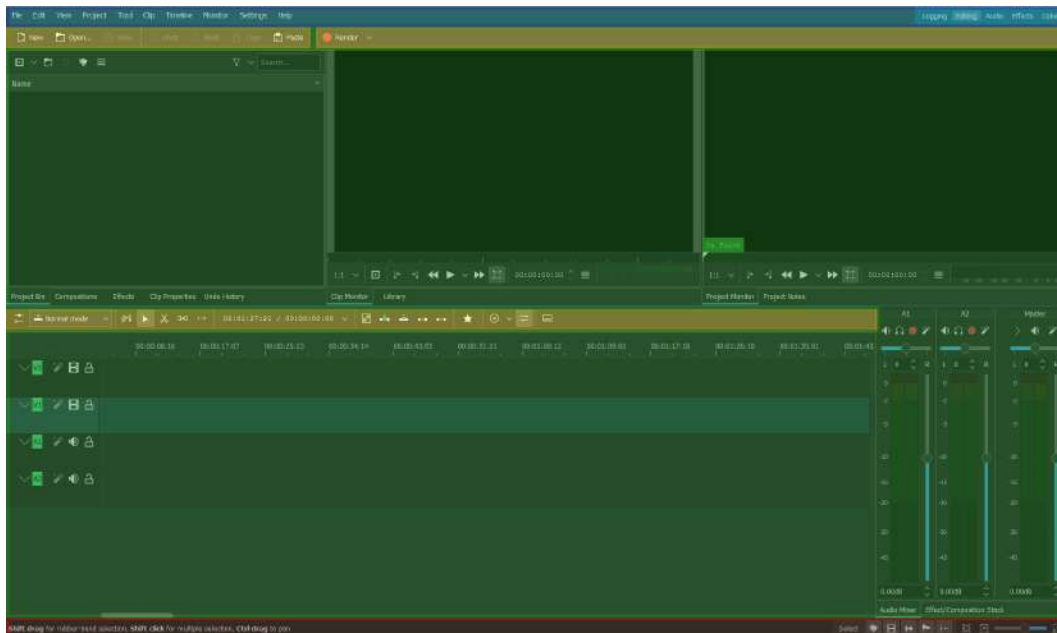
Kdenlive's interface is separated into four main parts:

[Menu Reference](#) and [Workspace Layouts](#) at the very top.

[Toolbars](#) at the top and above the timeline

[Window](#) in the middle.

[Status Bar](#) at the bottom.



Kdenlive's default Screen Layout (example editing view). Topbar (blue), Toolbars (yellow), Window (green) and Status Bar (red).

This page introduces the Kdenlive user interface (UI), explaining where to find each group of features, and how the highly focused and tightly integrated

Media, Edit, Color, Fairlight, and Deliver pages work together to let you pursue nearly any post-production workflow you can imagine.

Customizing interface

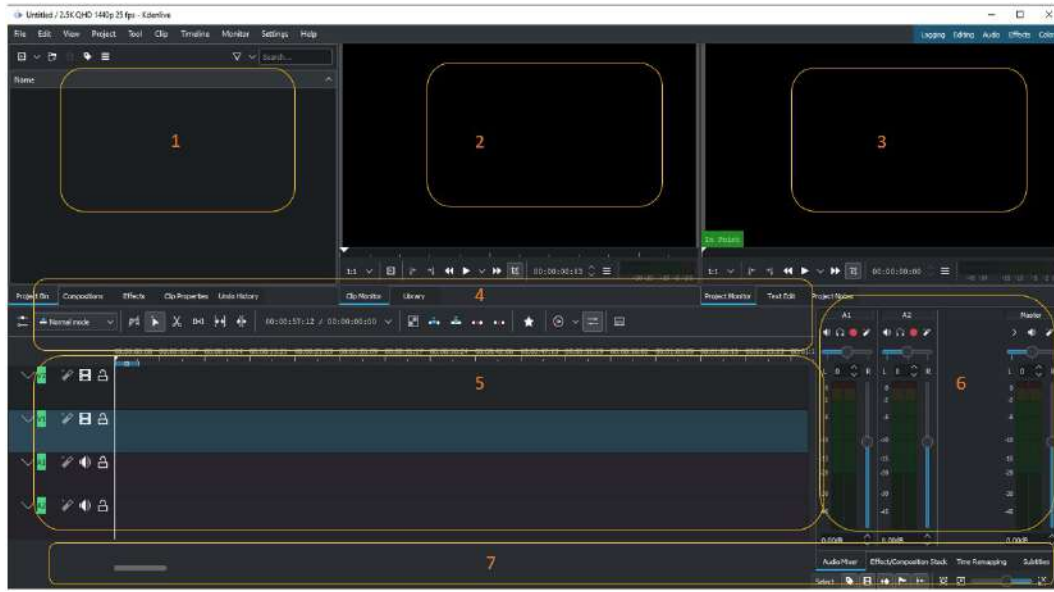
The user interface model has a clear division between the different panes, that they work on allows you to reorder them, drag them out into separate windows or size them up as you will.

The interface is divided into many sections. The menu is on top and then on the left you can make a note about the project. All loaded clips and videos are in the project bin, the second section. Third section is the Effect list. You can apply many transaction effects on your video. You can always watch the project preview in the last section. You can create as many audio/video track as you need. This is impressive about Kdenlive. If you're new to video editing then this is very useful. You can import multiple title clips inside video track.

Remove/Adjust Sections

You won't notice on the spot, but the tabs that appear on the bottom of the panes aren't built in them, but change according to what panes you have aggregated into that particular frame. This way you can group functions that you don't expect to use simultaneously into a single place on the user interface, thus reducing clutter.

If you don't want certain sections on the screen then you can simply delete them to make other sections wider. Just click the close button on that section and that section will be closed, by removing unnecessary video/audio tracks and now you can organize enough space to preview your project and all other necessary sections are wider.



Kdenlive's default Screen Layout, editing view

1. [Project Bin](#)

The top left section of the screen is known as the bin, library or browser, where clips, still images, audio files etc. are displayed, ready for use. Replicating the folder naming system within the editing software library will help keep everything organized. It may be helpful to label each clip with one or more descriptive keywords. These can be searched and are a useful way to rapidly locate the desired footage, especially with the use of many clips. It is preferable to edit using the same frame rate and frame size that the footage was shot with.

2. [Clip Monitor](#)

The preview or canvas window (top centre) plays what is currently selected in the project bin.

3. [Project Monitor](#)

This screen shows all clips, still images, audio files and effects such as titles or transitions were be applied to the footage in the timeline. To apply effects,

select it from the effects menu and then drag and drop it between the two clips where it is.

4. [Timeline Toolbar](#)

Trimming and other editing tools do not alter or delete the original footage, they only adjust the copy that has been added to the timeline.

5. [The Timeline](#)

This is the area where clips are placed in the order in which they will appear in the final video and trimmed to the desired length and content. When assembling the initial “rough cut” of the video, users can place clips from the project bin into the timeline in the desired sequence. To reorder clips simply click and drag them to a new position. Trimming tools allow only the relevant footage to be used by marking the desired start and end (“in” and “out”) points on each clip, to shorten or lengthen it.

6. [Audio Mixer](#)

The sound quality and volume can be adjusted, either for the entire sequence or selected sections. The editing software will display audio meters and generally any dialogue or narration in a video should be at about -10dB most of the time.

7. [Status Bar](#)

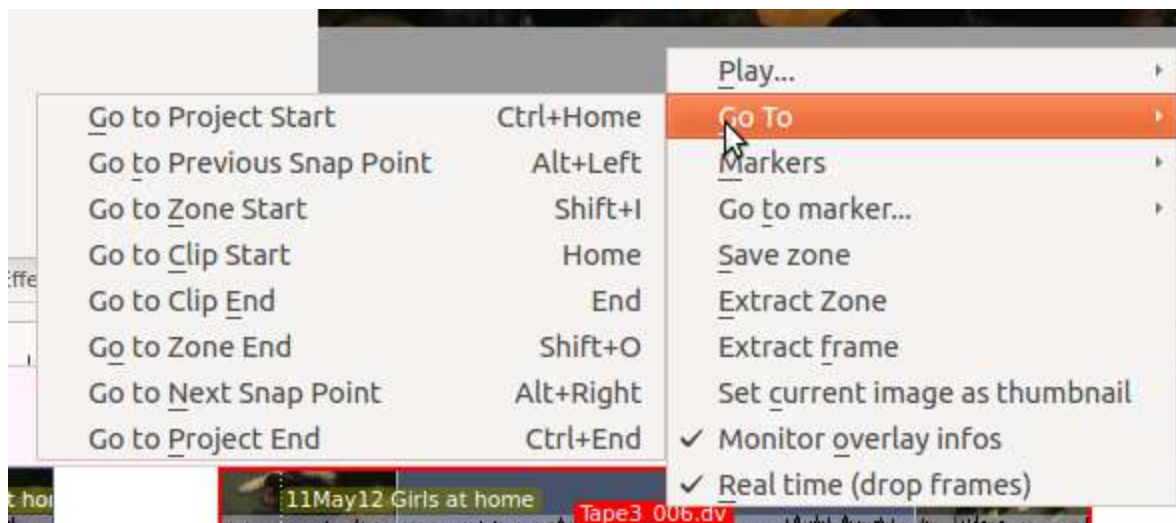
On the left side you see hints what you can do when you hover over items. In the middle you see the names of the clips you hover over in the timeline. Followed by mode you are in (default is *Select*). On the right end are switches for *Labels*, *Thumbnails*, *Snap* and for zooming the timeline.

Clip Monitor - Right Click Menu

Contents

- [Clip Monitor - Right Click Menu](#)
 - [Play...](#)
 - [Play](#)
 - [Play Zone](#)
 - [Loop Zone](#)
 - [Go To](#)
 - [Go to Project Start](#)
 - [Go to Previous Snap Point](#)
 - [Go to Zone Start](#)
 - [Go to Clip Start](#)
 - [Go to Clip End](#)
 - [Go to Zone End](#)
 - [Go to Next Snap Point](#)
 - [Go to Project End](#)
 - [Markers](#)
 - [Add Marker](#)
 - [Edit Marker](#)
 - [Delete Marker](#)
 - [Delete All Markers](#)
 - [Go to marker...](#)
 - [Go to marker...](#)
 - [Save zone](#)
 - [Extract Zone](#)
 - [Extract frame](#)
 - [Set current image as thumbnail](#)
 - [Monitor overlay infos](#)
 - [Real time \(drop frames\)](#)

These are the menu items that are available when you right click a clip in the [Monitors](#). These actions effect the clip that is currently selected in the [The Project Bin](#). Similar menu items are available from a Right click menu in the Project monitor. However project monitor menu items effect the currently selected clip on the timeline.



[Play...](#)

[Play](#)

Plays the clip currently selected in the project bin

[Play Zone](#)

Plays the current zone and stops. (See [Monitors](#) for info about what a Zone is)

[Loop Zone](#)

Plays the current zone in a continuous loop. (See [Monitors](#) for info about what a Zone is)

[Go To](#)

[Go to Project Start](#)

When this item is selected from Clip Monitor it goes the beginning of the clip. (When selected in project monitor it goes to the beginning of the project)

[Go to Previous Snap Point](#)

Moves the clip position to the previous [Editing](#) Point. Snap points are sections in clips that other clips snap to when “Snap” is turned on.

Snap points include markers, zone in-points, zone out-points, guides, transition start points etc

[Go to Zone Start](#)

Goes to the start of the Zone. (See [Monitors](#) for info about what a Zone is)

[Go to Clip Start](#)

Not working. Use Go To Project Start to make the clip monitor move to start of the clip.

[Go to Clip End](#)

Not working. Use Go To Project End to make the clip monitor move to end of the clip.

[Go to Zone End](#)

Goes to the end of the Zone. (See [Monitors](#) for info about what a Zone is)

[Go to Next Snap Point](#)

Moves the clip position to the next [Editing](#) Point. Snap points are sections in clips that other clips snap to when “Snap” is turned on.

Snap points include markers, zone in-points, zone out-points, guides, transition start points etc

[Go to Project End](#)

When this item is selected from Clip Monitor it goes the end of the clip.
(When selected in project monitor it goes to the end of the project)

[Markers](#)

[Add Marker](#)

Adds a new [clip](#) into the clip at the current time point.

[Edit Marker](#)

Brings up a dialog where you can edit the [clip](#) that is at the current time point. Use *Go to marker* to put the monitor at the marker you want to edit.

[Delete Marker](#)

Deletes the [clip](#) that is a the current timepoint. Use *Go to marker* to put the monitor at the marker you want to delete.

[Delete All Markers](#)

Deletes all the [Clips](#) from the current clip.

[Go to marker...](#)

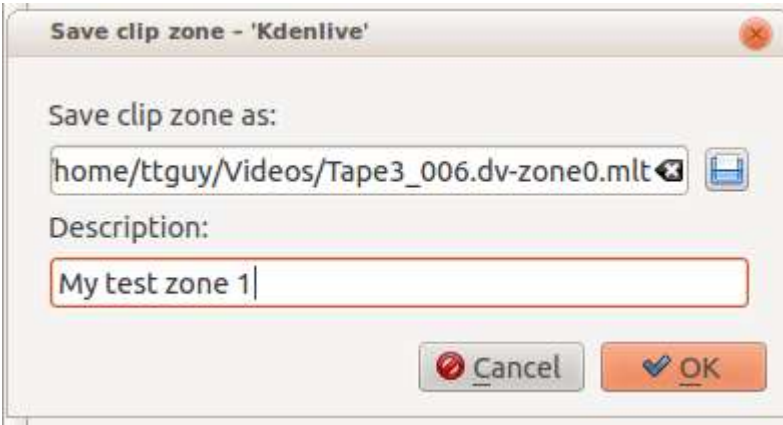
Same a Go to Marker [Clip Monitor - Right Click Menu](#).

[Go to marker...](#)

The menu item pops out a list of existing [Clips](#) to select from. When one is selected the Clip monitor moves to that marker.

Save zone

This brings up the **Save Zone** dialog

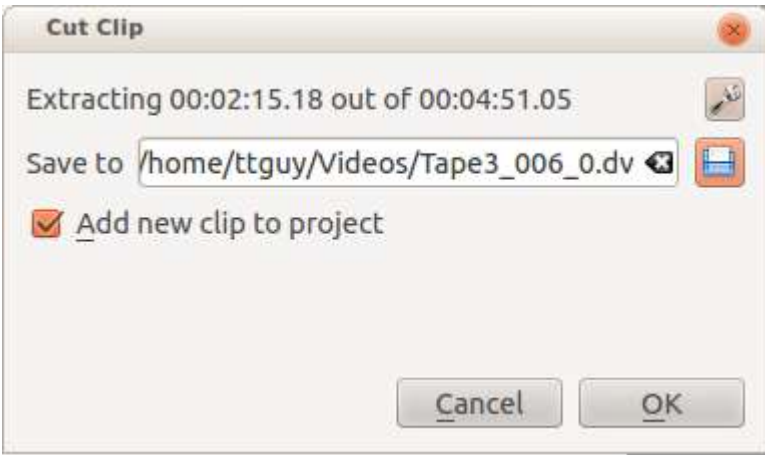


This causes the current zone (see [Monitors](#)) to be saved as a `.mlt` file. This is a MLT video playlist file which is an xml format file describing the zone that we saved.

You can then load the `.mlt` files as clips into the project monitor and edit them like any other clip.

Extract Zone

This brings up the **Cut Clip** dialog which appears to be setup to extract the zone into a new file and add it to the project bin.



On the authors 0.9.2 and 0.9.5 version of **Kdenlive** this feature is broken for .dv format clips at least. It does work for .mp4 type clips. However, the accuracy of the cuts on the clip is way out.

```
ffmpeg version 0.8.3-4:0.8.3-0ubuntu0.12.04.1, Copyright (c)
2000-2012 the Libav developers
  built on Jun 12 2012 16:37:58 with gcc 4.6.3
[dv @ 0x9d71480] Can't initialize DV format!
Make sure that you supply exactly two streams:
  video: 25fps or 29.97fps, audio: 2ch/48kHz/PCM
  (50Mbps allows an optional second audio stream)
Output #0, dv, to '/home/ttguy/Videos/Tape3_006_0.dv':
  Metadata:
    encoder           : Lavf53.21.0
    Stream #0.0: Video: dvvideo, yuv420p, 720x576 [PAR 64:45
DAR 16:9], q=2-31, 28800 kb/s, 90k tbn, 25 tbc
    Stream #0.1: Audio: pcm_s16le, 32000 Hz, 2 channels, 1024
kb/s
Stream mapping:
  Stream #0.0 -> #0.0
  Stream #0.1 -> #0.1
Could not write header for output file #0 (incorrect codec
parameters ?)
```

[Extract frame](#)

Extracts the frame currently in the clip monitor as a .PNG image which you can save to the file system.

Set current image as thumbnail

This will change the thumbnail that represents this clip in the project bin to the frame that is currently selected in the clip monitor.

Monitor overlay infos

???

Real time (drop frames)

Setting this to the Checked state means the clip monitor will drop frames during playback to ensure the clip plays in real time. This does not effect the final rendered file - it just effect how the clip appears when being previewed in the clip monitor

Project Monitor - Right Click menu

These are the menu items that are available when you right click a clip in the [Monitors](#). These actions effect the clip that is currently selected in the timeline. Similar menu items are available from a Right click menu in the clip monitor. However clip monitor menu items effect the currently selected clip on the project bin.

Contents

- [Project Monitor - Right Click menu](#)
 - [Play...](#)
 - [Play](#)
 - [Play Zone](#)
 - [Loop Zone](#)
 - [Loop Selected Clip](#)
 - [Go To](#)
 - [Go to Project Start](#)
 - [Go to Previous Snap Point](#)
 - [Go to Zone Start](#)
 - [Go to Next Snap Point](#)
 - [Go to Project End](#)
 - [Extract frame](#)
 - [Example how to extract frame](#)
 - [Split View](#)
 - [Monitor overlay infos](#)
 - [Real time \(drop frames\)](#)

Play...

Play

Plays the clip currently selected in the project bin

[Play Zone](#)

Plays the current zone and stops.

[Loop Zone](#)

Plays the current zone in a continuous loop.

[Loop Selected Clip](#)

[Go To](#)

[Go to Project Start](#)

When this item is selected from Project Monitor it goes the beginning of the project.

[Go to Previous Snap Point](#)

Moves the clip position to the previous [Editing](#) Point. Snap points are sections in clips that other clips snap to when “Snap” is turned on.

Snap points include markers, zone in-points, zone out-points, guides, transition start points etc

[Go to Zone Start](#)

Goes to the start of the Zone.

[Go to Next Snap Point](#)

Moves the clip position to the next [Editing](#) Point. Snap points are sections in clips that other clips snap to when “Snap” is turned on.

Snap points include markers, zone in-points, zone out-points, guides, transition start points etc

[Go to Project End](#)

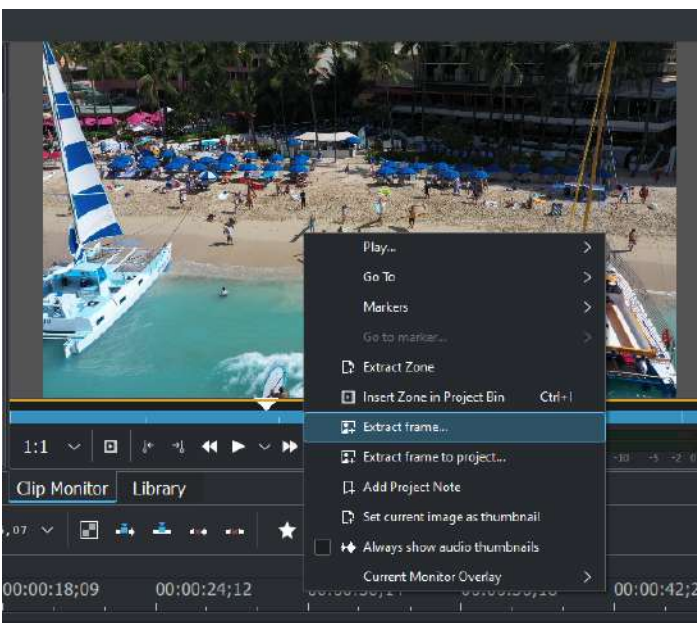
When this item is selected from Project Monitor it goes the end of the project.

[Extract frame](#)

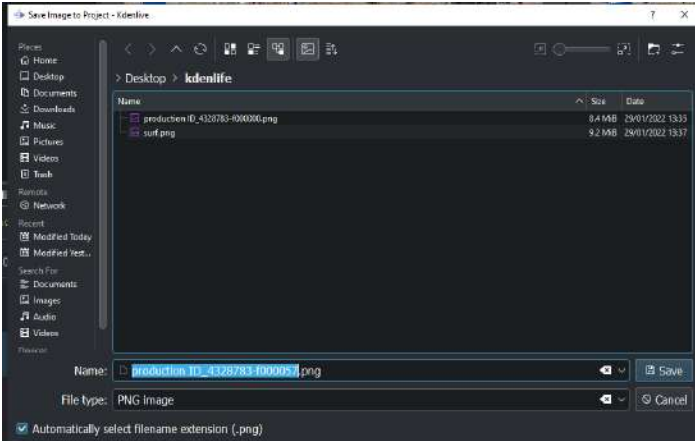
Extracts the frame currently in the project monitor as a .PNG image which you can save to the file system.

[Example how to extract frame](#)

Kdenlive sends that frame to the stills gallery, which includes the image and the node structure. You can see if you display node graph by right-clicking, which is helpful to copy and paste adjustments for other clips.

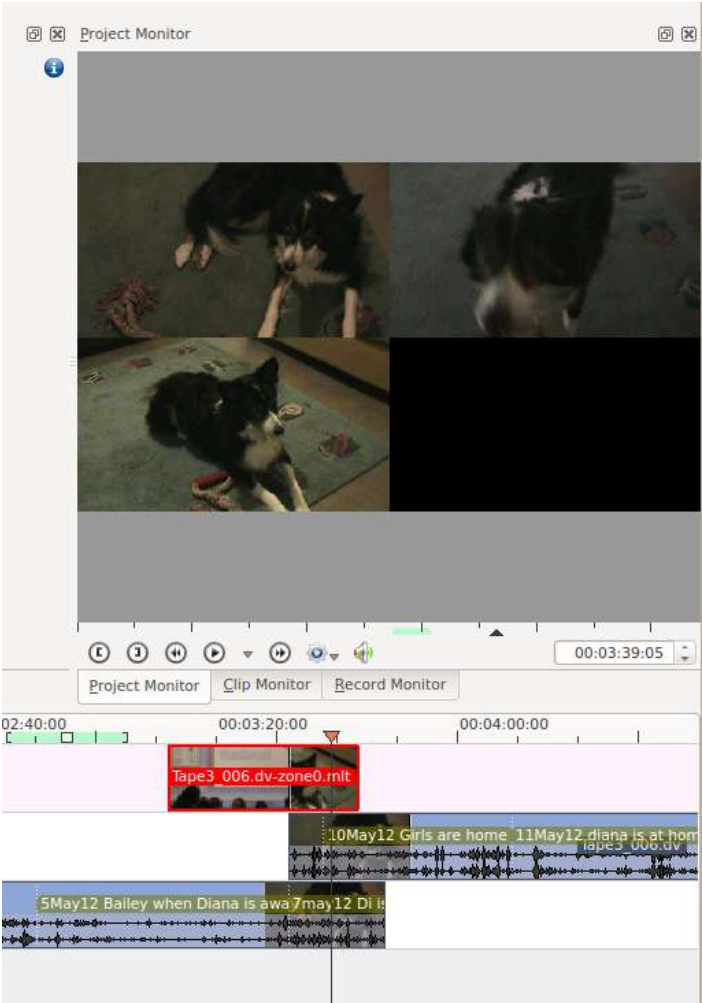


Click export, name it something logical, pick a safe location on your computer and change the format down below to png.

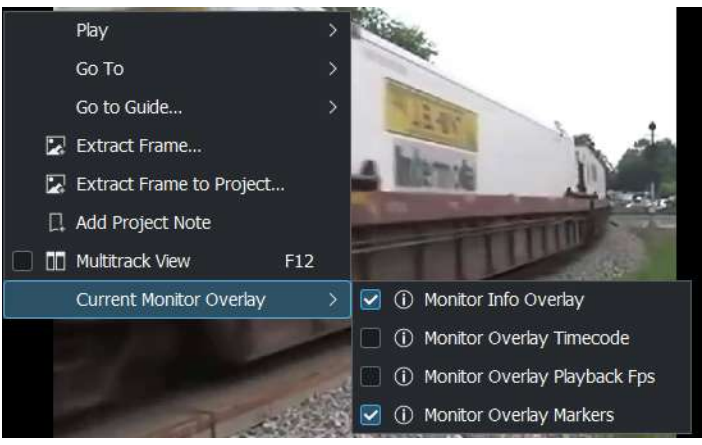


Split View

Selecting this allows you to view all the video tracks at once in split screen in the project monitor. See picture.



Monitor overlay infos



4 different monitor overlays help you to show you more information about your videos. These overlays will not be rendered to the final video.

Real time (drop frames)

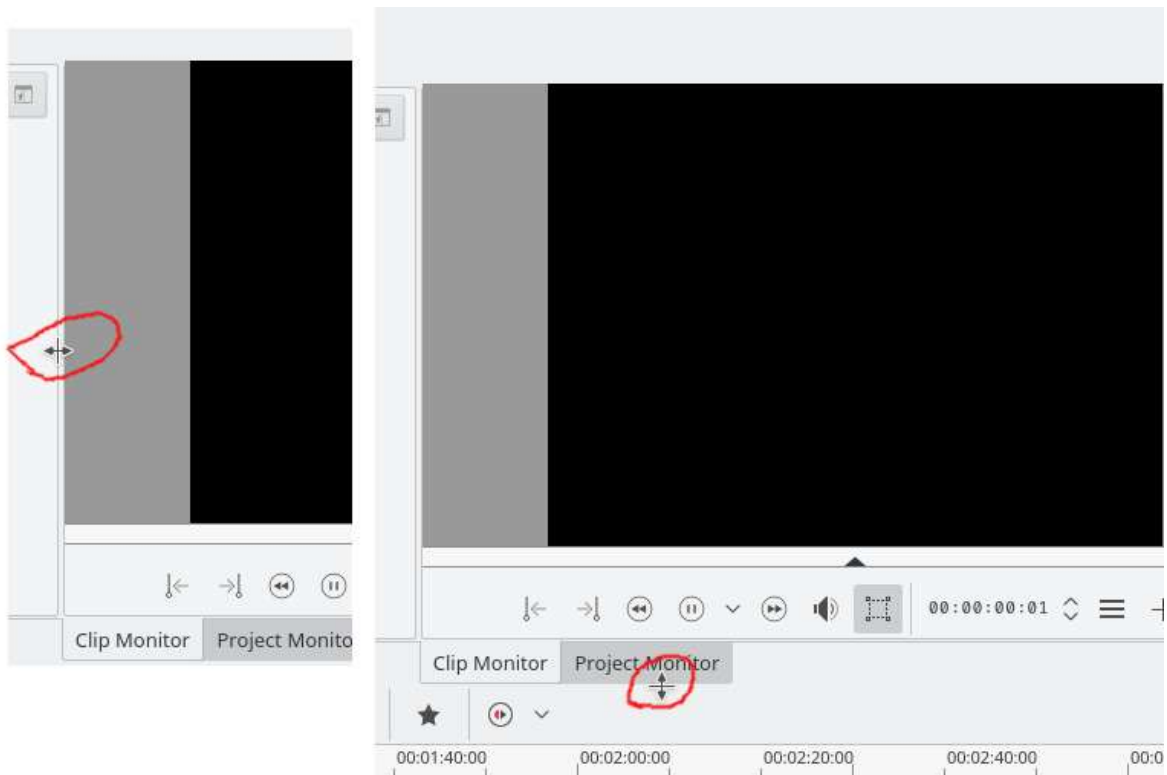
Setting this to the Checked state means the clip monitor will drop frames during playback to ensure the clip plays in real time. This does not effect the final rendered file - it just effect how the clip appears when being previewed in the clip monitor

Monitors

Kdenlive uses 2 monitor widgets to display your videos: Clip Monitor and Project Monitor. A third monitor - the Record Monitor - previews video capture. These monitors can be selected by clicking the corresponding tabs which appear at the bottom of the monitor window.

Resizing the Monitors

You can resize the monitors by dragging the sizing widget. It is a bit tricky to find the bottom widget. You need to hover just between the bottom of the monitor tab and the timeline



Monitor zoombar

New in version 20.08.0.

The Monitors get zoom bars. To activate: hover over the timeline ruler and CTRL + Mouse wheel.

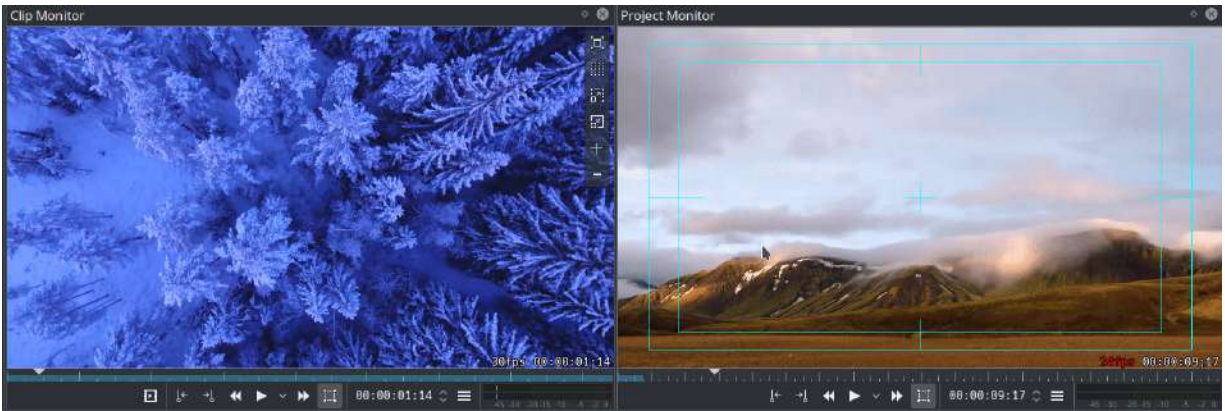


New in version 19.04.0.

Support for external monitor display using Blackmagic Design decklink cards.

Monitor toolbar

New in version 19.04.0.



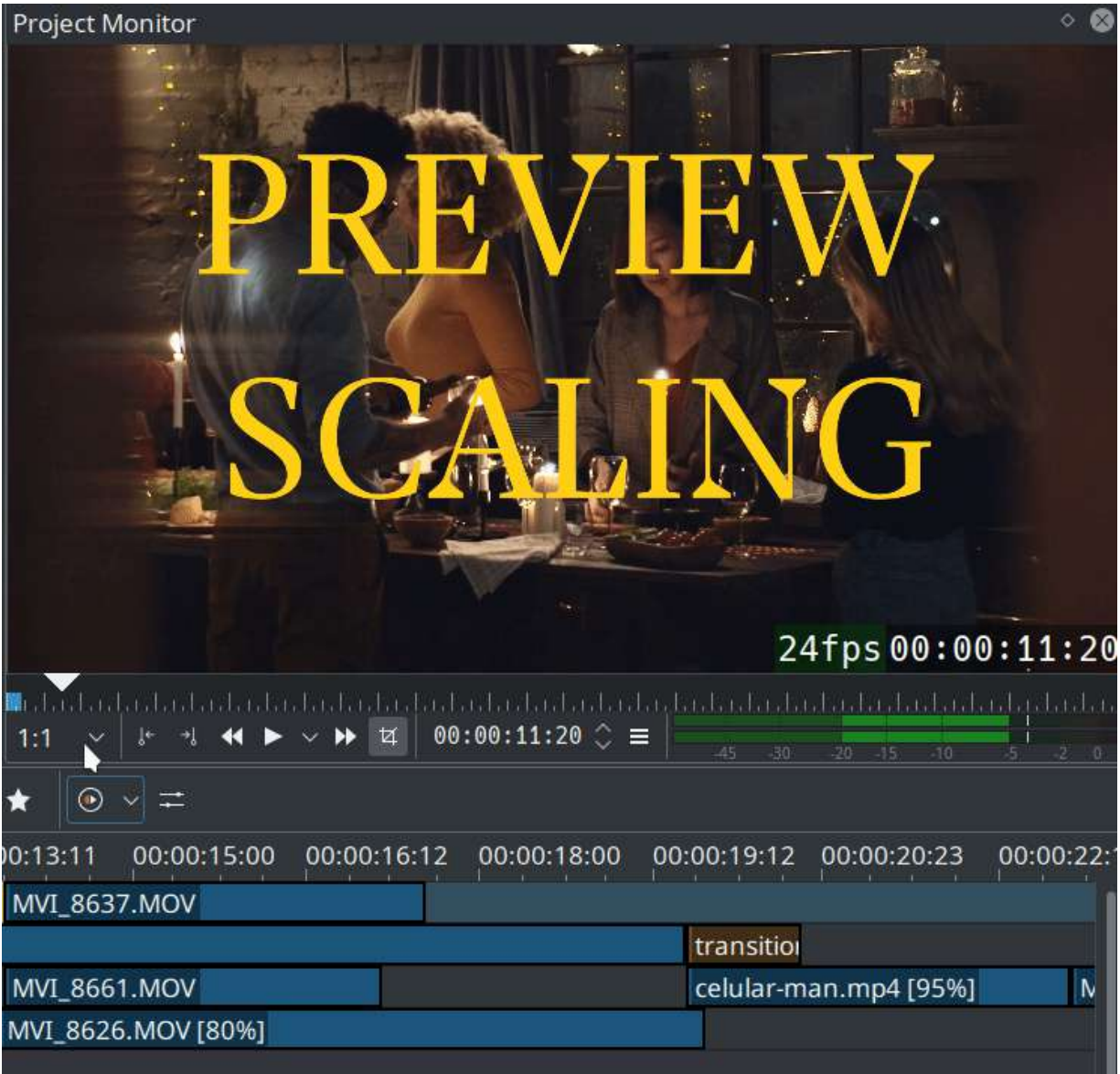
Support multiple guide overlays. Move with the mouse to the upper-right corner of the monitor to access the toolbar.

New in version 22.08.0.

The color of the guide overlays can be changed. See [Monitor toolbar](#)

Preview resolution

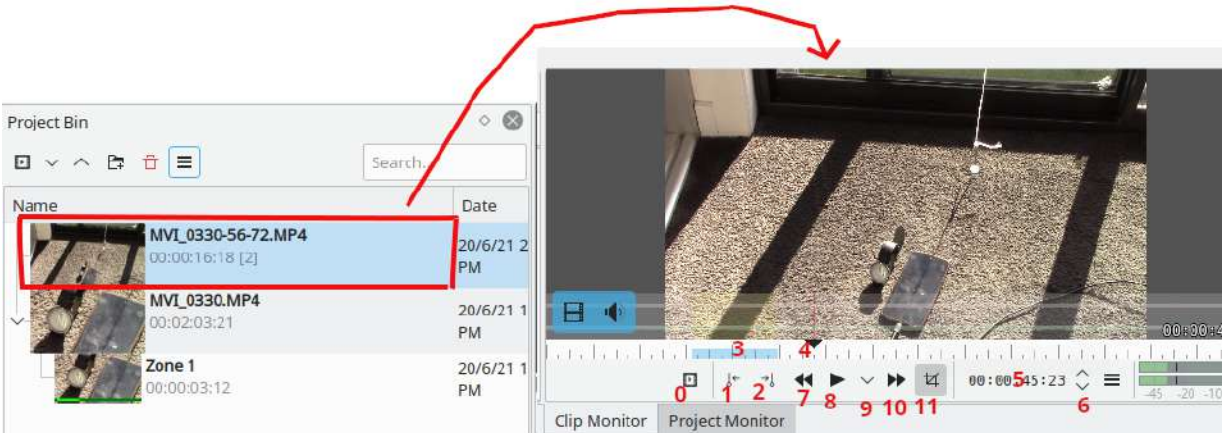
New in version 20.04.0.



Preview resolution speeds up the editing experience by scaling the video resolution of the monitors. It can be used of proxies instead.

Clip Monitor

The Clip monitor displays the unedited clip that is currently selected in [The Project Bin](#).



Widgets on the Clip Monitor

0. **Insert Zone In Project Bin** button - click this to add the current zone to the project bin. The selected zone will appear as child clip in the project bin - like the clip shown as Zone1 in the screen shot.
1. **Set zone start** button - click this to set an 'in' point.
2. **Set zone end** button - click this to set an 'out' point.
3. **Zone duration indicator** - selected by setting in and out points. Dragging the clip from the clip monitor to the timeline when there is a selected zone causes the selected zone, not the entire clip, to be copied to the timeline.
4. **Position Caret** - can be dragged in the clip. (In ver $\geq 0.9.4$ and with OpenGL turned on in *Settings* \triangleright *Configure Kdenlive* \triangleright *Playback*, audio will play as you drag this.)
5. **Timecode widget** - type a timecode here and hit `Enter` to go to an exact location in the clip. Timecode is in the format *hours:minutes:seconds:frames* (where frames will correspond to the number of frames per second in your project profile).
6. **Timecode arrows** - can be used to change the current position of the clip in the clip monitor.

Creating Zones in Clip Monitor

Zones are defined regions of clips that are indicated by a colored section in the clip monitor's timeline - see item 3 above. The beginning of a zone is set

by clicking [(item 1 in the pic above). The end of a zone is set by clicking] (item 2 in the pic above)

Clip Monitor Right-click menu

The Clip Monitor has a right-click (context) menu as described [here](#).

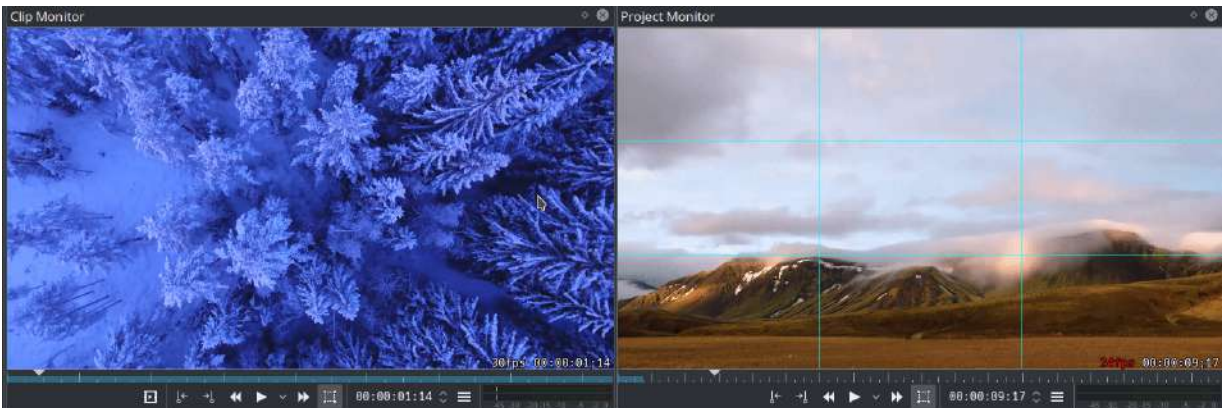
Seeking

New in version 20.08.0.

Inside the clip monitor: hold down `Shift` and move the mouse left/right.

Drag audio or video only of a clip in timeline

New in version 19.04.0.



Move with the mouse to the lower-left corner of the clip monitor to access the Video/Audio icons. Hover with the mouse either over the audio or video icon left click to drag either video or audio part into the timeline.

Project Monitor

The Project Monitor displays your project's timeline - i.e. the edited version of your video.

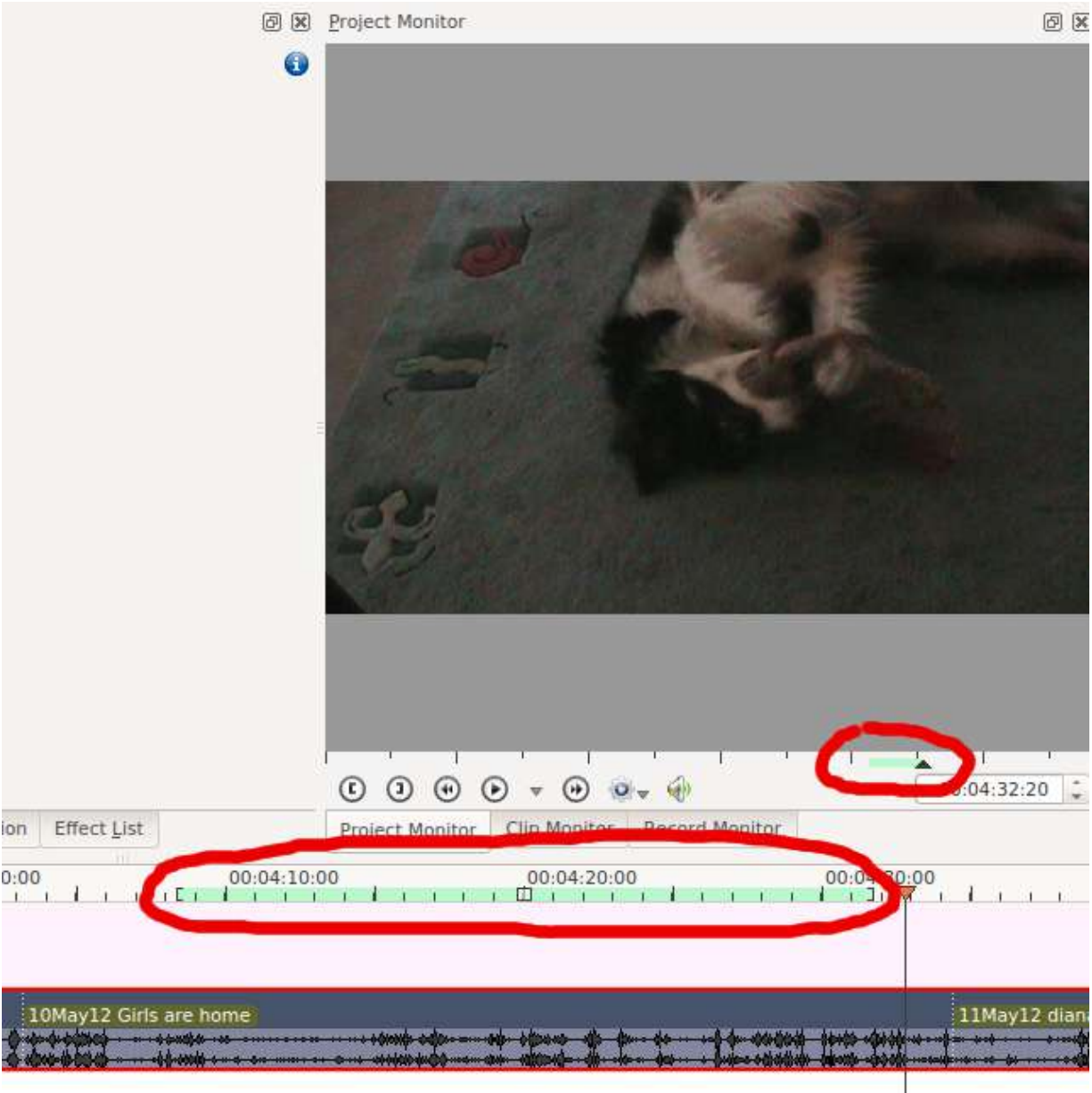


Project Monitor Widgets

1. The position caret. Shows the current location in the project relative to the whole project. You can click and drag this to move the position in the project.
2. The timecode widget. You can type a timecode here and press `Enter` to bring the Project Monitor to an exact location.
3. Timecode widget control arrows. You can move the Project Monitor one frame at a time with these.

Creating Zones in Project Monitor

You can use the `[` and `]` buttons to create a zone in the Project Monitor the same way you make zones in the clip monitor. The zone will be indicated by a colored bar both on the timeline and underneath the Project Monitor.



You can get Kdenlive to only render the selected zone - see [Guide Zone](#).

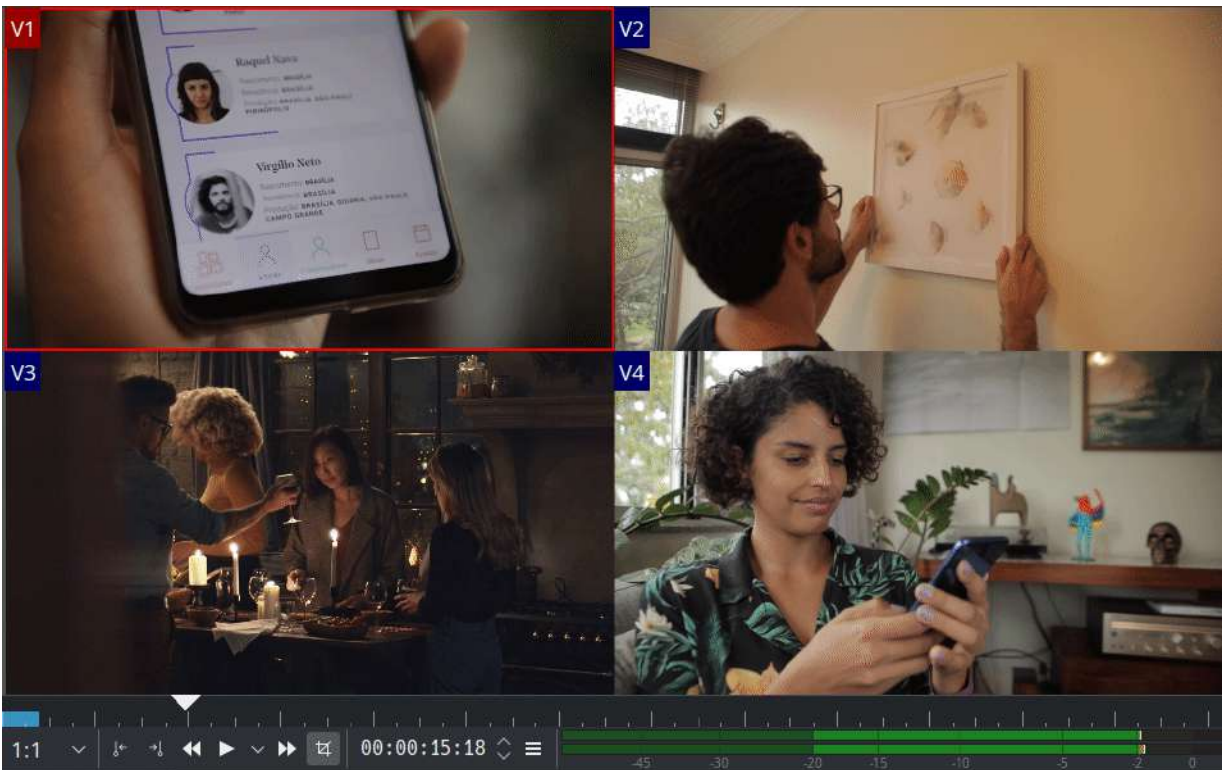
Project Monitor Right-click menu

The project monitor has a right-click (context menu) as described [here](#).

Multicam Editing

New in version 20.04.0.

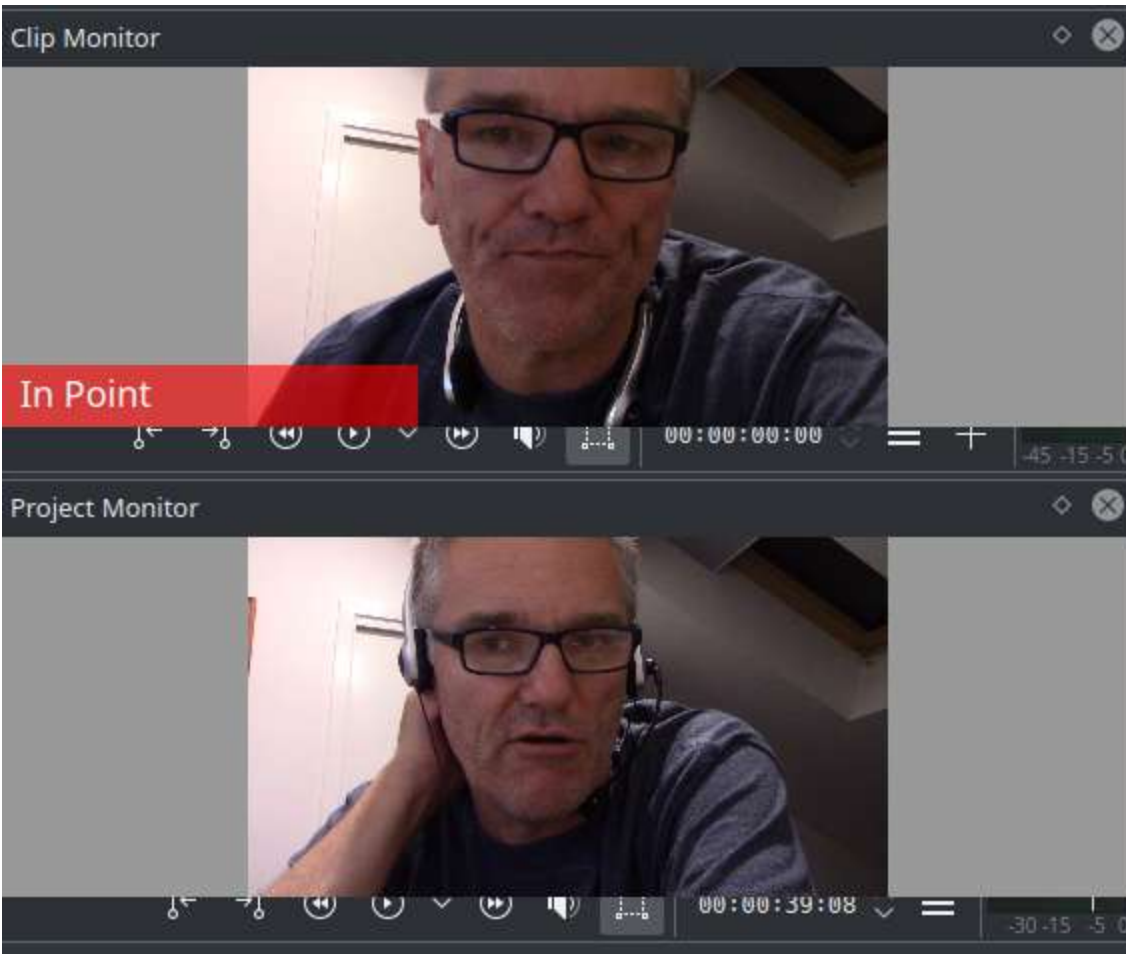
Enable the multitrack view via menu *Monitor* ▶ *Multitrack view*.



New multicam editing interface allows you to select a track in the timeline by clicking on the project monitor.

Separate Clip and Project Monitors

You can click on the Tab names that label the Monitors and drag the monitor out into its own window.



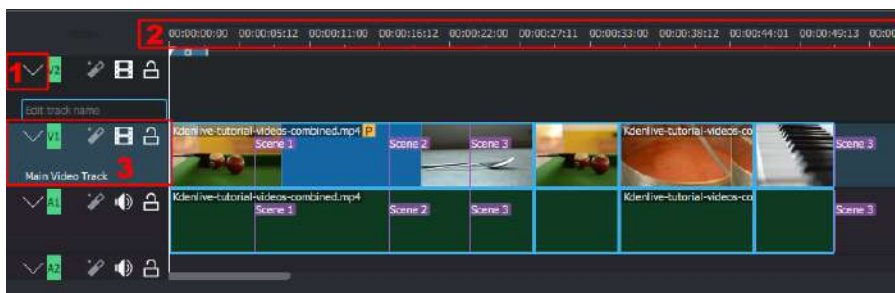
To put the monitors back into the Tabbed view - click on the monitor's title bar and drag the window on top of the other monitor window.

If the monitor has no title bar (intermittent defect) then you can not do this and you will need to reset kdenlive settings by deleting `~/.config/kdenlive`

Timeline

Contents

- [Timeline](#)
 - [Zoombars](#)
 - [Key binding information](#)
 - [Timeline visuals](#)
 - [Split Audio/Video](#)
 - [Timeline Cursor/Position Caret/Playhead](#)
 - [Tracks](#)
 - [Resizing tracks](#)
 - [Keyboard Navigation](#)
 - [Keyframe handling](#)
 - [Configurable tracks](#)
 - [Disabling individual clips](#)
 - [Continuously loop playback](#)







The timeline is the central part of **Kdenlive**. It is made of 4 different areas (see screenshot).

1 - **Track resizing icon**. This icon allows you to adjust the track height in the timeline from normal to small. This does not affect the video or the render in any way. The default height of tracks can be configured in **Kdenlive's** [Configure Kdenlive](#) dialog.

2 - **Timeline ruler.** This shows the time in frames or in hh:mm:ss notation. The area highlighted in green is called the selection zone, and is useful if you want to render only a part of your project. Left-clicking in the timeline ruler will move the [Timeline](#) and seek to that position. The Timeline ruler context menu allows you to manage [Guides](#).

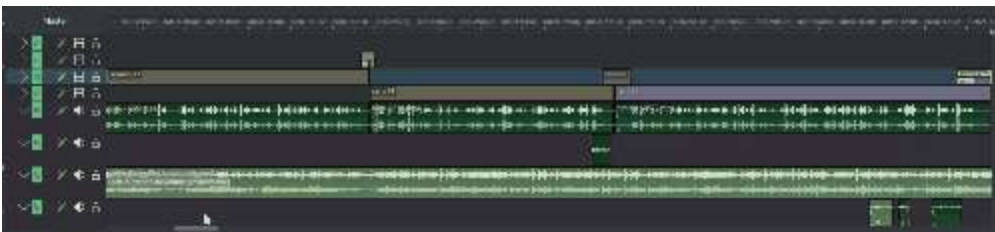
3 - **Track header.** This box shows some options for a track. First is the track name (Main Video Track in the screenshot). That name can be changed by simply clicking in it. Below are icons to

- *Lock the track*  which will prevent adding clips, removing clips, or moving of clips on the timeline;
- *Mute the track* 
- *Hide video*  from this track; and,
- *Enable/Disable track effects*  allows you to enable or disable the effects applied to the track.
- Right clicking in the track header will give you a context menu allowing to manage (add / delete) tracks. See [configure tracks](#)

4 - The track itself, this is where you can drop your clips.

[Zoombars](#)

New in version 21.04.0.



Besides the availability of zoombars in the monitor and keyframe scroll bars, zoombars are now available in the timeline as well. You can easily zoom in/out in the timeline by dragging the edges of the timeline scrollbar. (Vertical zoombars coming soon.) Recommend playing this video in full-screen mode.

Key binding information

New in version 21.04.0.

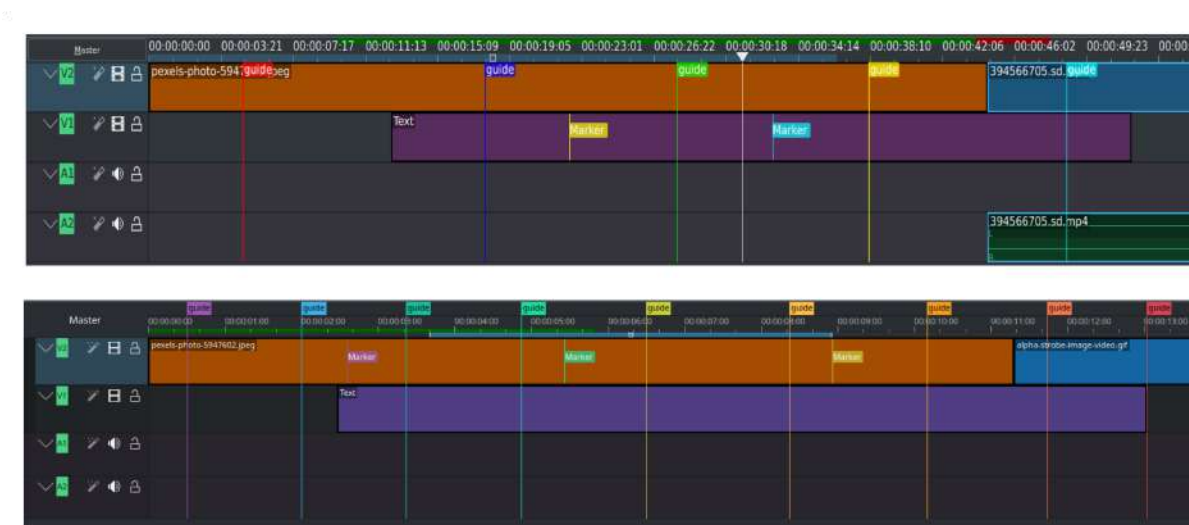


Key binding info has been added on the left while context item information has been moved to the right of the [Status Bar](#). Recommend playing this video in full-screen mode.

Timeline visuals

New in version 21.04.0.

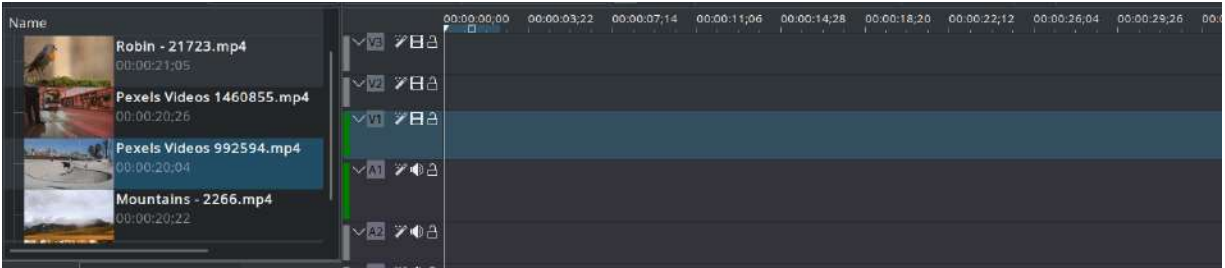
The timeline got a visual overhaul with more and better looking guides/marker colors, the guides have been moved above the timeline ruler while preview and zone bars have been moved below.



Before (above) and after (below)

Split Audio/Video

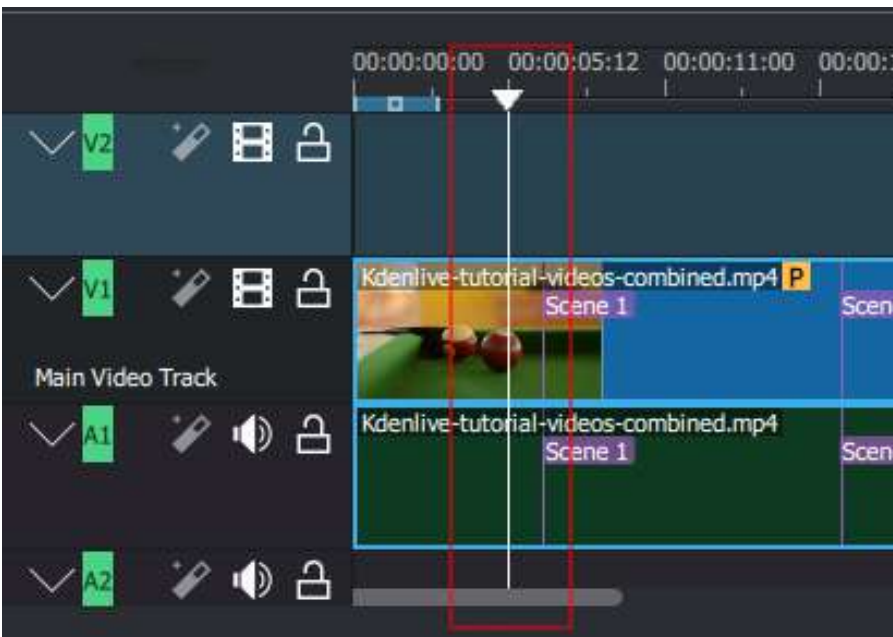
New in version 19.04.0.



The way timeline tracks work has changed. Each track is now either audio or video, and will only accept audio and video clips respectively. When dragging an AV clip from the project bin in the timeline, the clip will be automatically split, the video part going on a video track, and the audio part on an audio track.

The separation of audio/video is important for implementing [same-track-transitions](#).

[Timeline Cursor/Position Caret/Playhead](#)



This indicates the position we are displaying in the [Monitors](#). You can scroll the position by dragging the Timeline cursor (a.k.a Position Caret or Playhead).

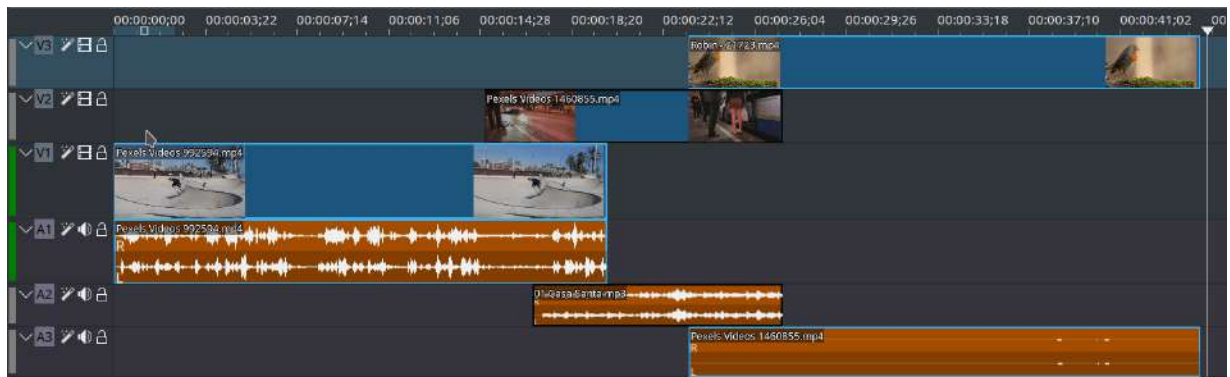
Beginning with version 0.9.4, dragging the timeline cursor will play the audio of the clip (a.k.a. Audio Scrubbing). This feature only works if you have checked *Use Open GL for video display* in [Configure Kdenlive](#).

Tracks

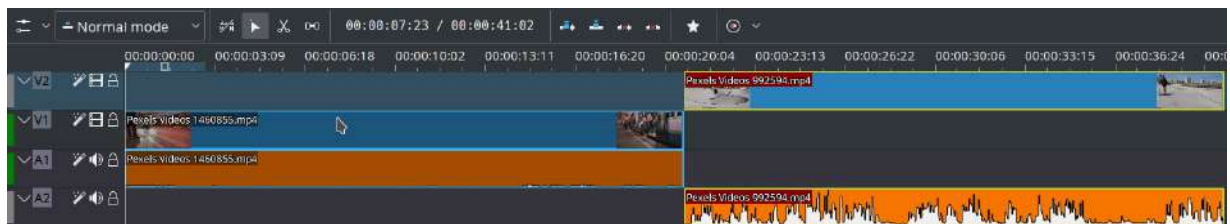
The timeline is made of tracks. There are two kinds of tracks: audio and video. The number of tracks is defined when creating a new project in the [Project Settings Dialog](#). Adding a clip in timeline can be achieved by dragging it from the [The Project Bin](#) or the [Monitors](#). More about tracks see [Tracks](#)

Resizing tracks

New in version 19.04.0.



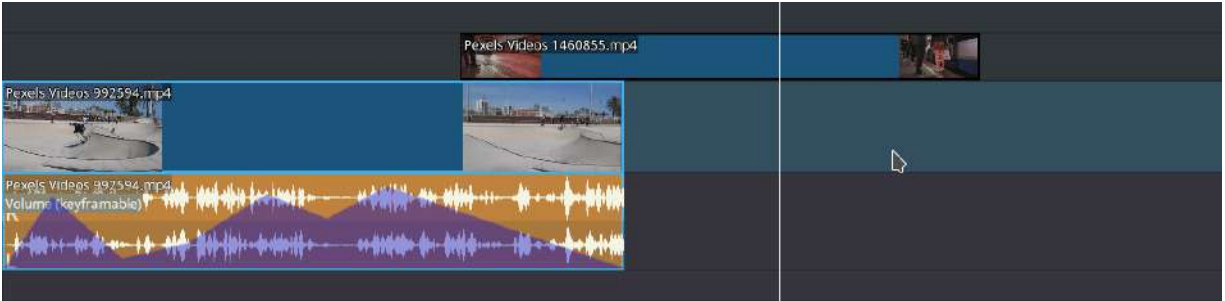
Tracks can be individually resized. (Holding down `Shift` makes all video or audio tracks change in height simultaneously.)



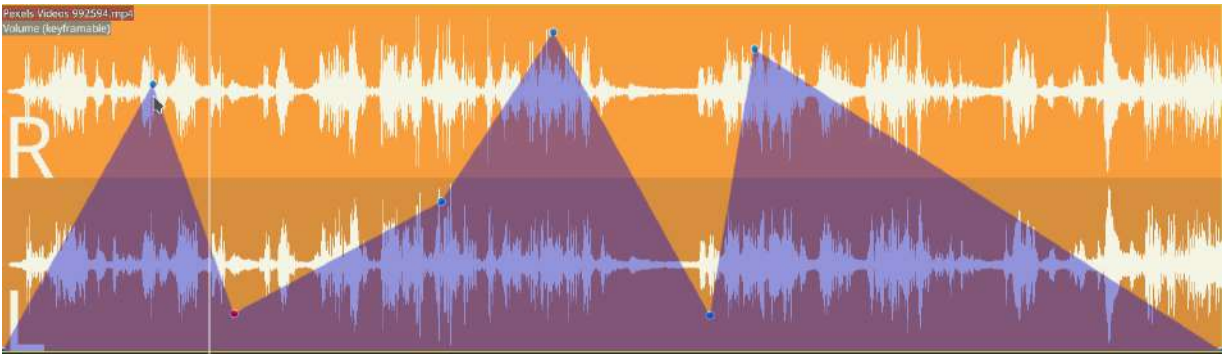
Switch live between two different layout modes (Mixed or Split).

Keyboard Navigation

New in version 19.04.0.



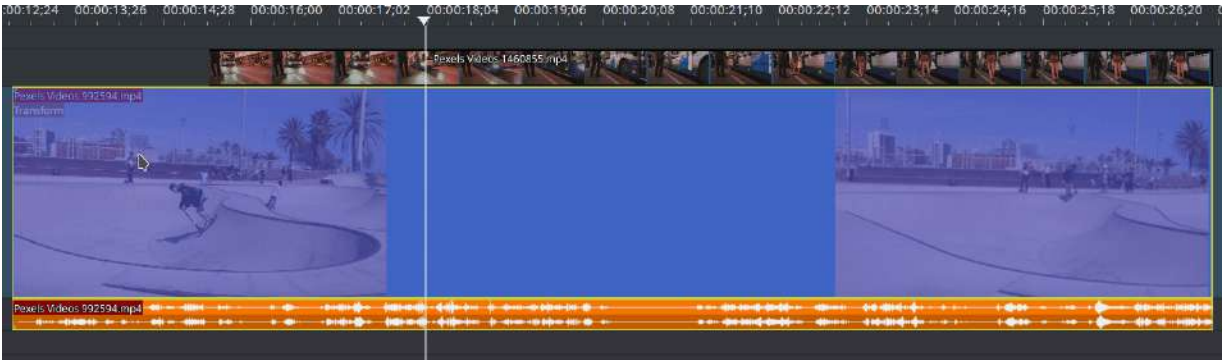
You now have the possibility to move clips and compositions with your keyboard. To do it, select a clip in timeline and use the *Grab Current Item* (Shift + G) function from the *Timeline* menu.



You can then move the item with your arrow keys. Keyframes can also be moved individually. Just click on a keyframe in timeline, then move it left/right with arrows, change its value with + and -. Alt + arrow to go to another keyframe.

Keyframe handling

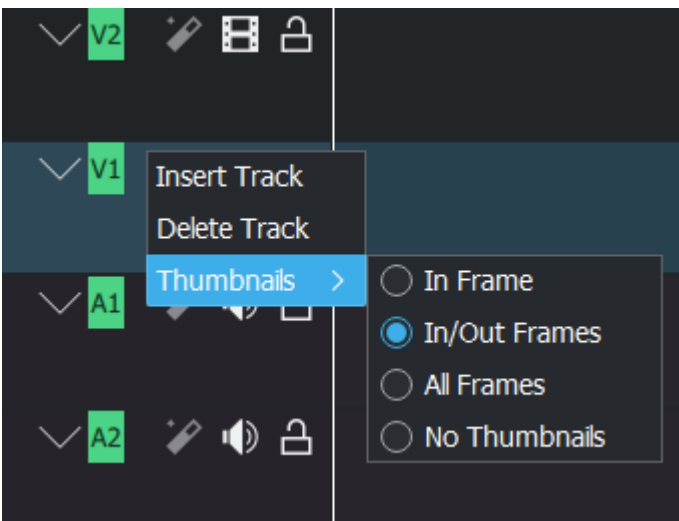
New in version 19.04.0.



- Add a new keyframe by double clicking in timeline.
- You can move a keyframe without altering its value by using the vertical line that appears when you are above or below a keyframe.
- Remove a keyframe by dragging it far above or below the clip limits.

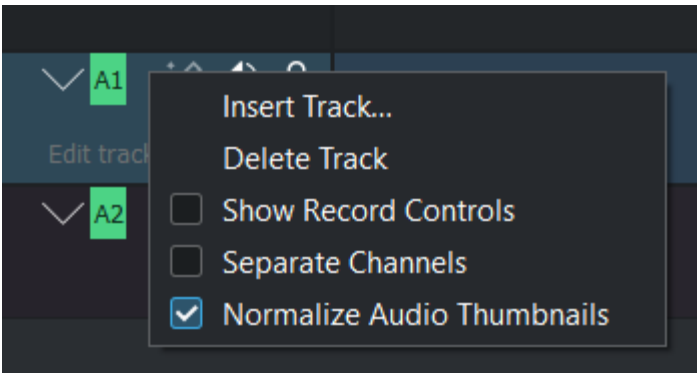
Configurable tracks

New in version 19.04.0.



Video track: You can choose to display between:

- *In frame*
- *In/Out frames*
- *All frames* or
- *No thumbnails.*

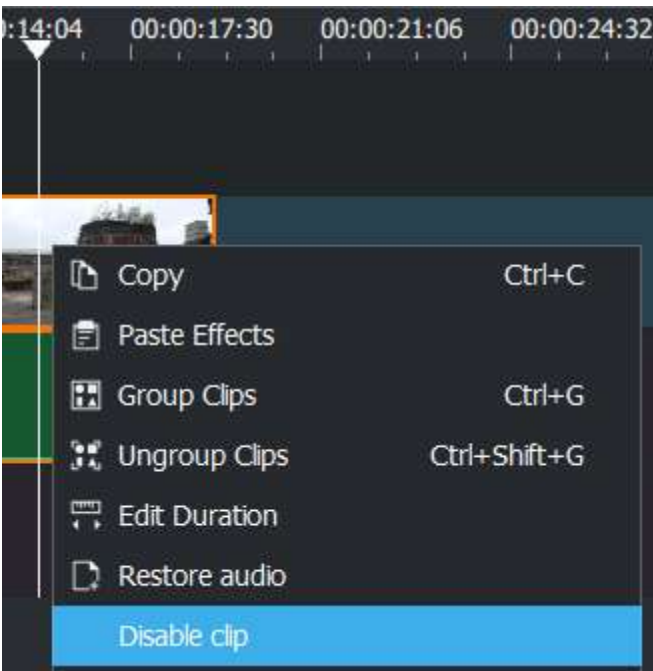


Audio track: You can enable:

- *Show Record Control* to record audio direct into the track. More details see [Audio recording](#).
- *Separate Channels* to see each channel of an audio track (i.e stereo, 5.1)
- *Normalize Audio Thumbnails* maximize the audio level peak to -3dB.

[Disabling individual clips](#)

New in version 19.04.0.



Individual clips can be disabled while still in the timeline but with no audio and no video – (works for all clip types). Right-click on the clip and choose *Disable clip* or *Enable clip*.

[Continuously loop playback](#)

- Disable *Pause playback when seeking* in [Timeline](#) settings (*Settings* ▸ *Configure Kdenlive* ▸ *Timeline*).
- Make a timeline zone the length you like to loop.
- Loop Zone (Ctrl + Shift + Space)

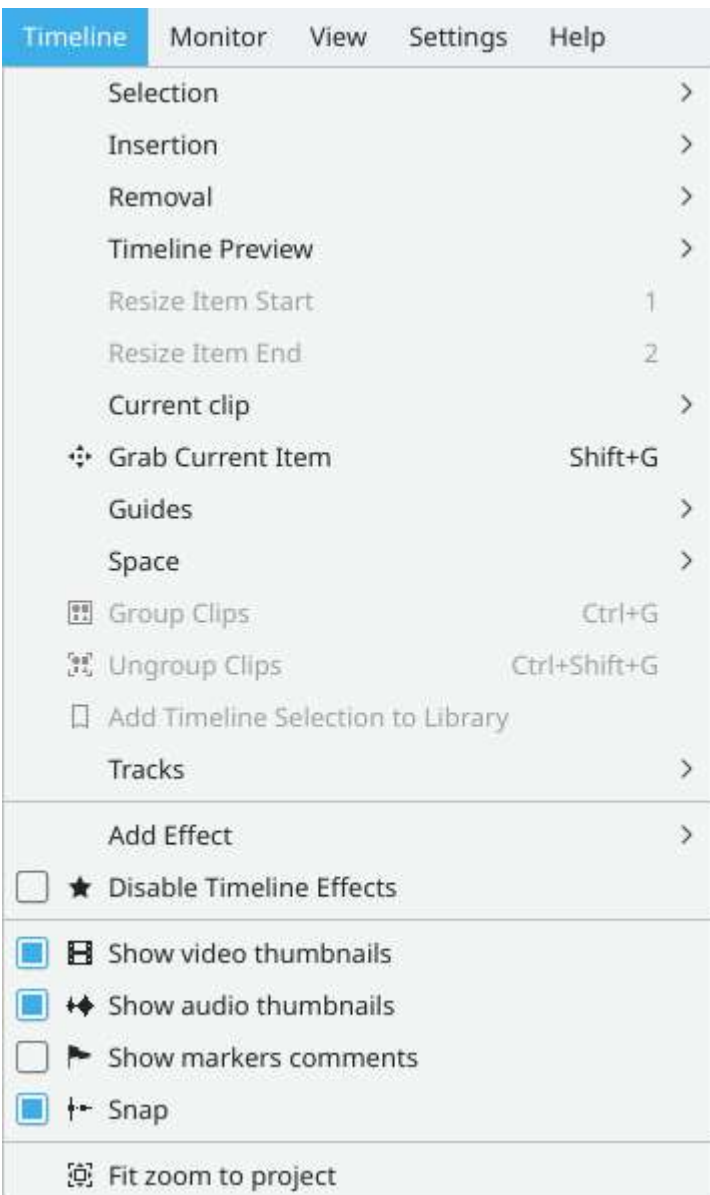
See also:

- [Timeline Menu](#)

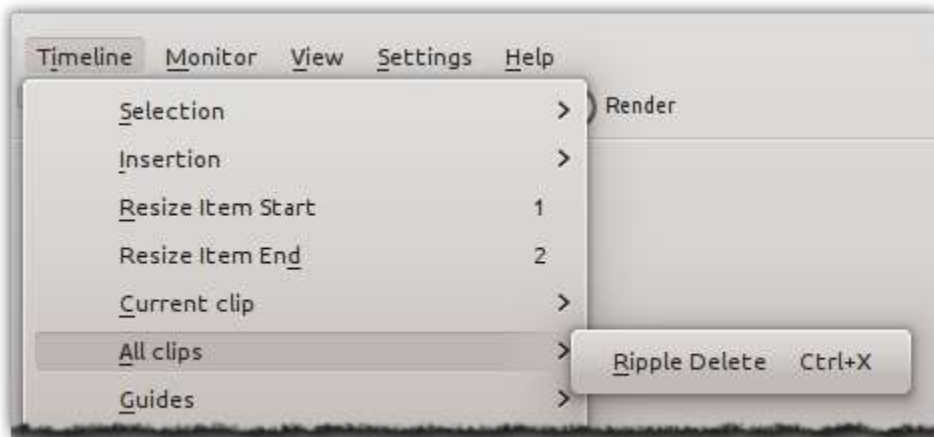
Timeline Menu

Contents

- [Timeline Menu](#)



- Resize Item Start
- Resize Item End
- Current Clip
- [Guides](#)
- Group Clips
- Ungroup Clips
- Add Effect
- Show video thumbnails
- Show audio thumbnails
- Show markers comments
- Snap
- Zoom In
- Zoom Out
- Fit zoom to project
- *All clips ▸ Ripple Delete*



Contents:

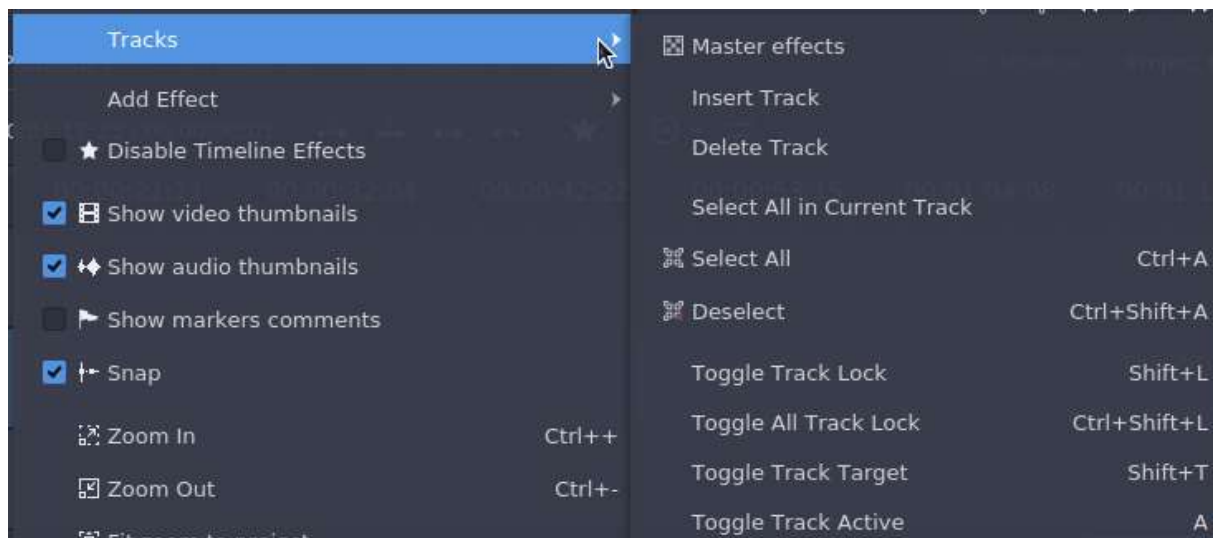
- [Tracks](#)
 - [Master effects](#)
 - [Insert Track](#)
 - [Delete Track](#)
 - [Select All in Current Track](#)
 - [Select All](#)
 - [Deselect](#)
 - [Toggle Track Lock](#)

- [Toggle All Track Lock](#)
- [Toggle Track Target](#)
- [Toggle Track Active](#)
- [Insert Clip Zone in Timeline](#)
- [Timeline>Space](#)
 - [Insert Space](#)
 - [Remove Space](#)
- [Selection Menu](#)
- [Current Clip Menu](#)
 - [Cut Clip](#)
 - [Delete Selected Item](#)
 - [Edit Duration](#)
 - [Save clip](#)

Tracks

Contents

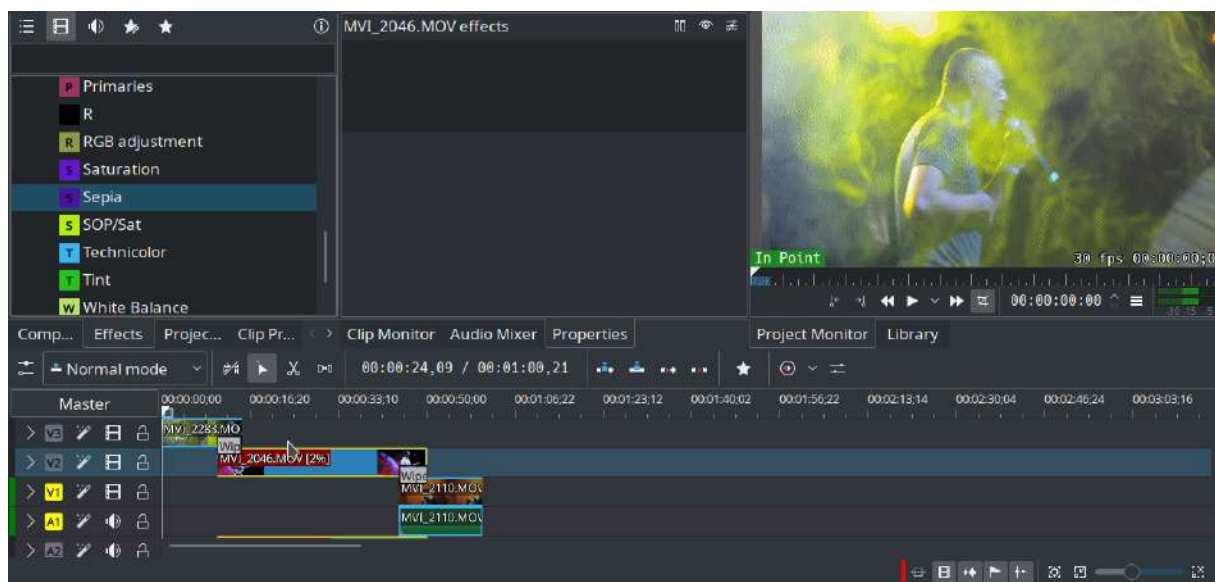
- [Tracks](#)
 - [Master effects](#)
 - [Insert Track](#)
 - [Delete Track](#)
 - [Select All in Current Track](#)
 - [Select All](#)
 - [Deselect](#)
 - [Toggle Track Lock](#)
 - [Toggle All Track Lock](#)
 - [Toggle Track Target](#)
 - [Toggle Track Active](#)



The submenu for inserting/deleting tracks can also be displayed by right-clicking the track title (anywhere except the track name).

Master effects

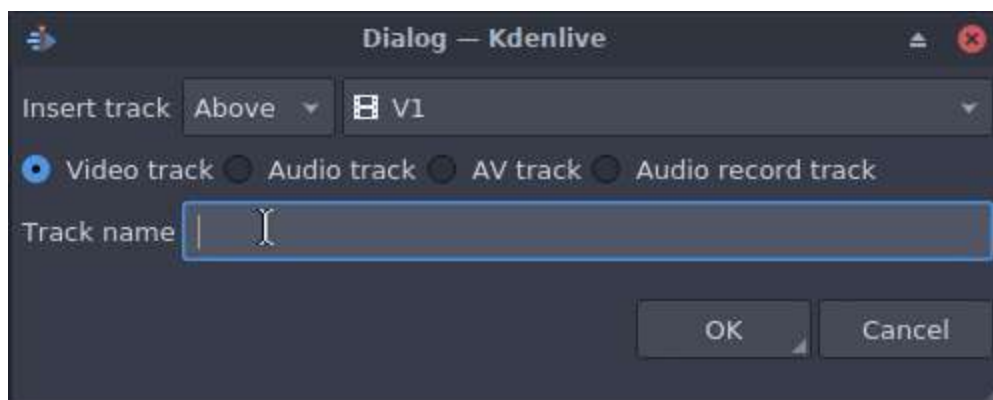
New in version 19.12.0.



Let user quickly apply audio or video effects to all tracks. This can be useful if you want one or more effects to be applied throughout the video.

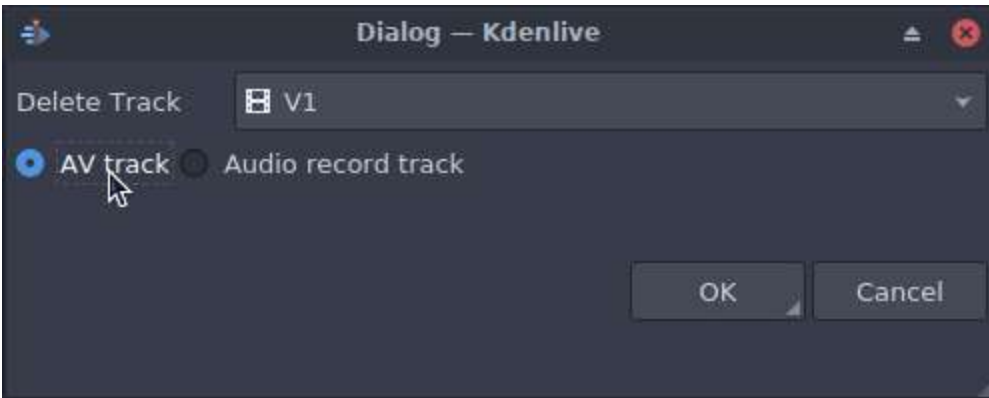
Click the *Master* button above track headers to see master effect stack.

Insert Track



Displays a dialog which lets you choose which type of track to insert and where – before or after a specified existing track.

Delete Track



Displays a dialog which lets you choose which track to delete.

[Select All in Current Track](#)

Selects all clips in the current track.

[Select All](#)

Selects all clips in all tracks.

[Deselect](#)

Cancels the selection.

[Toggle Track Lock](#)

Disables or allows editing on the selected track.

[Toggle All Track Lock](#)

Disables or allows editing on all tracks.

[Toggle Track Target](#)

Click to toggle track as target. Target tracks will receive the inserted clips.

Toggle Track Active

Click to make track active/inactive. Active tracks will react to editing operations.

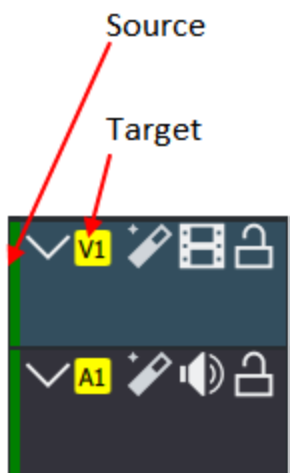
Insert Clip Zone in Timeline

Contents

- [Insert Clip Zone in Timeline](#)

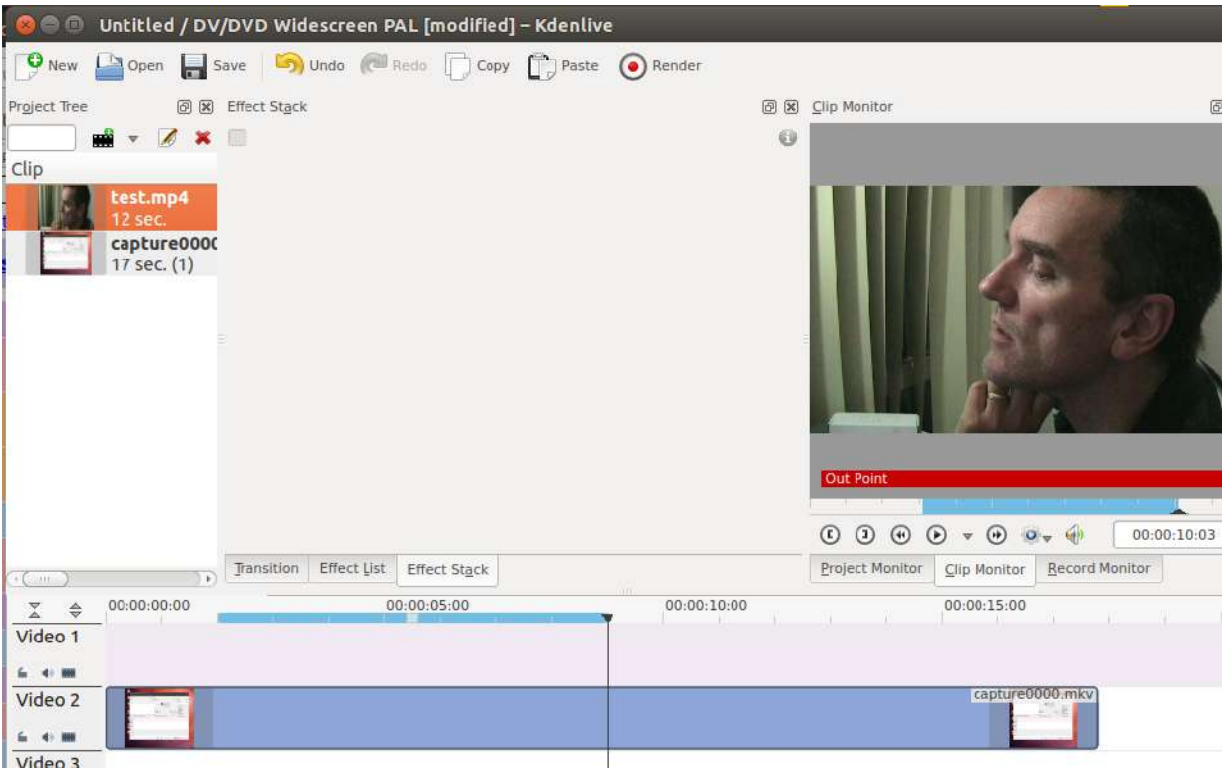
This menu item is available in the *Timeline* Menu on the *Insertion* sub menu. Shortcut is v

Keyboard command “v” and “b”: Since version 19.08 “3 point editing with keyboard shortcuts” is implemented. Source and target has to be activated that the clip gets inserted into the timeline.



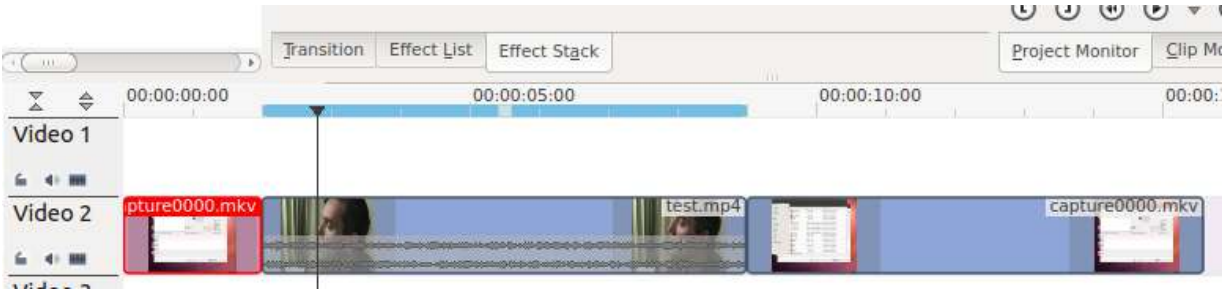
More info here: <https://kdenlive.org/en/2019/08/kdenlive-19-08-released/>

Say you have a 10 sec. zone defined on a clip in Clip Monitor and on the timeline you have a 20 sec. zone defined somewhere. When you press v or select *Insert Clip Zone in Timeline (overwrite)* , it will insert the 10 sec. segment of the clip from the Clip Monitor at the beginning of the zone on the timeline. If there happens to be another clip there already, it will overwrite it, completely or partially, depending on how long the existing clip was.



Regions selected on time line and in clip monitor - blue regions.

Select *Insert Clip Zone in Timeline (overwrite)* and the section in the clip overwrites the section on the timeline



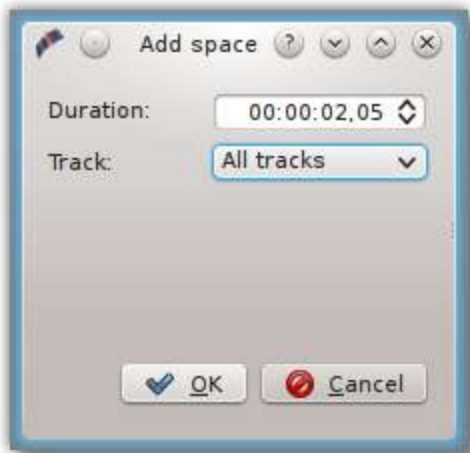
Timeline>Space

Contents

- [Timeline>Space](#)
 - [Insert Space](#)
 - [Remove Space](#)

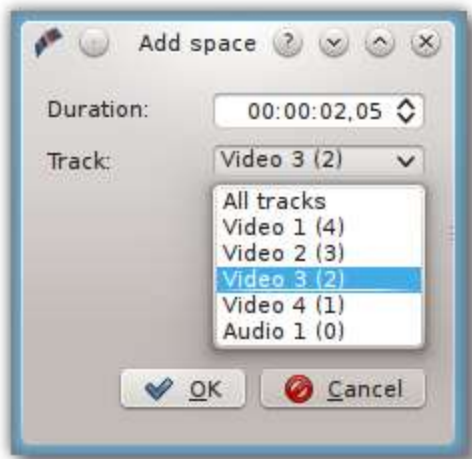
Insert Space

Space brings up a submenu with *Insert Space* and *Remove Space* options. Inserting a space is a useful feature when you want to push all the existing clips on the timeline aside to make room for new clips but also want to preserve the relationships among all the clips that were shifted, including their transitions.



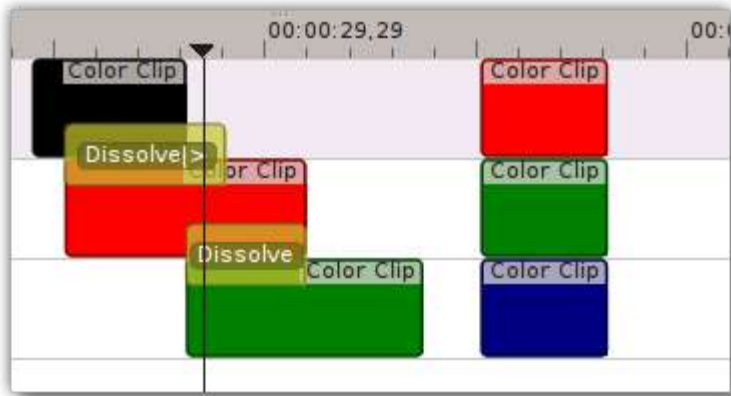
In addition to invoking this menu from *Timeline* ▸ *Space*, you can also bring it up by right-clicking on an empty spot on a track in the timeline. There are a couple of important differences with how *Insert Space* behaves, though, depending on which method you choose. First, using *Timeline* ▸ *Space* ▸

Insert Space brings up the **Add Space** dialog shown in Figure 1 where the default choice for **Track:** is *All tracks*.

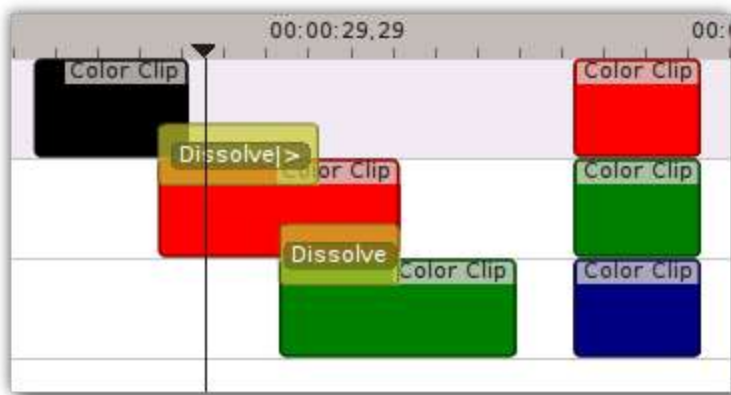


When you access the menu by right-clicking on a track, the same dialog appears but the default is the track you clicked on. In either case, you can obviously override the default by picking another option (Figure 2). The other difference is that the insertion happens at the playhead when the operation originates from the Timeline menu; it takes place at the mouse cursor position when right-clicking.

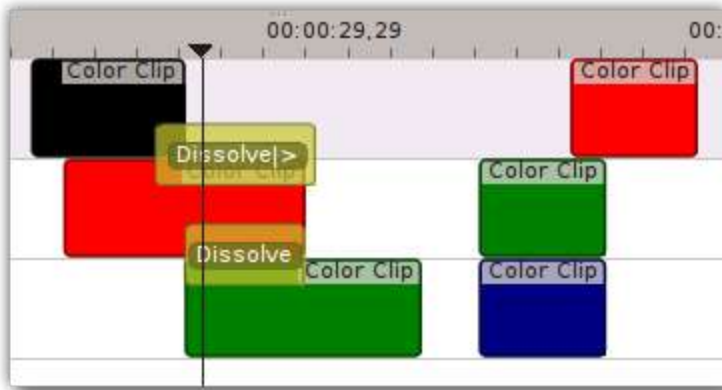
And in case you're wondering, the default **Duration** for the inserted space is 65 frames, which is not configurable in the Kdenlive or Project settings. 65 frames will equate to different amounts of time depending on the frame rate set in your project profile. In the example, our project's frame rate happens to be 30 fps and that's why the default **Duration** works out to be 00:00:02.05.



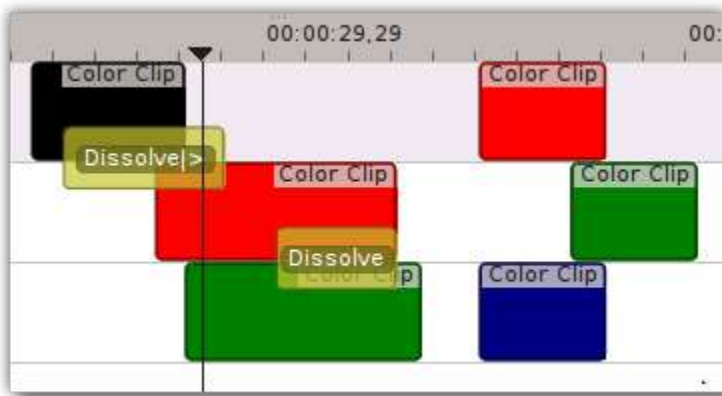
Let's look at an example, albeit an unrealistic one, of how inserting a space from the playhead position will affect clips and transitions on different tracks. In general, inserting a space will shift any clips that the playhead is touching as well as all clips to the right of the playhead on the affected track(s). Transitions are a little trickier because they span two tracks. They are assumed to "belong" to the higher track (regardless of the direction of the transition) and so if the playhead is touching them, they will go if the higher track is included in the shift. Figure 3 shows a scenario with clips on three video tracks before inserting a space. All of the following examples assume we're starting from this position.



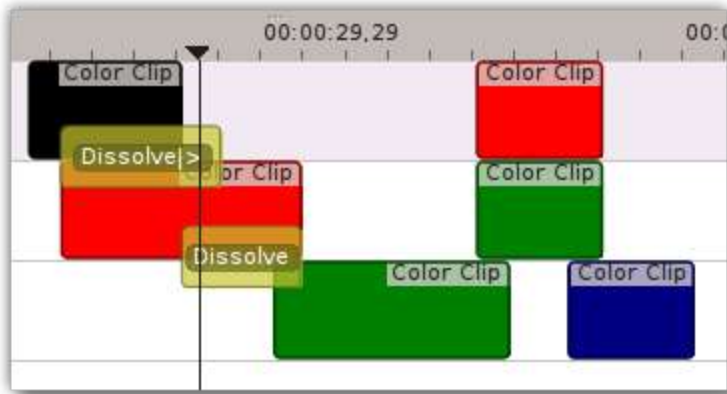
In Figure 4, we have chosen to insert a space on *All Tracks*. Since the playhead was touching both transitions and the color clips on tracks 2 and 3, it shifted them, along with all the clips to the right of the playhead. It did not shift the black clip on track 1 because it was to the left of the playhead.



In Figure 5, we chose Track 1. The transition went because it “belongs” to the black clip on track 1, but the clip itself did not go because it was to the left of the playhead. The red clip on track 1 also went because it was to the right of the playhead.



In Figure 6, we shifted the clips on Track 2. Now the Dissolve transition between tracks 1 and 2 does not shift, even though the playhead was touching it, because it belongs to track 1. The other transition does go, because it belongs to the higher track 2.



Finally, In Figure 7, we chose track 3 and just the clips move.

If we had started this process by right-clicking on a spot on track 1 or track 3 which corresponds to the playhead position in the example, the results would have been the same.

Remove Space

Remove Space is not the exact opposite of *Insert Space*.

The similarities are:

- If you access *Remove Space* from the *Timeline* menu, the playhead governs where the removal will happen. When using right-click, it happens at the mouse cursor.
- Transitions will move with clips on the higher track.

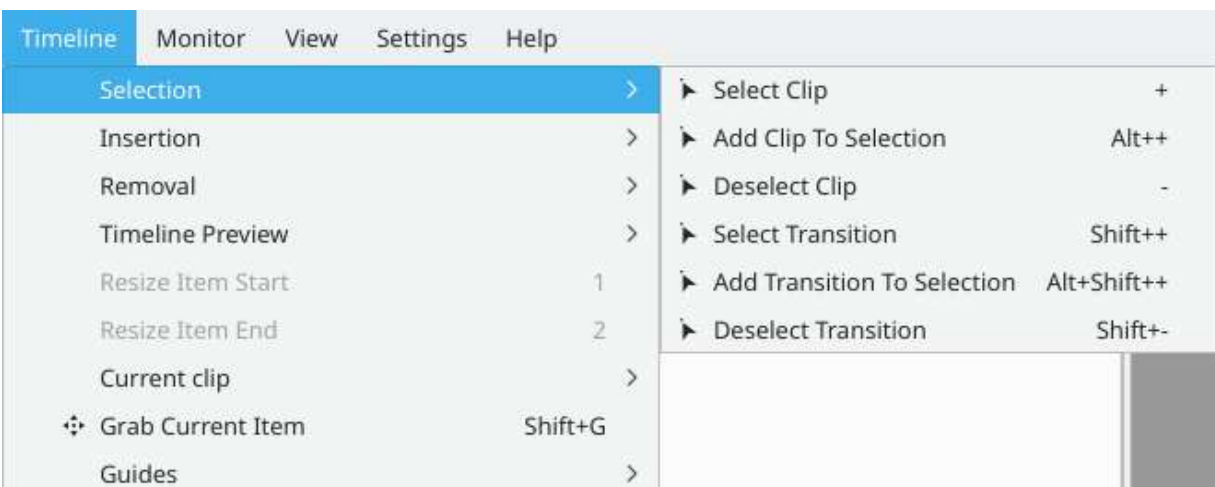
There are the following differences:

- It only works on one track at a time – there is no *All Tracks* option.
- If you accessed *Remove Space* from the *Timeline* menu, the playhead must be on an empty space in the track where the space is to be removed.
- You can not set the duration of the space to be removed – all the empty space between clips is removed. All the clips and transitions to the right of the playhead or mouse cursor will be shifted left until the first clip encounters another clip or the beginning of the track.

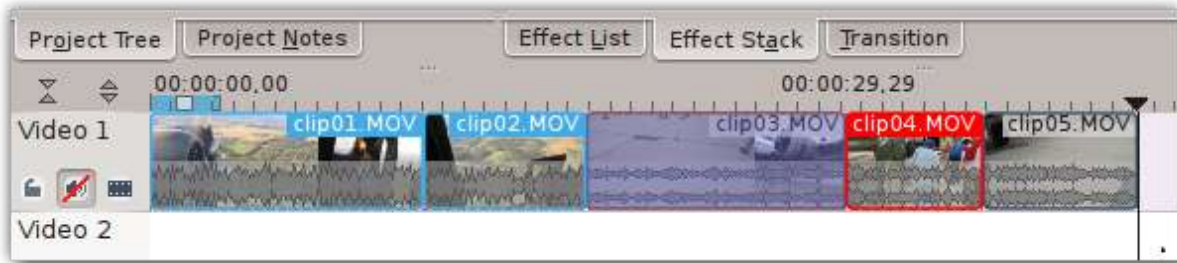
Selection Menu

Contents

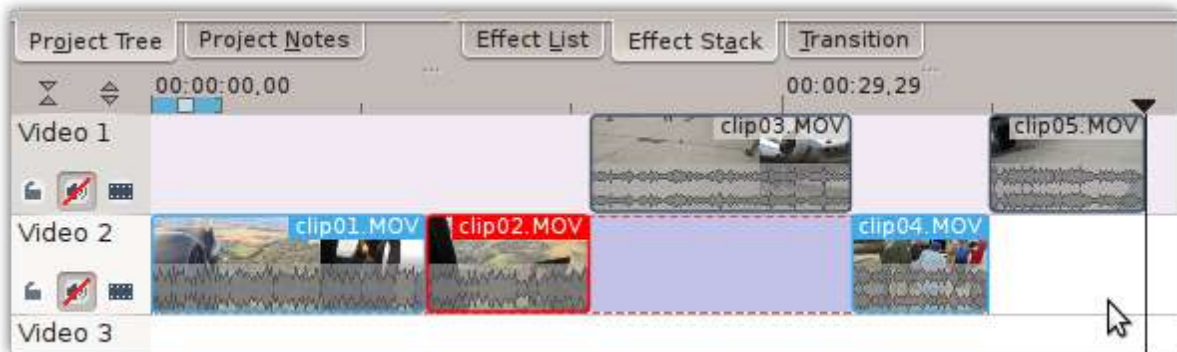
- [Selection Menu](#)



The purpose of this submenu is to allow you to select multiple clips or transitions on the timeline for the purpose of performing operations on all of them simultaneously. However, it should be said up front that making selections this way is not very practical. That's because, in order to select a clip or transition using this menu, you must first position the playhead on it. A much quicker and easier way is to press `Ctrl + left-click` on each clip you want to add to the selection. The clips do not have to be contiguous to be selected using this method. If the clips you want to select are all contiguous, you can press `Shift + left-click` and drag your mouse over all the clips.



In Figure 1, three of the five clips on the timeline have been selected using the `Ctrl + left-click` method. At first, it might be difficult to tell which clips are part of the selection because of the different colors. Kdenlive indicates that a clip is selected by changing the color of the filename text to white; unselected clips show the filename with black letters. So even though two of the selected clips have a light blue outline and the third is outlined in a red border, they are all part of the same selection (the *clipxx.MOV* filenames are all in white). Conversely, *clip03.MOV* and *clip05.MOV* are not part of the selection – their text is black.



Now that multiple clips have been selected, you can do things like moving, copying, pasting or deleting all of them at once. Or you can use the [Grouping](#) option to perform other advanced operations on the clips. Figure 2 shows that the selected clips from Figure 1 have been moved to another track by grabbing any of the selected clips with the mouse and dragging them. Clicking anywhere outside of the selected clips will unselect all of them. Note however, that if you had used the **Group Clips** option on the selections, the clips will still be grouped even though they are no longer selected.

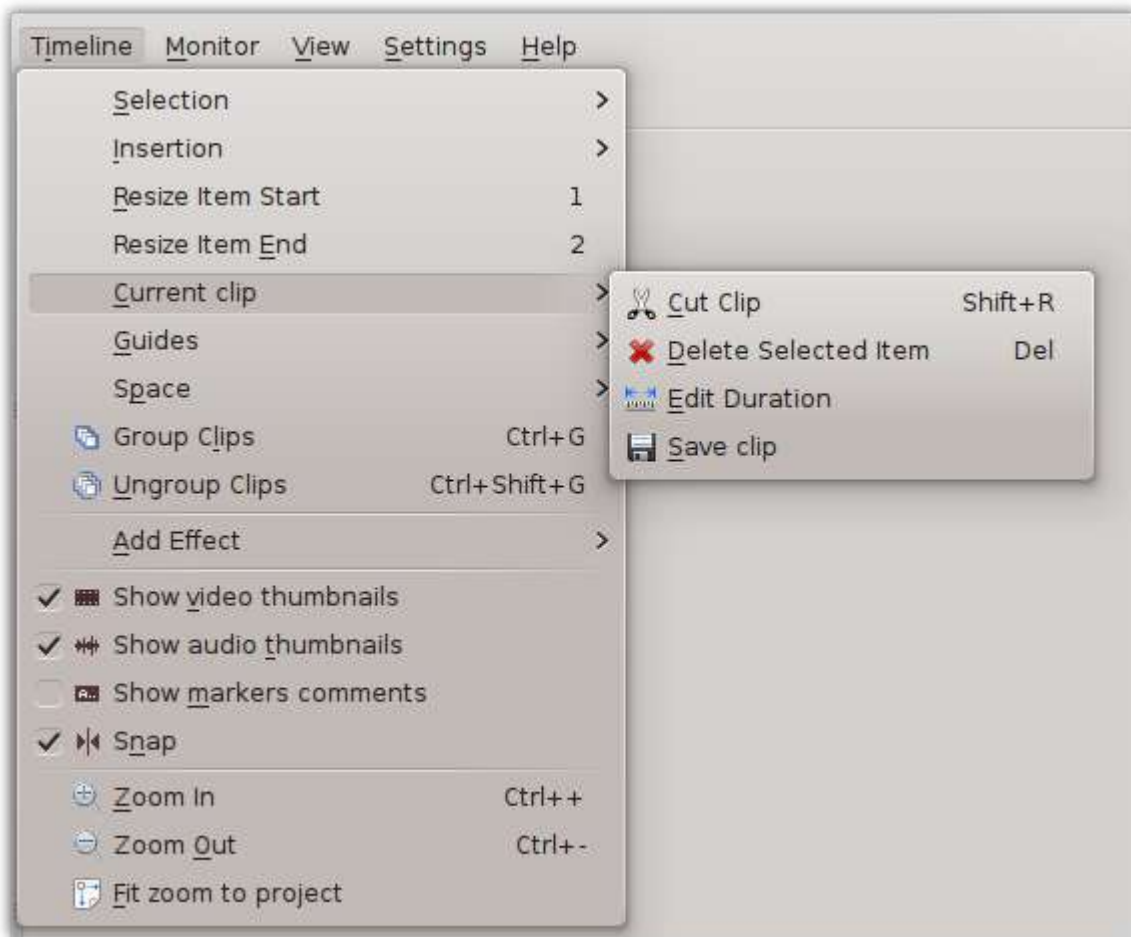


Selecting multiple transitions works just like selecting clips. Click on the first one and then `Ctrl + left-click` on as many others as you'd like to add to the selection. Figure 3 shows two **Dissolve** transitions selected. These transitions can now be copied, moved, deleted, etc. just as with clips.

Current Clip Menu

Contents

- [Current Clip Menu](#)
 - [Cut Clip](#)
 - [Delete Selected Item](#)
 - [Edit Duration](#)
 - [Save clip](#)



Before using the operations on this menu, you must first select the clip or clips on which you want to make the changes. The first two menu choices, *Cut Clip* and *Delete Selected Item*, can be performed on either a single clip or a group of clips. The other two, *Edit Duration* and *Save clip*, will only work on a single clip.

Cut Clip



Figure 1.

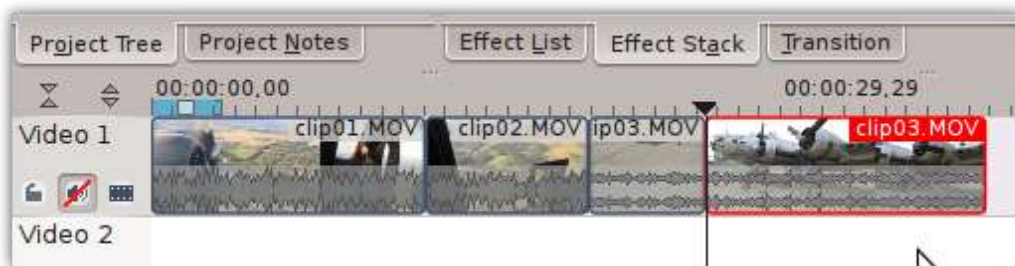


Figure 2.

Cut Clip performs the same operation as the [Editing](#), but it works differently. When the Razor tool is enabled, you can click on any clip on the timeline and that clip will be cut where you clicked. To use *Cut Clip* from the menu or its `Shift + R` keyboard shortcut, you must first select the target clip or clip group and then position the playhead where you want the cut to occur. Figures 1 and 2 show the before and after of such an action. Unlike using the Razor tool, you can even cut a clip this way while it is playing (again, as long as it is selected first). If you try to perform the operation when the playhead is on an unselected clip, nothing will happen.

Delete Selected Item

This menu choice does just what it says. Selected clips will be deleted from the timeline (but not from the project). If multiple clips are selected or grouped, they will all be deleted.

Edit Duration

This option is an alternative to dragging with the mouse for changing not just the duration but also the position of clips on the timeline. Adjusting the time values directly with spin boxes gives more fine-grained control than dragging with the mouse. A quicker way than using the menus to bring up the **Duration** dialog is to simply double-click on a clip in the timeline.

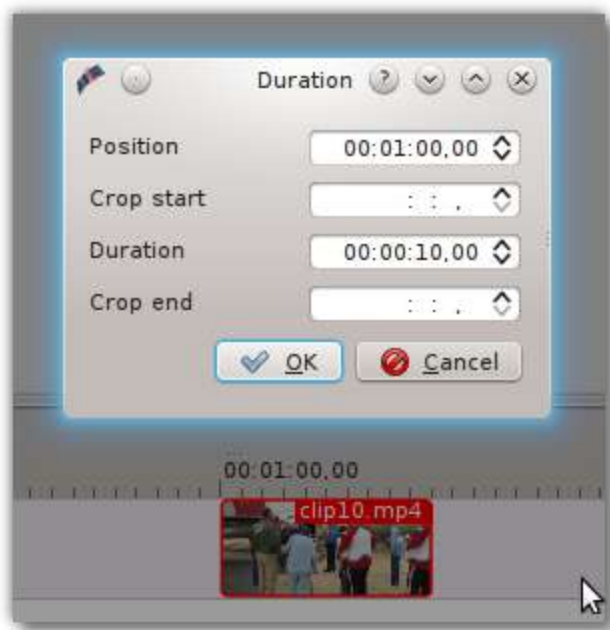


Figure 3.

Figure 3 shows an example of a 10-second clip located at the 1 minute position on the timeline. You can see that the *Crop start* and *Crop end* values are blank. This indicates that 10 seconds is the full, uncut length of the clip. We can't increase its duration (there's just no more material available) but we can crop it to remove material from the beginning, end, or both.



Figure 4.

Figure 4 shows the result of cropping 1 second from the start and end of the clip. This leaves an 8-second clip, still positioned at the 1 minute mark on the timeline. In the case of the example, we could also adjust its position because there is empty space on either side of the clip. If there happened to be other clips adjacent to the selected clip, you would not be able to adjust its position with this method, even if you have [Editing](#) enabled. This is a case where dragging the clip with the mouse does have an advantage.

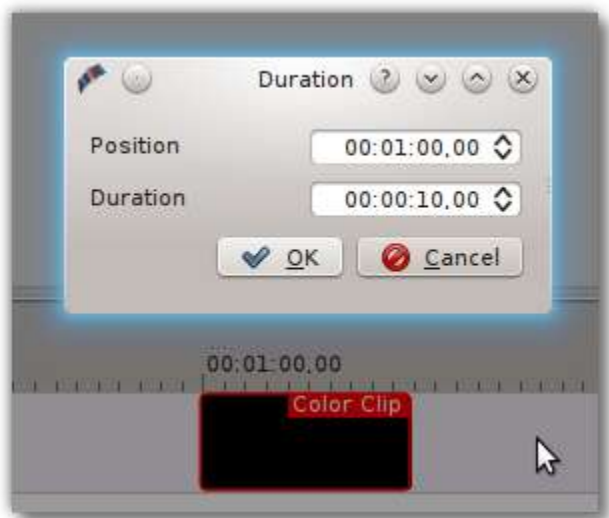


Figure 5.

The examples shown above apply to video clips. Still images, Color and Title clips are a slightly different. Since their content is static, the concept of cropping doesn't apply to them. Therefore, if you double-click on one of those clips, you will only be offered options to change "Position*and*Duration" (Figure 5).

Save clip

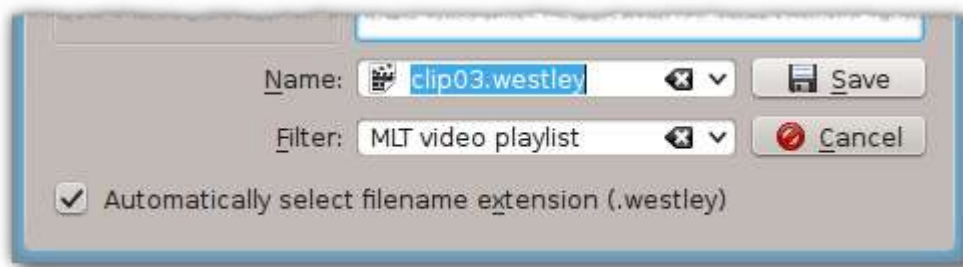


Figure 6.

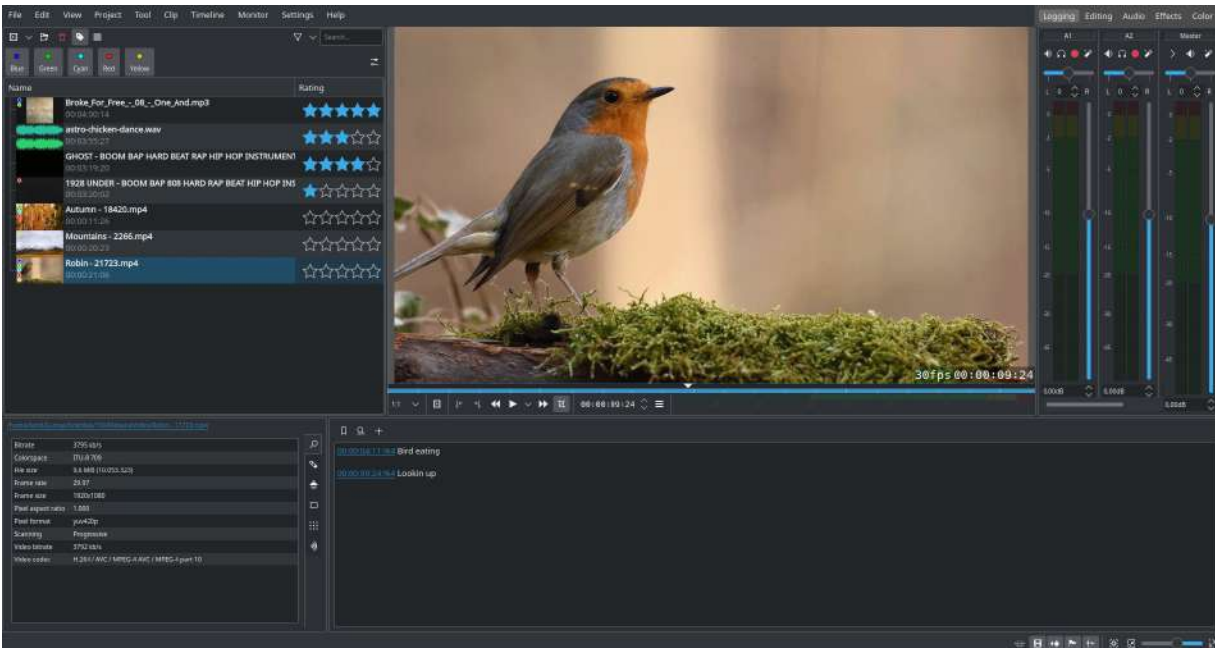
Use this option to save a copy of the current clip as an XML file. When you select it, you will be presented with the **Save As** dialog, a portion of which is shown in Figure 6. The saved file is basically a proxy clip which points back to the original file. It not only references the original selected clip but also stores all the properties of that clip, including any effects (but not transitions) which were applied when you did the save. The saved file can be added back as a clip to the project and used on the timeline like a regular video clip. It will retain the properties of the original source clip as they were when you saved them, even if you go back later and modify the source clip.

Workspace Layouts

Contents

- [Workspace Layouts](#)

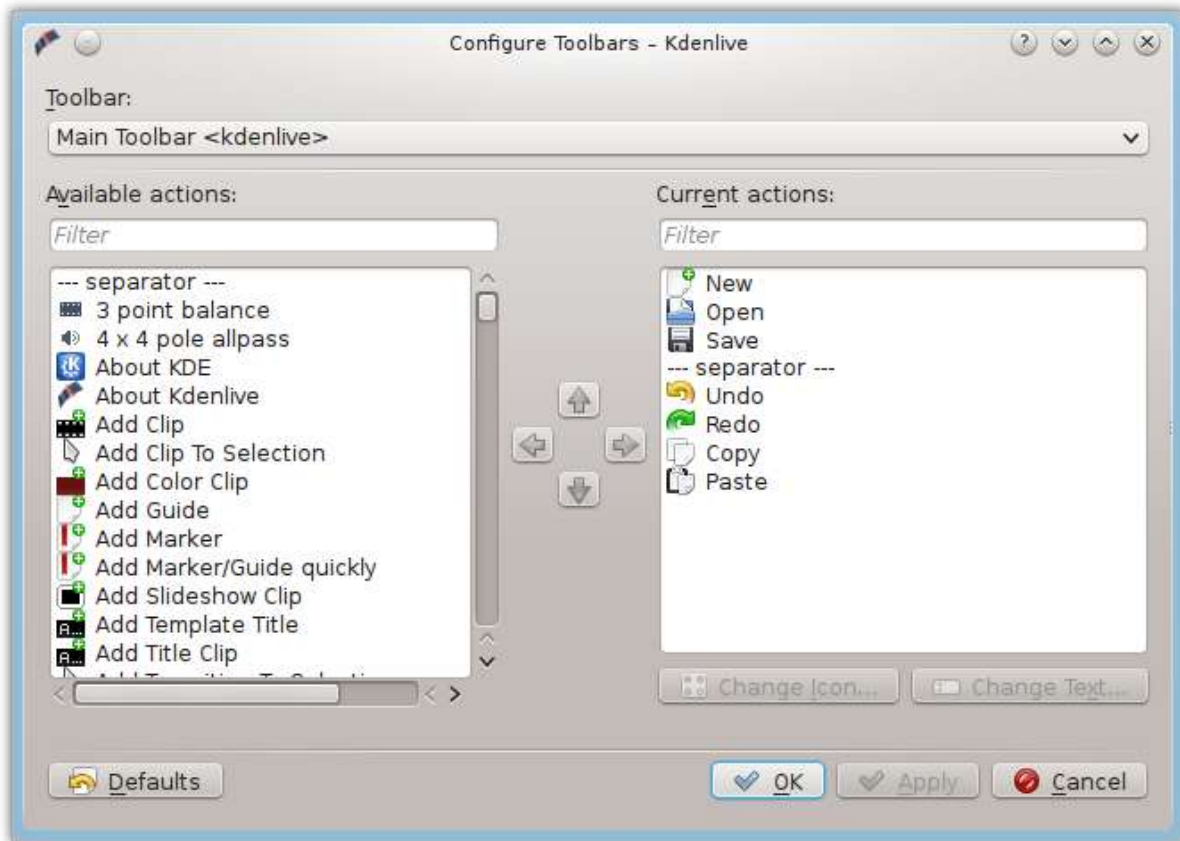
New in version 20.08.0.



These workspaces aim to improve the layout for each stage of video production:

- **Logging** for reviewing your footage
- **Editing** to compose your story in the timeline
- **Audio** for mixing and adjusting your audio
- **Effects** for adding effects
- **Color** for adjusting and color grading

Check out this [video](https://www.youtube.com/watch?v=BdHbUUjfBLk) [https://www.youtube.com/watch?v=BdHbUUjfBLk] for more details.



[Hiding and Showing the Toolbars](#)

You can toggle the hiding and showing of the toolbars from the [View Menu](#) using the *Main Toolbar* and *Extra Toolbar* menu items. You can also control this from the [Toolbars Shown](#) menu item in the *Settings* menu.

Keyboard Shortcuts

Contents

- [Keyboard Shortcuts](#)
 - [File](#)
 - [General](#)
 - [Navigation and Playback](#)
 - [Project Bin](#)
 - [Editing](#)
 - [Timeline](#)
 - [Titler](#)
 - [Render](#)
 - [Settings](#)
 - [Raise widgets with shortcuts \(window\)](#)
 - [Shortcuts for keyframe functions](#)
 - [Command Bar](#)

File

Action Name	Shortcuts	Description
New	Ctrl + N	Creates a new Kdenlive project
Open...	Ctrl + O	Opens a Kdenlive project
Quit	Ctrl + Q	Exits Kdenlive

Action Name	Shortcuts	Description
Save	Ctrl + S	Saves the current state of the project
Save As...	Ctrl + Shift + S	Saves the current state of the project with the name of your choice

General

Action Name	Shortcuts	Description
Collapse/Expand Item	<	
Copy	Ctrl + C Alternate: Ctrl + Ins	Current selection
Delete Selected Item	Del	
Find Action...	Ctrl + Alt + I	Opens the action window. Only possible with this shortcut.

Action Name	Shortcuts	Description
Full Screen Mode	Ctrl + Shift + F	
Kdenlive Handbook	F1	
Switch Monitor Fullscreen	F11	Monitor
Paste	Ctrl + V Alternate: Shift + Ins	
Redo	Ctrl + Shift + Z	
Rename...	F2	
Show Menubar	Ctrl + M	Show Menubar Shows the menubar again after it has been hidden

Action Name	Shortcuts	Description
		Works in:
Select All	Ctrl + A	<ul style="list-style-type: none"> • Timeline • Project Bin • Titler
Undo	Ctrl + Z	
Up	Alt + Up	
What's This?	Shift + F1	
	Ctrl + +	
	Alternate: Ctrl + =	Works in Timeline only
Zoom In		Works in:
	CTRL + Mouse wheel	<ul style="list-style-type: none"> • Timeline • Clip Monitor • Project Monitor • Project Bin • effects keyframe pane
Zoom Out	Ctrl + -	Works in Timeline only

Action Name	Shortcuts	Description
	CTRL + Mouse wheel	<p>Works in:</p> <ul style="list-style-type: none"> • Timeline • Clip Monitor • Project Monitor • Project Bin • effects keyframe pane
Increment, Decrement	Mouse wheel	<p>Works in:</p> <ul style="list-style-type: none"> • Timeline, scroll the timeline left/right • Timeline Ruler, project monitor • Clip Monitor • Project Bin • effects keyframe pane, numbers and selections
	Shift + left click	Timeline: adds clicked clips to the selection
Add to the selection	shift + dragging	<p>Timeline: adds multiple clips to the selection</p> <p>Titler: adds clicked clips to the selection</p> <p>Project Bin: adds all clips between already selected clip and clicked clip</p>

Action Name	Shortcuts	Description
Add to the selection	Ctrl + left click	Project Bin: adds clicked clips to the selection Effect: select keyframes
		Edit bookmark
Double click	double click	Project Bin: double click on a clip shows properties Project Bin: double click on an empty place opens <i>add clip or folder</i> Timeline: double click a clip shows duration

Navigation and Playback

Action Name	Shortcuts	Description
Align Playhead to Mouse Position	P	Timeline
Forward	L	Playback
Forward 1 Frame	Right	Playback

Action Name	Shortcuts	Description
Forward 1 Second	Shift + Right	Playback
Go to Clip End	End	Timeline
Go to Clip Start	Home	Timeline
Go to Next Guide	Ctrl + Right	Timeline
Go to Next Snap Point	Alt + Right	Timeline
Go to Previous Guide	Ctrl + Left	Timeline
Go to Previous Snap Point	Alt + Left	Timeline
Go to Project End	Ctrl + End	Timeline
Go to Project Start	Ctrl + Home	Timeline
Go to Zone End	Shift + O	Timeline
Go to Zone Start	Shift + I	Timeline

Action Name	Shortcuts	Description
Loop Zone	Ctrl + Shift + Space	Playback
Pause	K	Playback
Play	Space	Playback
Play Zone	Ctrl + Space	Playback
Rewind	J	Playback
Rewind 1 Frame	Left	Playback
Rewind 1 Second	Shift + Left	Playback
Playback clip	Shift and move the mouse left/right	Inside the clip monitor

[Project Bin](#)

Action Name	Shortcuts	Description
Closing the extra bins	CTRL + W	

Editing

Action Name	Shortcuts	Description
Focus Timecode	=	
Insert Zone in Project Bin	Ctrl + I	Clip monitor
Set Zone In	I	
Set Zone Out	O	
Switch Monitor	T	Switch between clip monitor and project monitor (timeline)
Select Target 1	Ctrl + 1	3-point-editing
Select Target 2	Ctrl + 2	3-point-editing
Select Target 3	Ctrl + 3	3-point-editing

Action Name	Shortcuts	Description
Select Target 4	Ctrl + 4	3-point-editing
Select Target 5	Ctrl + 5	3-point-editing
Select Target 6	Ctrl + 6	3-point-editing
Select Target 7	Ctrl + 7	3-point-editing
Select Target 8	Ctrl + 8	3-point-editing
Select Target 9	Ctrl + 9	3-point-editing
Switch All Tracks Active	Alt + Shift + A	3-point-editing
Toggle All Track Lock	Ctrl + Shift + L	Tracks

Action Name	Shortcuts	Description
Toggle All Tracks Active	Shift + A	3-point-editing
Toggle Track Active	A	3-point-editing Activate the track as a target with shortcut A (this connects the track to the source)
Slip multiple clips at once	Shift + move	select all clips you want to slip with the selection tool using Shift then enable the slip tool and go ahead...
Slip a clip	left/right	Slip can be done with the mouse, with the left/right keys and with the buttons on the monitor toolbar.

Timeline

Action Name	Shortcuts	Description
Add Clip to Selection	Alt + +	Adds the clip of the active track to the selection at playhead position.

Action Name	Shortcuts	Description
Add Marker/Guide quickly	Num + *	On Numlock pad: * adds a marker/guide
Add Subtitle	Shift + S	Adds a subtitle at playhead position.
Add Transition to Selection	Alt + Shift + +	
Add/Remove Guide	G	Adds a guide at playhead position.
Group Clips	Ctrl + G	Current selection
Ungroup Clips	Ctrl + Shift + G	Current selection
Cut All Clips	Ctrl + Shift + R	Cuts all clips at playhead position. Except tracks which are locked.
Cut Clip	Shift + R	Cuts the clip of the active track at playhead position.
Deselect Clip	-	
Deselect Transition	Shift + -	

Action Name	Shortcuts	Description
Extract Timeline Zone	Shift + X	
Grab Current Item	Shift + G	Select a clip -> Shift + G -> move the clip with left/right
Insert Clip Zone in Timeline	V	
Lift Timeline Zone	Z	
Mix Clips	U	Or double click. Play head must be on the end/begin of 2 clips. Creates a transition between 2 clips on the same track.
Multitrack View	F12	<i>Tool -> Multicam tool</i> must be disabled
Overwrite Clip Zone in Timeline	B	
Resize Item End)	On active track: Cut and deletes the end of the clip at playhead position.

Action Name	Shortcuts	Description
Resize Item Start	(On active track: Cut and delete the start of the clip at playhead position.
Select Clip	+	
Select Transition	Shift + +	
Start Preview Render	Shift + Return	
Razor Tool	X	Tools
Selection Tool	S	Tools
Spacer Tool	M	Tools
Deselect	Ctrl + Shift + A	Tracks
Select Audio Track 1	Alt + 1	Tracks
Select Audio Track 2	Alt + 2	Tracks
Select Audio Track 3	Alt + 3	Tracks

Action Name	Shortcuts	Description
Select Audio Track 4	Alt + 4	Tracks
Select Audio Track 5	Alt + 5	Tracks
Select Audio Track 6	Alt + 6	Tracks
Select Audio Track 7	Alt + 7	Tracks
Select Audio Track 8	Alt + 8	Tracks
Select Audio Track 9	Alt + 9	Tracks
Select Video Track 1	1	Track selection in general and for 3-point-editing Multicam tool: You trim the clips in the desired track while the timeline is playing
Select Video Track 2	2	Track selection in general and for 3-point-editing Multicam tool: You trim the clips in the desired track while the timeline is playing

Action Name	Shortcuts	Description
Select Video Track 3	3	Track selection in general and for 3-point-editing Multicam tool: You trim the clips in the desired track while the timeline is playing
Select Video Track 4	4	Track selection in general and for 3-point-editing Multicam tool: You trim the clips in the desired track while the timeline is playing
Select Video Track 5	5	Track selection in general and for 3-point-editing Multicam tool: You trim the clips in the desired track while the timeline is playing
Select Video Track 6	6	Track selection in general and for 3-point-editing Multicam tool: You trim the clips in the desired track while the timeline is playing

Action Name	Shortcuts	Description
		Track selection in general and for 3-point-editing
Select Video Track 7	7	Multicam tool: You trim the clips in the desired track while the timeline is playing
		Track selection in general and for 3-point-editing
Select Video Track 8	8	Multicam tool: You trim the clips in the desired track while the timeline is playing
		Track selection in general and for 3-point-editing
Select Video Track 9	9	Multicam tool: You trim the clips in the desired track while the timeline is playing
Switch Track Target Audio Stream	,	Tracks
Toggle Track Disabled	Shift + H	Tracks
Toggle Track Lock	Shift + L	Tracks

Action Name	Shortcuts	Description
		3-point-editing
Toggle Track Target	Shift + T	Select a video or audio track in the timeline (up/down arrow key) and set it as source with Shift + T.
Resize only audio or video part of a clip	Shift + resize	Only possible with keyboard
Move audio or video part to another track independently.	Alt + move	Only possible with keyboard
Adjust the speed of a clip	Ctrl + dragging	Only possible with keyboard
Return from any tools back to Selection tool.	ESC:	Only possible with keyboard
Tracks resized simultaneously	Shift + dragging	Either for video or audio tracks.
Tracks resized simultaneously to normal	Shift + double click	Normalize track height either for video or audio tracks.

Action Name	Shortcuts	Description
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Track selection	up/down	
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Titler

Action Name	Shortcuts	Description
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Add text	Alt + T	Click on the canvas to add text
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Add rectangle	Alt + R	Drag the mouse to draw a rectangle
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Add ellipse	Alt + E	Drag the mouse to draw a ellipse.
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Insert an image	Alt + I	Insert an image
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Back to selection tool	Alt + S	
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Move selected items vertical only.	Shift	Hold Shift moves selected items vertical only.
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Move selected items horizontally only.	Shift + Alt	Hold Shift + Alt moves selected items horizontally only.
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Render

Action Name	Shortcuts	Description
Render...	Ctrl + Return	Opens the Render window.

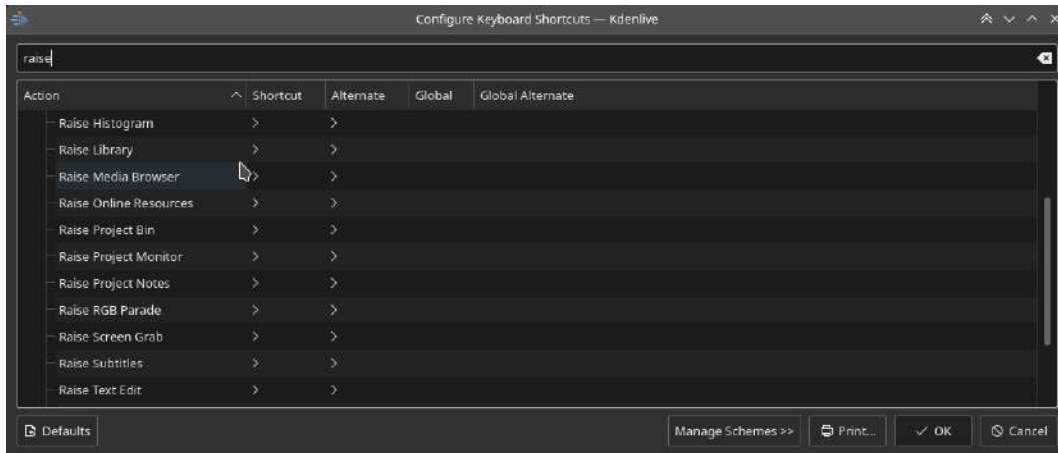
Settings

Action Name	Shortcuts	Description
Configure Kdenlive...	Ctrl + Shift + ,	Opens the configure window
Configure Keyboard Shortcuts...	Ctrl + Alt + ,	Opens the shortcut window

Raise widgets with shortcuts (window)

New in version 21.08.0.

With the word “raise” you see all dock widgets (window) on which you can assign shortcuts to raise dock widgets (window). The actions are called like “Raise Project Bin”.

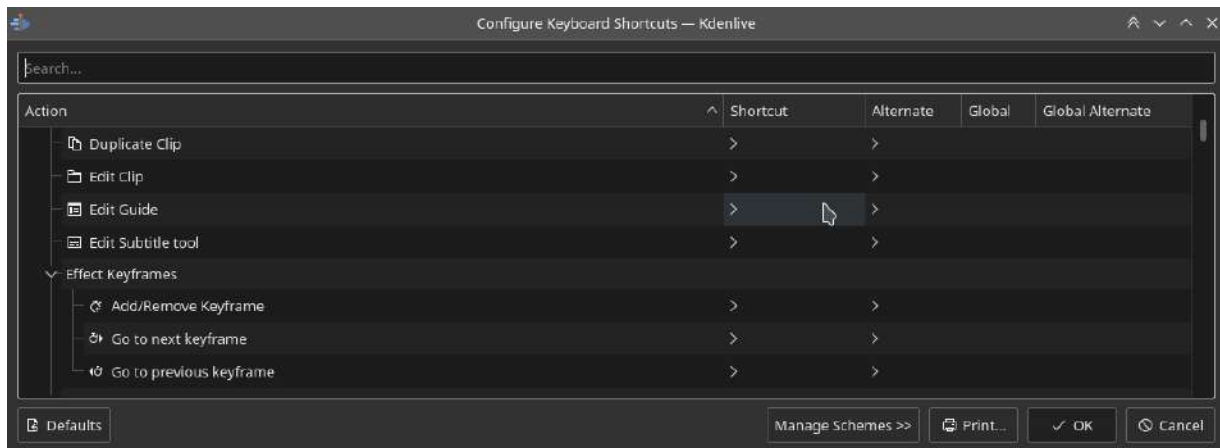


Click into the image to start the animation.

[Shortcuts for keyframe functions](#)

New in version 21.08.0.

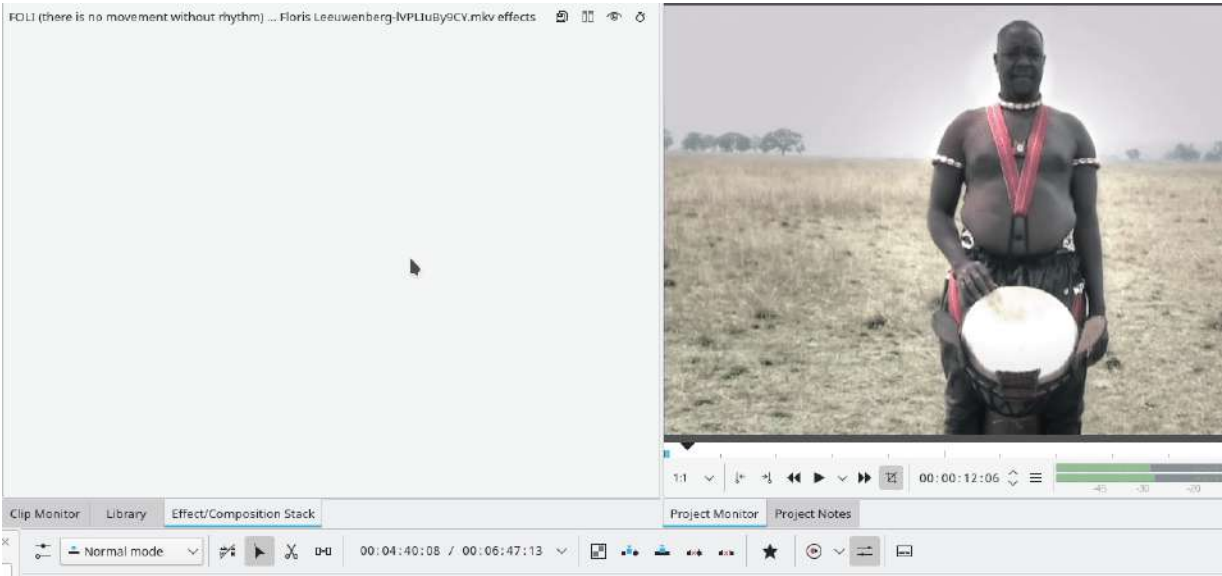
Allow assigning shortcuts to 3 keyframe functions: *Add/Remove Keyframe*, *Go to next keyframe* and *Go to previous keyframe*. Click on the clip and you can add/remove keyframe by shortcut.



[Command Bar](#)

New in version 21.08.0.

The command bar allows to easily searching for any action in Kdenlive like changing themes, adding effects, opening files and more. It can be accessed with the shortcut: Ctrl + Alt + i. The shortcut is defined by KDE-Framework, so do not change it. (This feature requires KDE Frameworks lib version 5.83).



Menu Reference

Contents:

- [File Menu](#)
 - [New](#)
 - [Open...](#)
 - [Open Recent](#)
 - [Save](#)
 - [Save As...](#)
 - [Save Copy...](#)
 - [Revert](#)
 - [Transcode Clips...](#)
 - [Close](#)
 - [Quit](#)
- [Edit Menu](#)
 - [Undo](#)
 - [Redo](#)
 - [Copy](#)
 - [Paste](#)
 - [Paste Effects](#)
- [View Menu](#)
 - [Audio Signal](#)
 - [Audio Spectrum](#)
 - [Clip Monitor](#)
 - [Effects](#)
 - [Effect Stack](#)
 - [Histogram](#)
 - [Layouts](#)
 - [Project Monitor](#)
 - [RGB Parade](#)
 - [Screen Grab](#)
 - [View Timeline](#)
 - [Show Title Bars](#)
 - [Spectrogram](#)

- [Transition](#)
- [Undo History](#)
- [Vectorscope Window](#)
- [Waveform](#)
- [Project Menu](#)
 - [Adjust Profile to Current Clip](#)
 - [Clean Project](#)
 - [Create Folder](#)
 - [Generators](#)
 - [Online Resources](#)
 - [Open Backup File](#)
 - [Reverse Clip](#)
 - [Stop Motion Capture](#)
 - [View Mode](#)
- [Tool Menu](#)
- [Clip Menu](#)
 - [Markers Menu Item](#)
 - [Automatic Transition](#)
 - [Other Items](#)
- [Timeline Menu](#)
 - [Tracks](#)
 - [Insert Clip Zone in Timeline](#)
 - [Timeline>Space](#)
 - [Selection Menu](#)
 - [Current Clip Menu](#)
- [Monitor Menu](#)
 - [Play](#)
 - [Play Zone](#)
 - [Loop Zone](#)
 - [Loop selected clip](#)
 - [Go To](#)
 - [Rewind](#)
 - [Rewind 1 frame](#)
 - [Rewind 1 second](#)
 - [Forward 1 Frame](#)
 - [Forward 1 Second](#)
 - [Forward](#)

- [Set Zone In](#)
- [Set Zone Out](#)
- [Switch monitor fullscreen](#)
- [Deinterlacer](#)
- [Interpolation](#)
- [Switch monitor](#)
- [Insert zone in project bin](#)
- [Insert zone in timeline](#)
- [Settings Menu](#)
 - [Settings Menu - Mac OS X](#)
 - [Configure Language](#)

File Menu

Contents

- [File Menu](#)
 - [New](#)
 - [Open...](#)
 - [Open Recent](#)
 - [Save](#)
 - [Save As...](#)
 - [Save Copy...](#)
 - [Revert](#)
 - [Transcode Clips...](#)
 - [Close](#)
 - [Quit](#)

New

Creates a new Kdenlive project. The default keyboard shortcut is `Ctrl + N`.

See [Quick Start](#).

The default settings that appear on this feature are defined under *Settings* ▶ *Configure Kdenlive* > [Configure Kdenlive](#).

Open...

Opens a project that has been saved in a [Project File Details](#) format file. The default keyboard shortcut is `Ctrl + O`.

Open Recent

Displays a picklist of recently saved files (up to 10) to choose from. Click the *Clear List* choice when you want to start over with a fresh list.

Save

Saves the current state of the project in a [Project File Details](#) format file. Prompts for a file name if this is the first time the file is being saved. The default keyboard shortcut is `Ctrl + S`.

Save As...

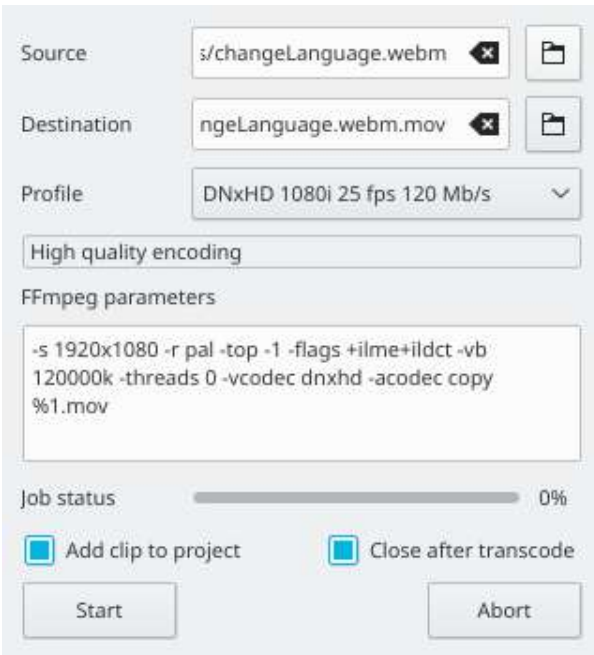
Saves the current state of the project in a [Project File Details](#) format file of your choice. The default keyboard shortcut is `Ctrl + Shift + S`.

Save Copy...

Revert

This abandons any changes to the project you have made since last saving and reverts back to the last saved version of the project.

Transcode Clips...



Use this to convert a video or audio clip from one codec/format to another.

Choose one source file or multiple source files and a profile that represents the desired destination codec/format. Optionally change the destination path and file name and hit *Start*. Otherwise, hit *Abort* to close the windows.

Transcoding a clip should be faster than loading the clip into the timeline and re-encoding it into a different format.

- *Add clip to project* controls if after the conversion, the new clip is added to the [The Project Bin](#).
- *Close after encode* Uncheck this checkbox if there is the need to convert to another format after the conversion.

Close

Not sure what this is supposed to do. It is always greyed out on my **Kdenlive**.

Maybe it is there ready for a version of **Kdenlive** that can have more than one project open at a time.

Quit

Exits **Kdenlive**. Prompts you to save any unsaved changes. The default keyboard shortcut is `Ctrl + Q`.

Contents:

- [DVD Wizard](#)
 - [Screen 1 of the DVD Wizard](#)
 - [Screen 2 of the DVD Wizard](#)
 - [Screen 3 of the DVD Wizard](#)
 - [Screen 4 of the DVD Wizard](#)

DVD Wizard

Contents

- [DVD Wizard](#)
 - [Screen 1 of the DVD Wizard](#)
 - [Screen 2 of the DVD Wizard](#)
 - [Screen 3 of the DVD Wizard](#)
 - [Screen 4 of the DVD Wizard](#)

Note

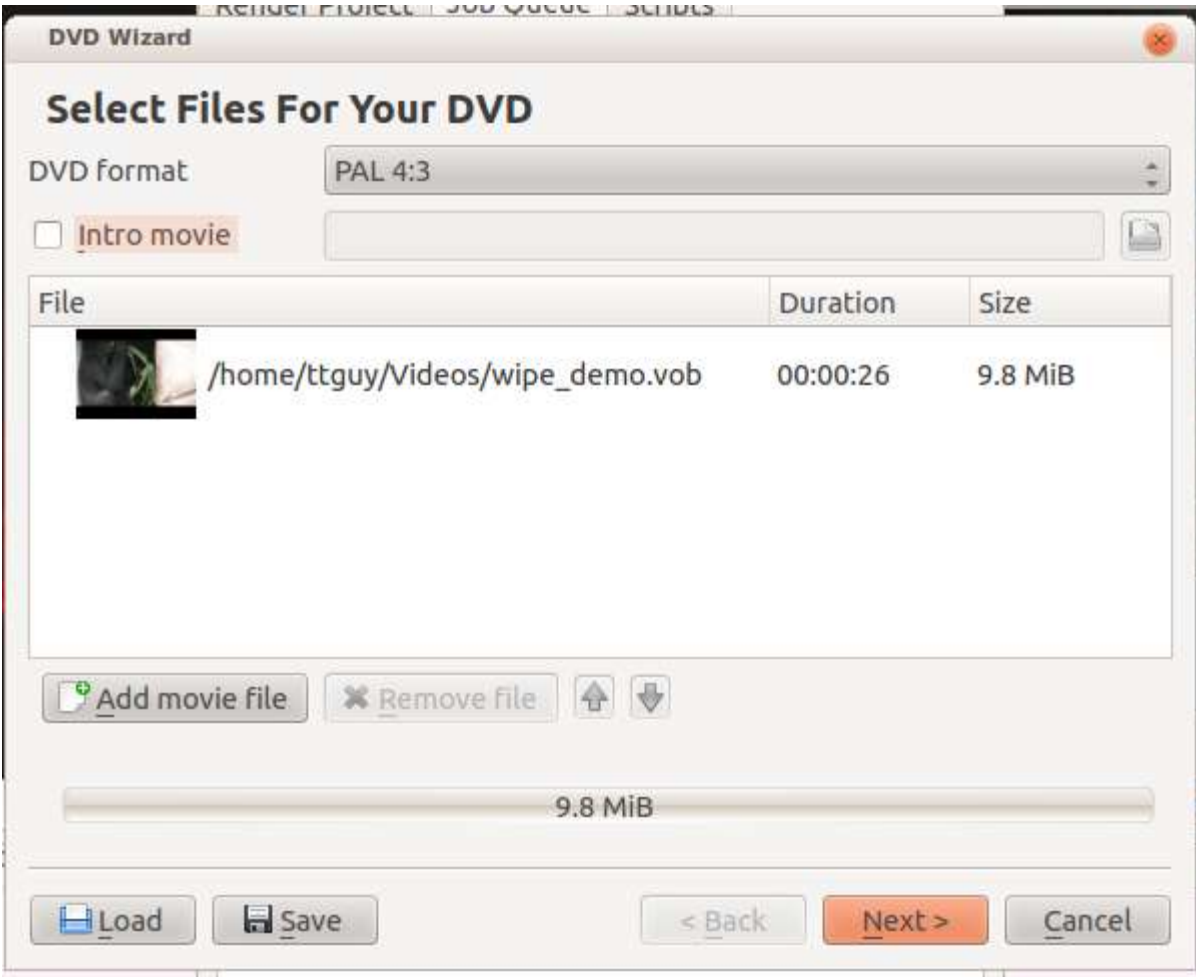
Removed since Version 21.08

With the move to MLT7 the DVD Wizard was removed as it was unmaintained since long.

This feature allows you to author a DVD with a simple menu. Nothing flashy.

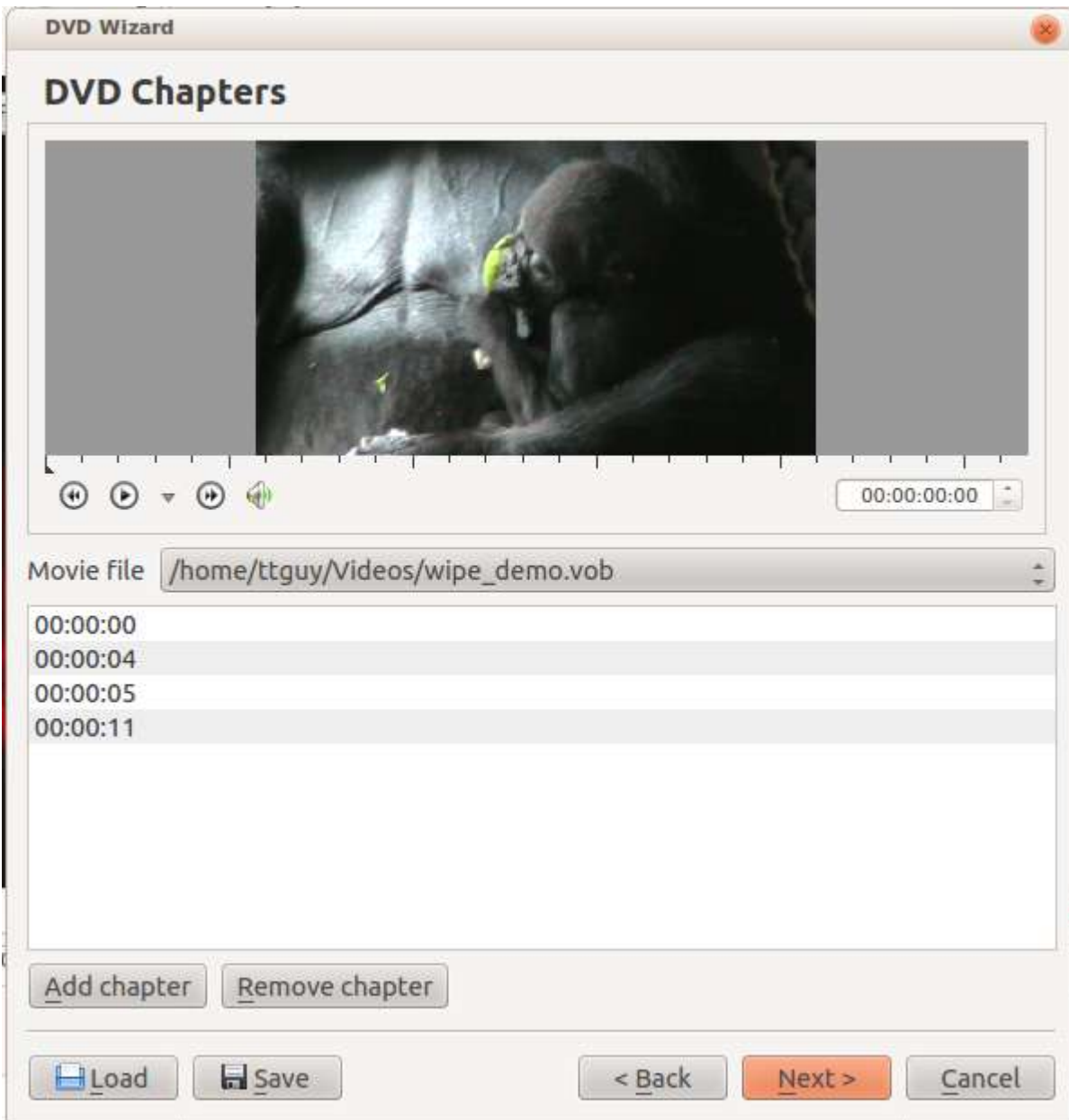
Screen 1 of the DVD Wizard

Select a file here that you have rendered using one of the [Rendering](#).



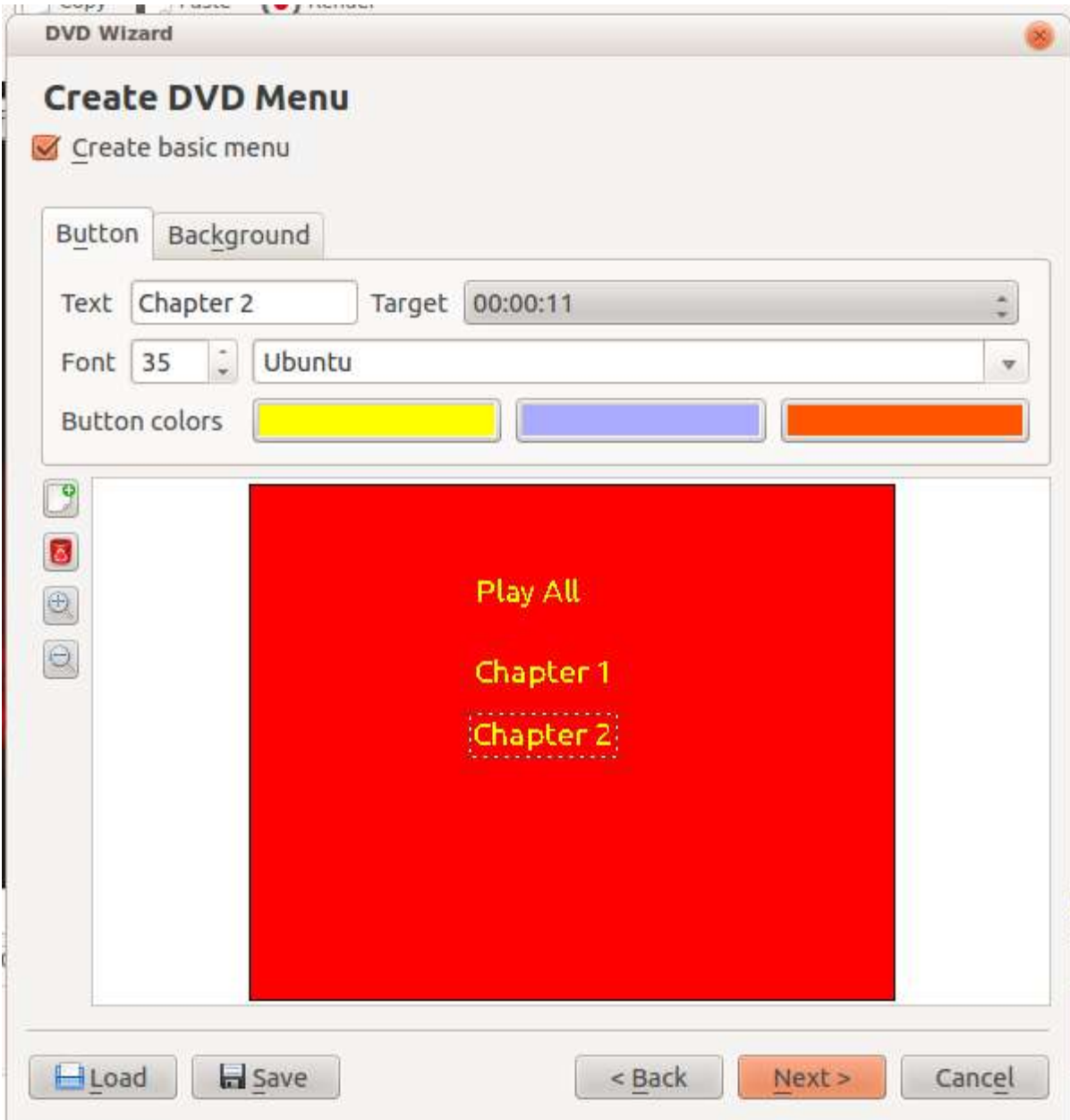
[Screen 2 of the DVD Wizard](#)

First click on the **00:00:00** in the center to select a file to play. Then play the file in the preview window and add chapters at the cursor's time point by clicking the *Add Chapter* button.



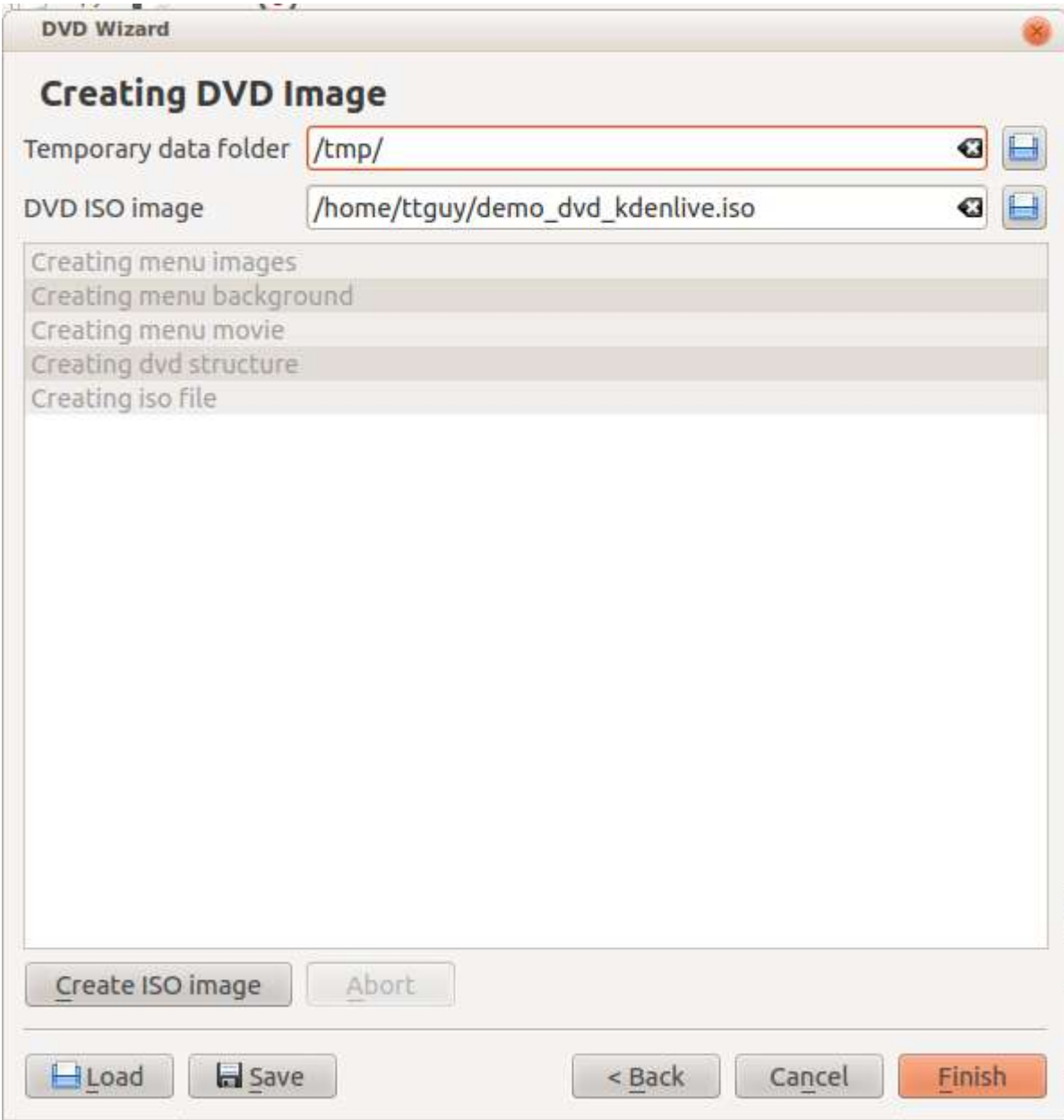
[Screen 3 of the DVD Wizard](#)

The first two buttons on the side allow you to add and delete menu buttons. You define what the button does using the **Target** drop down list.

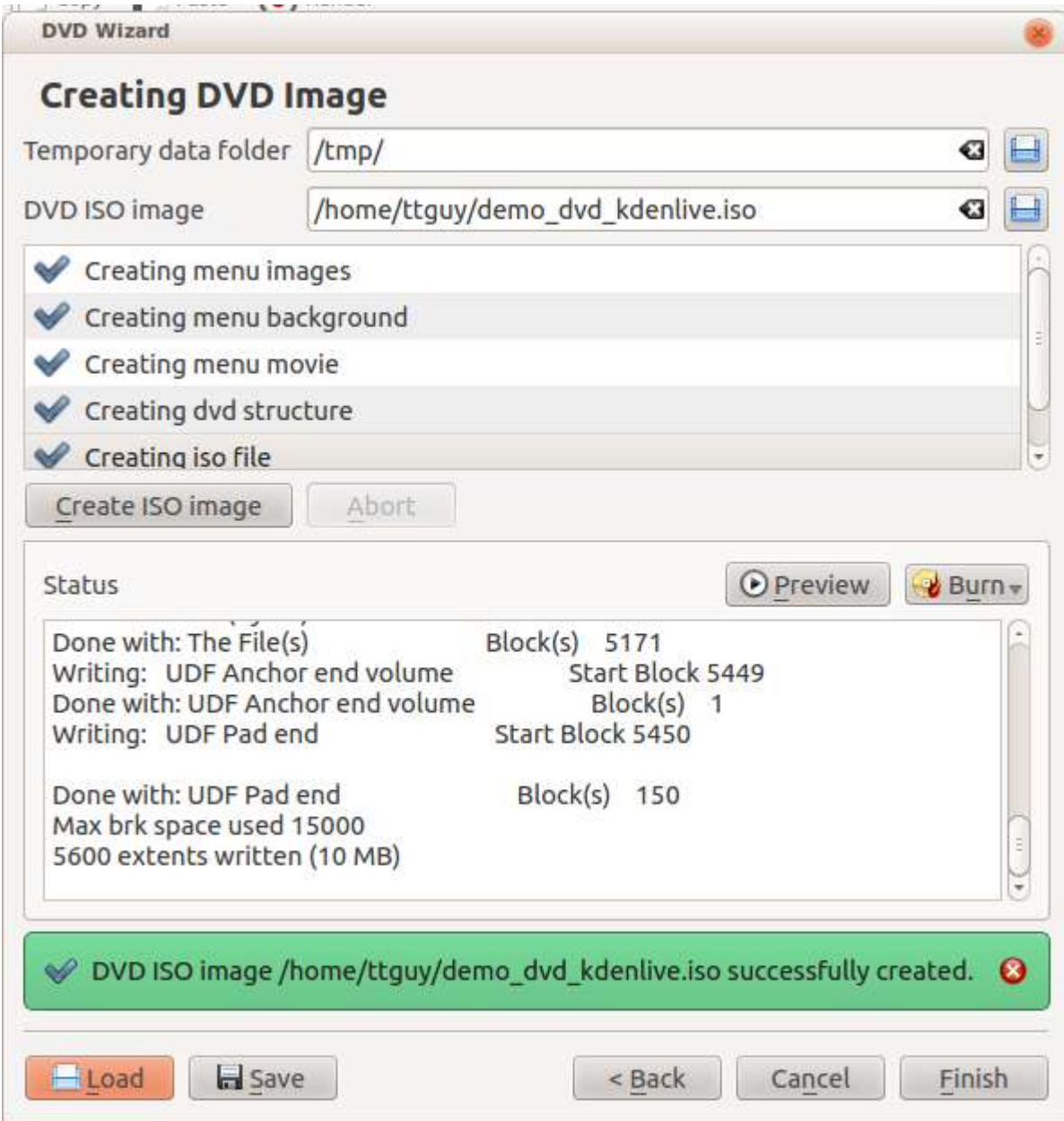


[Screen 4 of the DVD Wizard](#)

Click the *Create ISO Image* button on this screen to author your DVD. Click *Finish* only after you have clicked *Create ISO Image* button. Clicking *Finish* closes the DVD wizard without prompting for you to complete the job.



Result of successful DVD creation



Resulting iso-file can then be written into writable DVD-disk using programs like K3b. File can also be viewed with most video player applications like Kaffeine, Vlc or Smplyer (Disk menu might have issues to play correctly).

Edit Menu

Contents

- [Edit Menu](#)
 - [Undo](#)
 - [Redo](#)
 - [Copy](#)
 - [Paste](#)
 - [Paste Effects](#)

Undo

Edit ▶ *Undo* is used to reverse the last change you made or operation you performed in Kdenlive. If you have made multiple changes to your project, **Undo** can be used repeatedly to rollback each of the changes in the reverse order they were performed. **Undo** can also be executed from the icon on the **Extra Toolbar** (*Settings* ▶ *Toolbars Shown*) or by using the keyboard shortcut `Ctrl + Z`.

To view a navigable list of all the changes which can be undone, see [Undo History](#).

Redo

Edit ▶ *Redo* reverses the previous :[Undo](#) operation. The default keyboard shortcut is `Ctrl + Shift + Z`.

Copy

Copies a clip selected in the timeline to the clipboard. The default keyboard shortcut is `Ctrl + C`. It also copies the effects attached to the clip to the clipboard. Use [Paste](#) to paste the clip into a different spot on the timeline. Use [Paste Effects](#) to paste just the effects from the copied clip onto a different clip.

[Paste](#)

Pastes an existing clip in the clipboard into a different spot on the timeline. The default keyboard shortcut is `Ctrl + V`.

[Paste Effects](#)

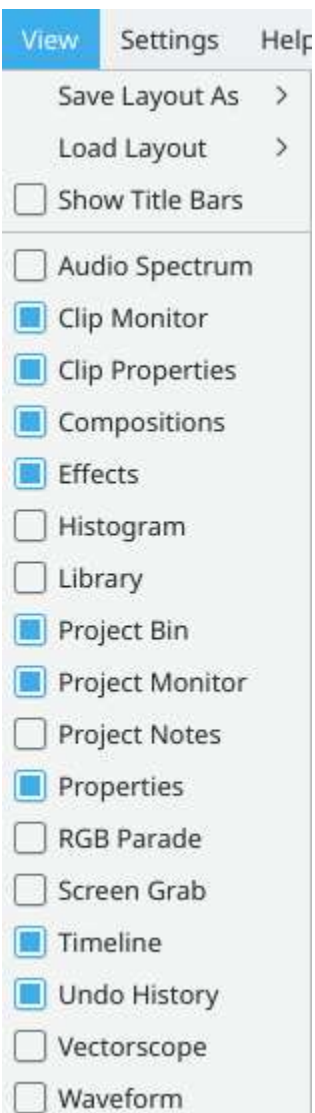
Pastes just the effects from a clip existing in the clipboard onto a different clip.

View Menu

Contents

- [View Menu](#)

From the View menu you can control which windows appear on the screen. You can also save the layout or load a saved layout.



Contents:

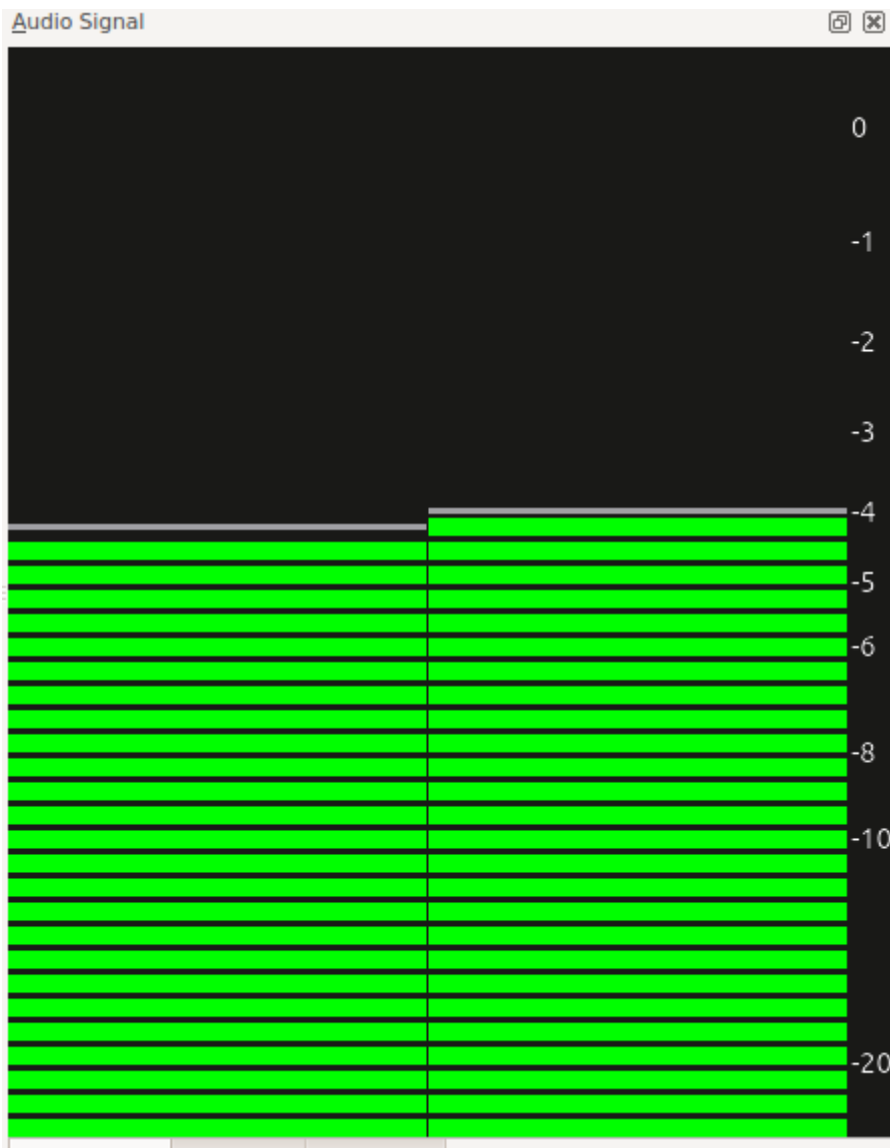
- [Audio Signal](#)
- [Audio Spectrum](#)
- [Clip Monitor](#)
- [Effects](#)
- [Effect Stack](#)
- [Histogram](#)
- [Layouts](#)
 - [Load Layout](#)
 - [Save Layout](#)
 - [Manage Layouts](#)
- [Project Monitor](#)
- [RGB Parade](#)
- [Screen Grab](#)
- [View Timeline](#)
- [Show Title Bars](#)
- [Spectrogram](#)
- [Transition](#)
- [Undo History](#)
- [Vectorscope Window](#)
- [Waveform](#)

Audio Signal

Contents

- [Audio Signal](#)

You can monitor the levels of the audio as the clip plays with this widget.



Audio Spectrum

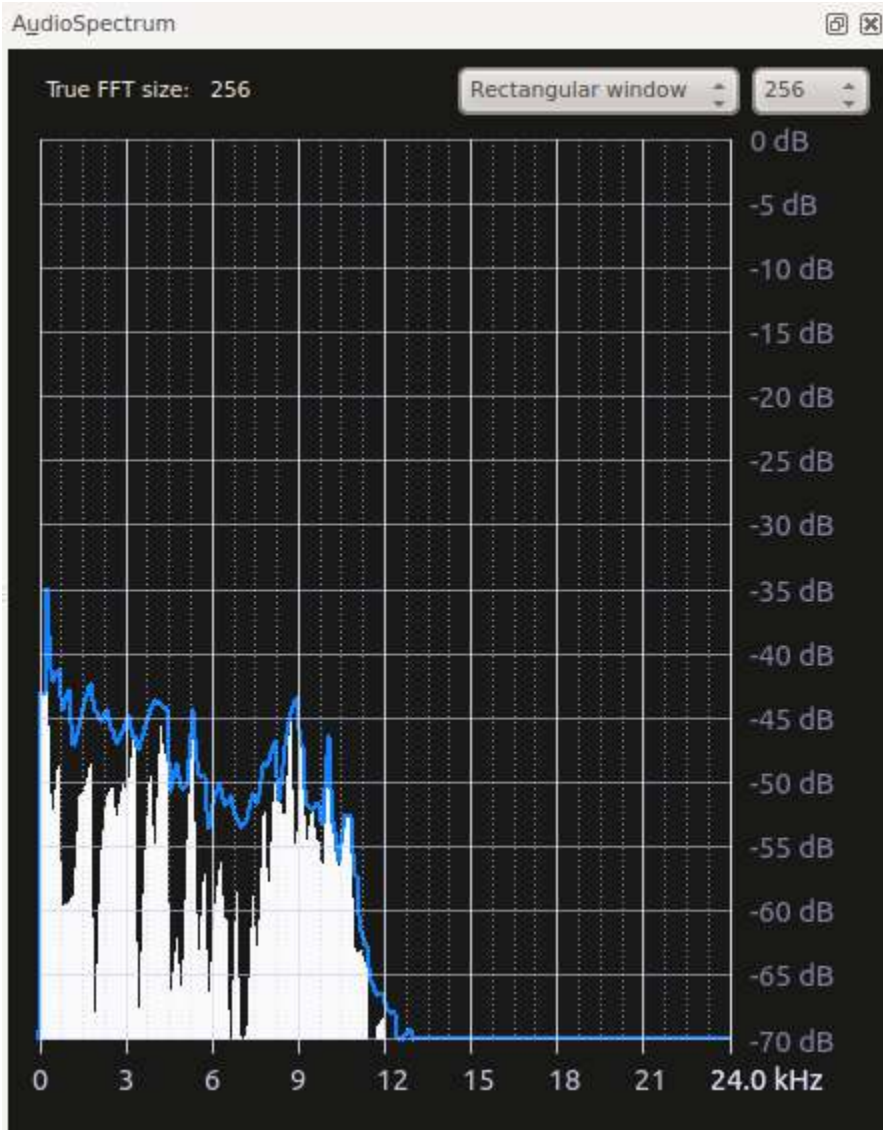
Contents

- [Audio Spectrum](#)

This allows you to monitor the audio properties of your clip in detail. The graph only display data while the clip is playing in the clip or project monitor.

It graphs the loudness of the audio (in decibels - vertical axis) for each audio frequency (horizontal axis) in the current frame. The blue curve is +- the maximum over the previous few samples.

See also [Spectrogram](#) scope which displays a graphical representation of the audio spectrum over the entire clip.



For more information see [Granjow's blog](#) on Audio Spectrum

Clip Monitor

Contents

- [Clip Monitor](#)

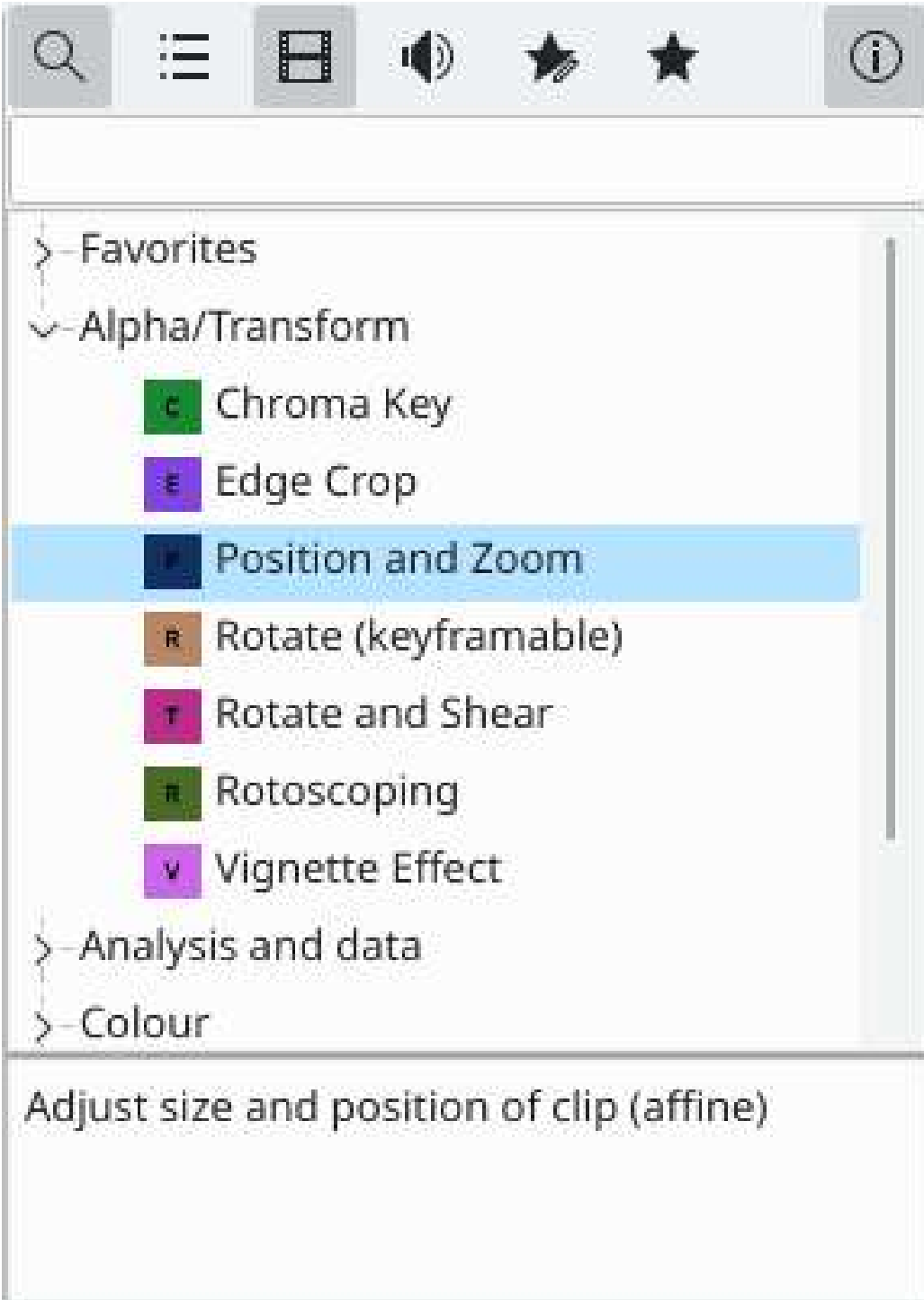
Toggles the display of the [Monitors](#).

Effects

Contents

- [Effects](#)

Toggles the display of the [Effects](#)



Effect Stack

Contents

- [Effect Stack](#)

Toggles the display of the [Effects](#)

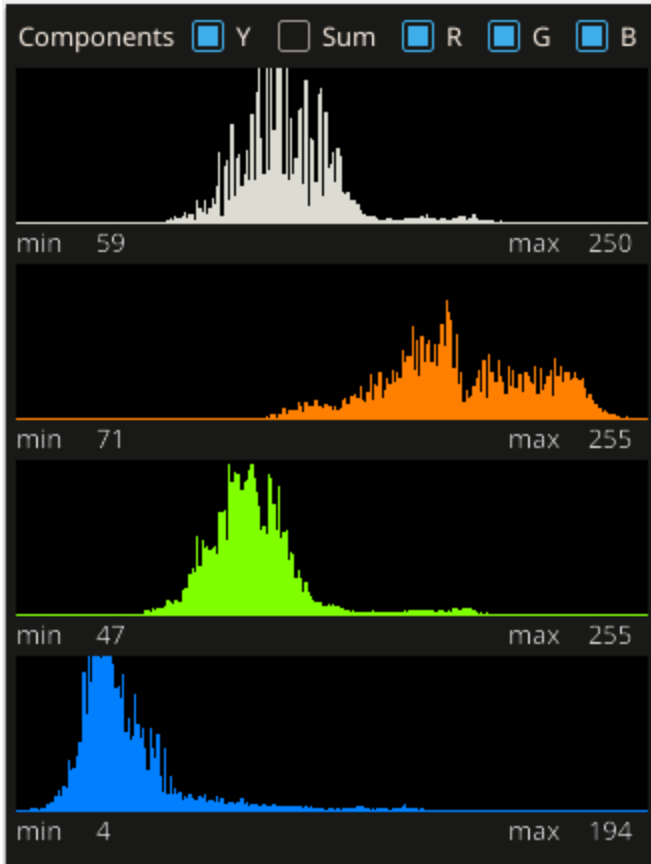
Histogram

Contents

- [Histogram](#)

This scope displays a frequency histogram of the luminance of the color components of the video. This information is useful when used in combination with color correction effects to perform color correction on the video. Color correction includes increasing the brightness or adjusting the white balance to ensure that white remains white and not blue.

The histograms have the luminance on the horizontal axis going from 0 on the left to 255 on the right. The vertical (Y) axis represents the count of the total number of pixels in the current video frame with a given luminance.



For more information read [Granjow's blog](#) on the histogram scope.

Attention

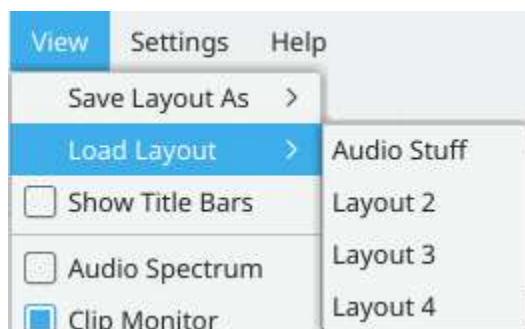
[Windows issue with scopes](#)

Layouts

Contents

- [Layouts](#)
 - [Load Layout](#)
 - [Save Layout](#)
 - [Manage Layouts](#)

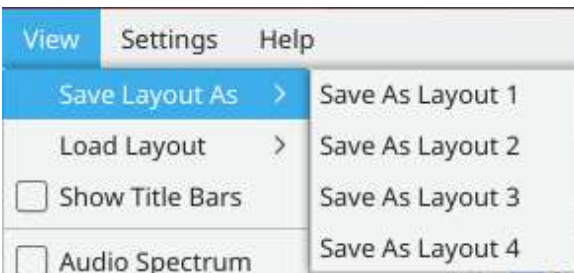
Load Layout



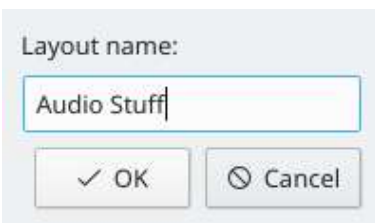
Lets you switch to a previously saved custom layout. Once you load a saved layout, that layout will remain the current one when starting Kdenlive until you switch to another saved layout or modify the current one. If you do make changes to a custom layout after loading it and then quit Kdenlive, you will not be prompted to save your changes to the named layout. The changes will be remembered and applied the next time you launch Kdenlive, but be aware that you are now working with an unnamed layout. If you like the layout and want to preserve it, save it back to the original name or save it as a new name.

Save Layout

Kdenlive allows a great deal of freedom to customize screen layout. You can choose which windows to display and where to position them. You can resize them or undock them and move them to a second monitor. Any changes you make to the layout will be automatically saved so that the next time you start Kdenlive, things will look as you left them. This is fine if you have one layout that works for all your projects. However, you may want to have different layouts for different types of projects and be able to switch between them as needed.



Kdenlive lets you name and save up to four custom layouts. In the example shown, no custom layouts have been saved yet so they are just labeled 1 through 4. Click *Save Layout As* and then choose one of the four choices presented.



The Save Layout dialog appears and you can give your custom layout a name.

Now you can easily switch to that layout whenever you'd like by choosing the corresponding [Load Layout](#) menu selection.

[Manage Layouts](#)

Project Monitor

Contents

- [Project Monitor](#)

Toggles the display of the [Monitors](#).

RGB Parade

Contents

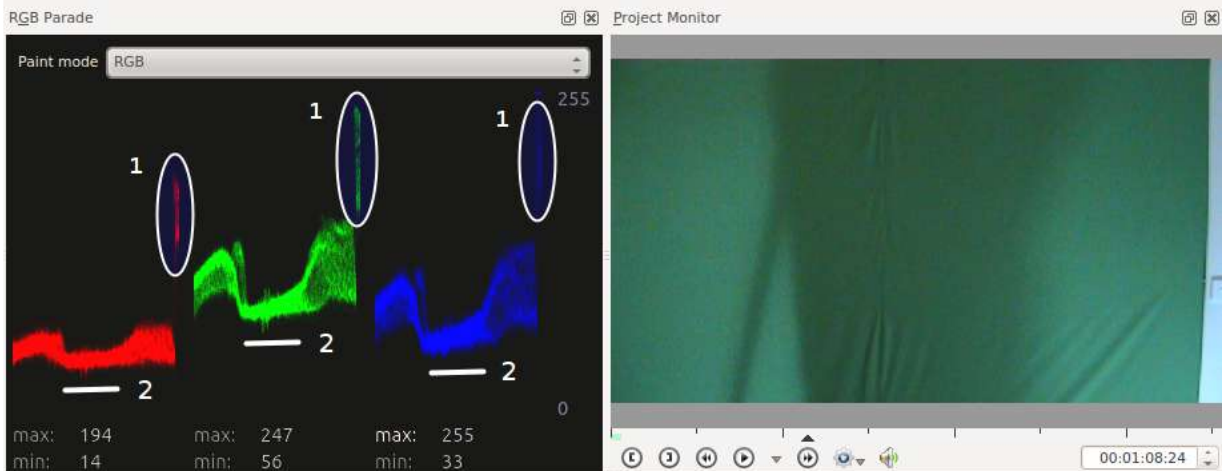
- [RGB Parade](#)

Displays a histogram of R, G and B components of the video data. This data is a 3D histogram.

The horizontal axis represents the horizontal axis in the video frame. The vertical axis is the pixel luminance from 0 to 255. The brightness of the point on the graph represents the count of the number of pixels with this luminance in this column of pixels in the video frame.

In the sample screenshot below of a green screen with a shadow on it and with a right edge that reveals a white wall, you can see how the scope works. The circled regions labeled 1 are on the right side representing the fact that there are several columns of pixels that are quite bright whitish/gray. So these regions are higher up on the Y axis.

The regions labeled 2 are in the middle of the scope and the dip in the graph there shows the shadow on the screen at this point. The average luminance of the pixels in these columns is lower.



For more information, see [Granjow's blog](#) on the waveform and RGB Parade scopes. This blog gives some information on how to use the data provided by the RGB Parade to do color correction on video footage.

The RGB Parade option in the View menu is somewhat different from the [RGB Parade](#) in that *View* ▸ *RGB Parade* displays the histogram in the application whereas the **RGB Parade** effect writes the histogram into the video output file.

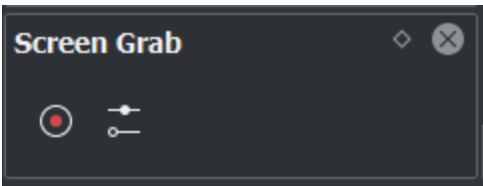
Attention

[Windows issue with scopes](#)

Screen Grab

Contents

- [Screen Grab](#)



Start recording: click the “record” button.

Stop record: click the “record” button again.

For more information see [Screen Grab](#)

Clicking on the configure button brings you to the [Configure Kdenlive](#) window.

View Timeline

Contents

- [View Timeline](#)

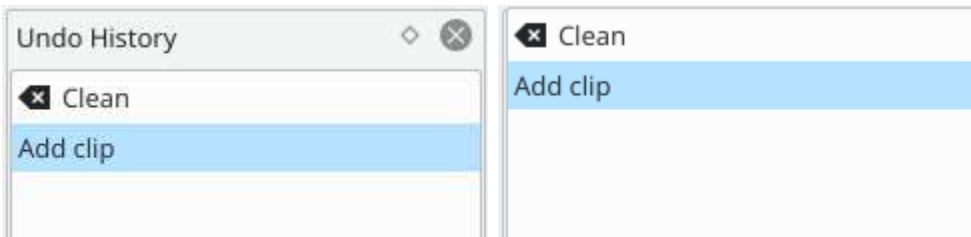
Toggles the display of the [Timeline](#)

Show Title Bars

Contents

- [Show Title Bars](#)

This toggles the display of the title bar and control buttons on dockable windows in **Kdenlive**.

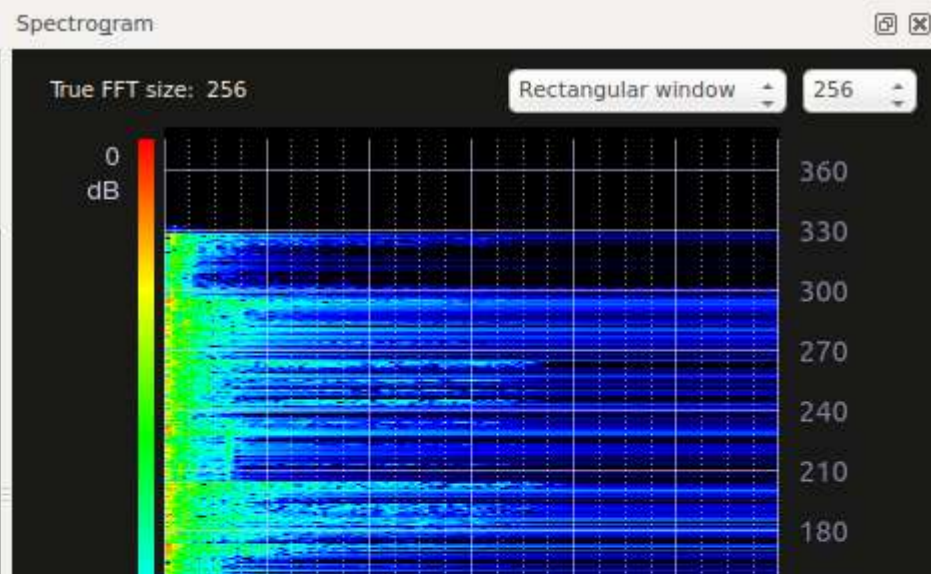
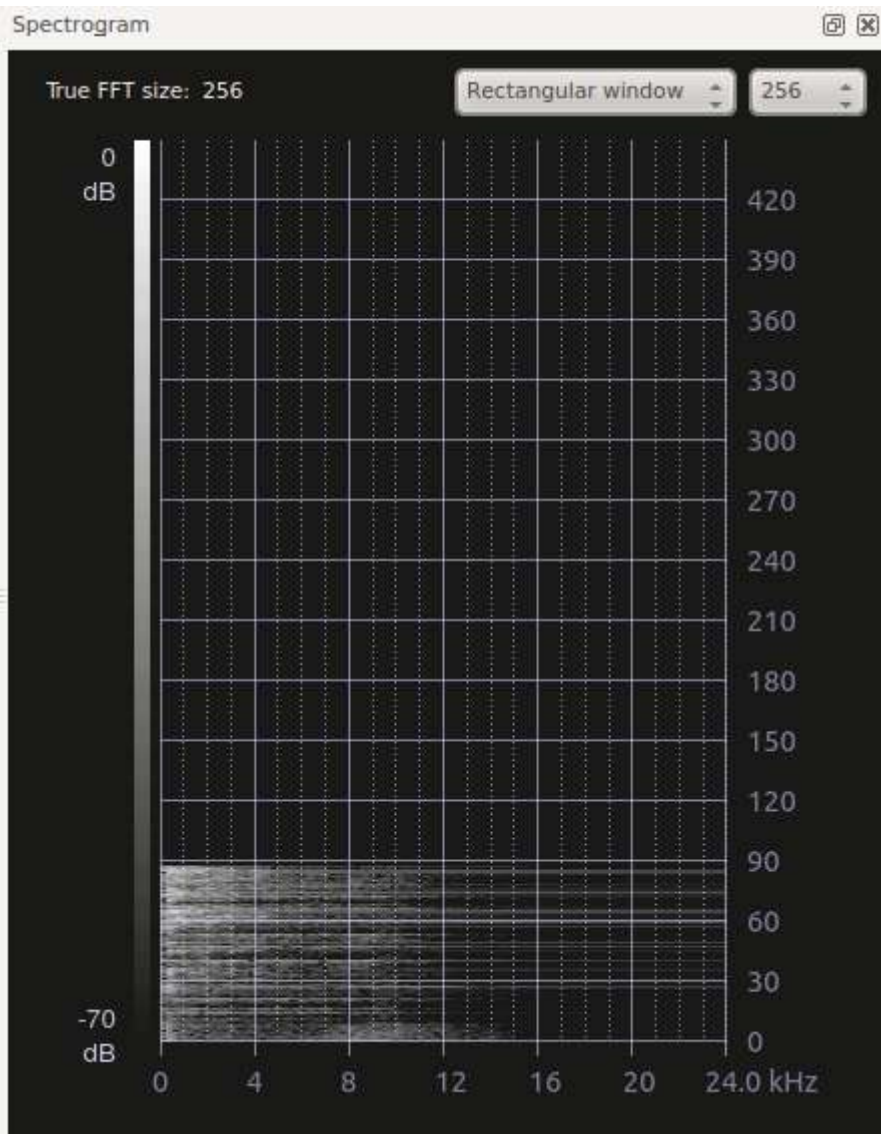


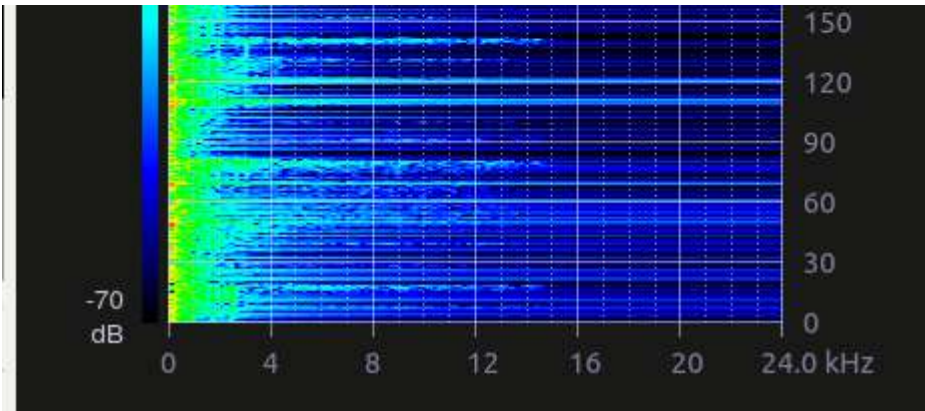
Spectrogram

Contents

- [Spectrogram](#)

This allows you to monitor the audio properties of your clip in detail. The spectrogram displays the loudness (in decibels) of the audio at different audio frequencies over the entire length of the clip. In the spectrogram, the horizontal axis represents the audio frequency and the loudness is represented by the brightness (version $\leq 0.9.8$) or the colour (version $\geq 0.9.10$) of the pixel on the graph. The vertical axis represents frame number.





For more information see [Granjow's blog](#) on Spectrogram

Attention

[Windows issue with scopes](#)

Transition

Contents

- [Transition](#)

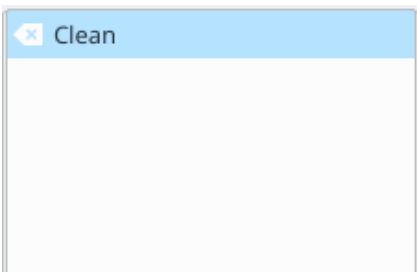
Toggles the display of the [Transitions](#)

Undo History

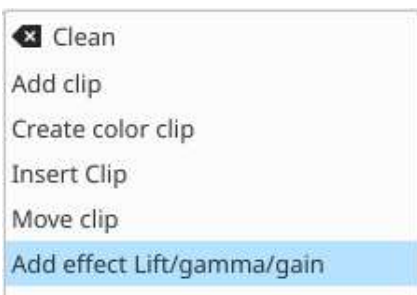
Contents

- [Undo History](#)

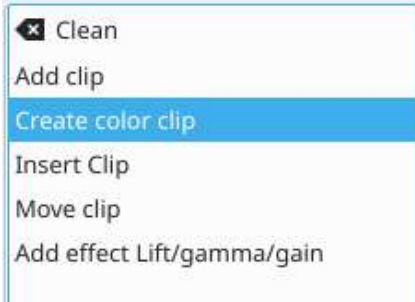
There may be times when you want to quickly restore your project to the state it was in several changes ago. Instead of repeatedly executing single undo operations, it might be more efficient to jump right to the operation in question – if you could easily locate it.



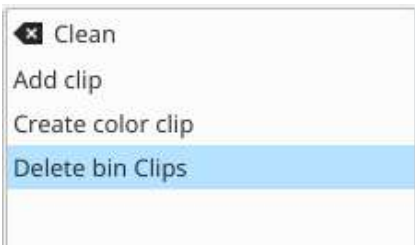
That's where *View > Undo History* comes in. It opens a dockable window which lists all the changes made to your project in the order they were made. When a project file is first opened, the window looks like Figure 1.



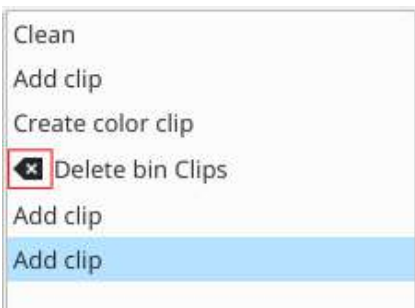
Each operation you perform from then on gets added to the list, as shown in Figure 2. Notice that the most recent operation you have performed is highlighted.



In this example, if you wanted to undo the last three operations with one click, all you have to do is click on the **Create color clip** entry and those three changes will be reversed in one fell swoop. At this point, if you are unhappy with undoing those changes, you can easily redo them by clicking on any of the entries which are still in the list.



However, if you decided that reverting to that **Create color clip** entry looked good and you then made another change to the project, the three remaining operations that were in the list in Figure 3 will be flushed from the buffer and no longer available. They will be replaced by the new operation you just performed. See the result in Figure 4.



Whenever you save your project, the icon that looks like a broom with the red X is repositioned next to the most recent operation in the list. Figure 5 shows three additional operations which were performed after the file save

shown by the circle. After saving the file, you can still revert back to changes which were made before the save.

Vectorscope Window

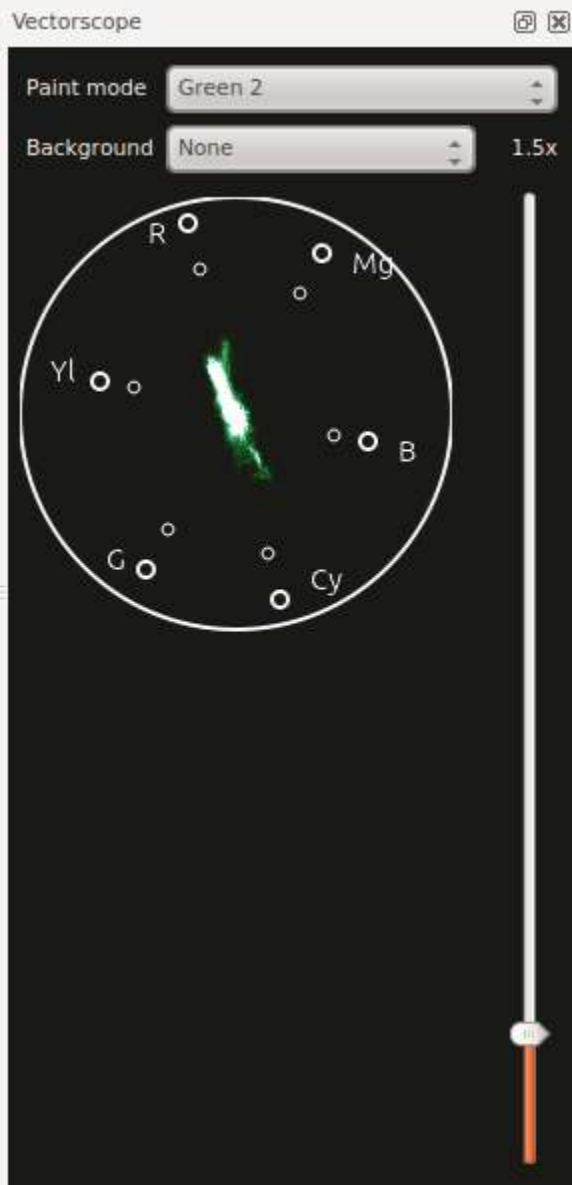
Contents

- [Vectorscope Window](#)

This window allows you to monitor the colour properties of your clip in detail.

The Vectorscope shows the hue and saturation distribution in a way we can understand without problems. This is useful for quickly recognizing color casts, but also helps judging the color distribution of a clip and matching it to others.

[See Granjow's blog here](#) and [here](#) on the Vectorscope.



Attention

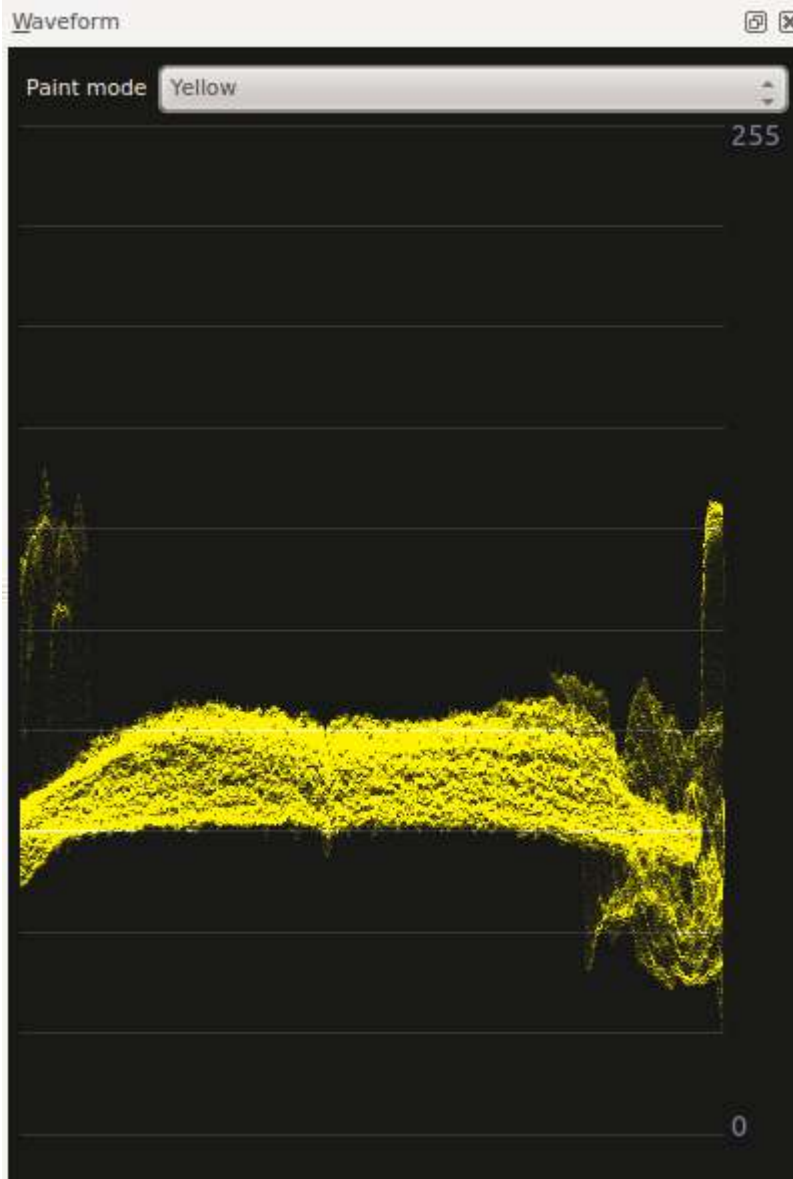
[Windows issue with scopes](#)

Waveform

Contents

- [Waveform](#)

This data is a 3D histogram. It represents the Luma component (whiteness) of the video. It is the same type of graph as for the [RGB Parade](#). The horizontal axis represents the horizontal axis in the video frame. The vertical axis is the pixel luma from 0 to 255. The brightness of the point on the graph represents the count of the number of pixels with this luma in this column of pixels in the video frame.



For more information see [Granjow's blog](#) on the waveform and RGB parade scopes. This blog gives some information on how to use the data provided by the RGB parade to do color correction on video footage.

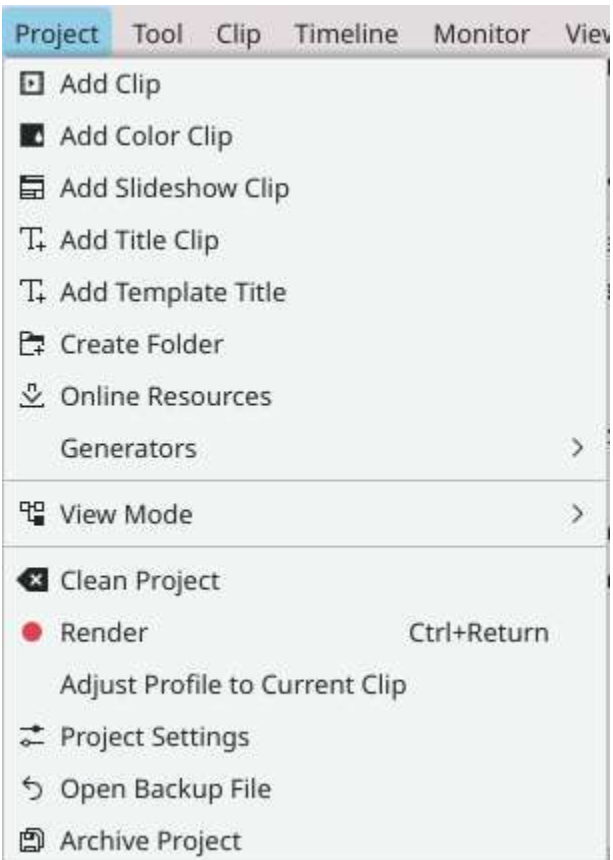
Attention

[Windows issue with scopes](#)

Project Menu

Contents

- [Project Menu](#)



- [Add Clip or Folder...](#)
- [Add Color Clip...](#)
- [Add Slideshow Clip](#)
- [Add Title Clip...](#)
- [Add Template Title...](#)
- [Create Folder](#)
- [Online Resources](#)
- [Generators](#)

- [View Mode](#)
- [Clean Project](#)
- [Render...](#)
- [Extract Audio](#)
- [Adjust Profile to Current Clip](#)
- [Archive Project...](#)
- [Open Backup File...](#)
- [Project Settings...](#)

Contents:

- [Adjust Profile to Current Clip](#)
- [Clean Project](#)
- [Create Folder](#)
 - [Create additional bins](#)
- [Generators](#)
- [Online Resources](#)
 - [Freesound Audio Library](#)
 - [Freesound Audio Library - Future version](#)
 - [Archive Org Video Library](#)
 - [Open Clip Art Graphic Library](#)
- [Open Backup File](#)
- [Reverse Clip](#)
- [Stop Motion Capture](#)
- [View Mode](#)

Adjust Profile to Current Clip

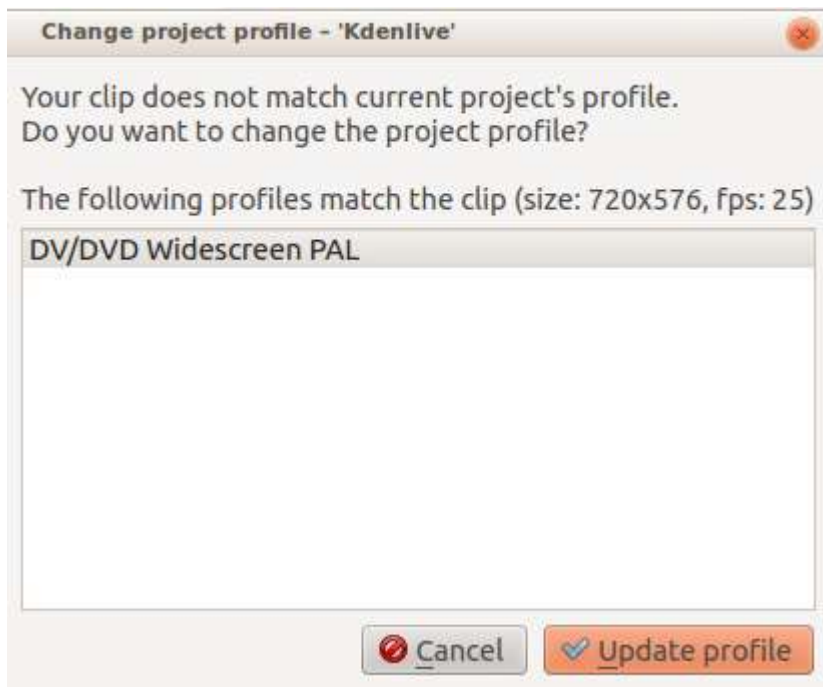
Contents

- [Adjust Profile to Current Clip](#)

This function is available from the [Project Menu](#) menu.

This function offers up a suggested Project Profile that would be most suitable for the properties of the currently selected clip (selected in the Project Bin?).

You get to see the profile it suggests and accept the suggestion or cancel.



Clean Project

Contents

- [Clean Project](#)

Available from the [Project Menu](#) menu this function removes any clips from the Project Bin that are not currently being used on the timeline. The files remain on the hard drive and are only removed from the Project Bin.

You can undo this action with `Ctrl + Z`.



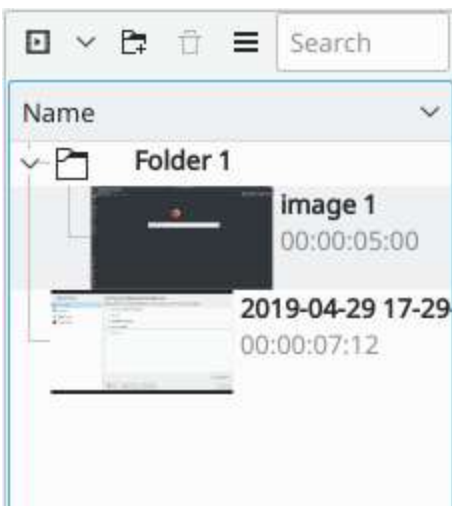
This is different from the [Project Settings Dialog](#) button on the Project Files tab in Project Settings which deletes files not used by the project from the hard drive.

Create Folder

Contents

- [Create Folder](#)
 - [Create additional bins](#)

There are three ways to access a menu containing this option: from the [Project Menu](#) menu, the [Clips](#) dropdown on [the Project Bin toolbar](#) or by right-clicking on a clip in the [Project Bin](#). This menu item creates a folder in the Project Bin. It is a virtual folder, not one created on your hard disk. You can use this feature to organize your Project Bin when it gets very large or complex by placing clips in folders, which can then be collapsed to free up space in the tree. Existing clips in the Project Bin can be moved to a folder using drag and drop. New clips can be added directly to a folder by first selecting the folder (or any clip in the folder) and then choosing the *Add Clip* option from one of the dropdown menus described above.



Edit the name of the folder: select the folder and right-click on the text **Folder** or press F2.

Create additional bins

New in version 21.12.

You can create a separate bin from each folder, following [these steps](#).

Generators

Contents

- [Generators](#)

Used to create a clip with either a countdown timer or noise.

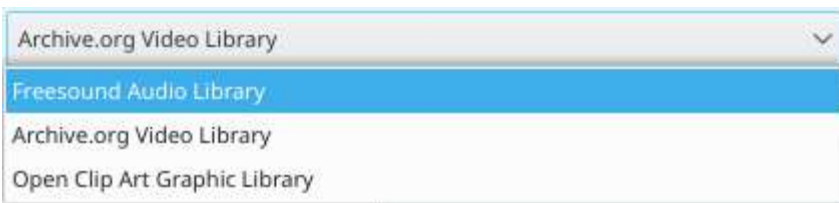
This option is also available from the Add Clip icon in the Project Bin – see [Clips](#).

Online Resources

Contents

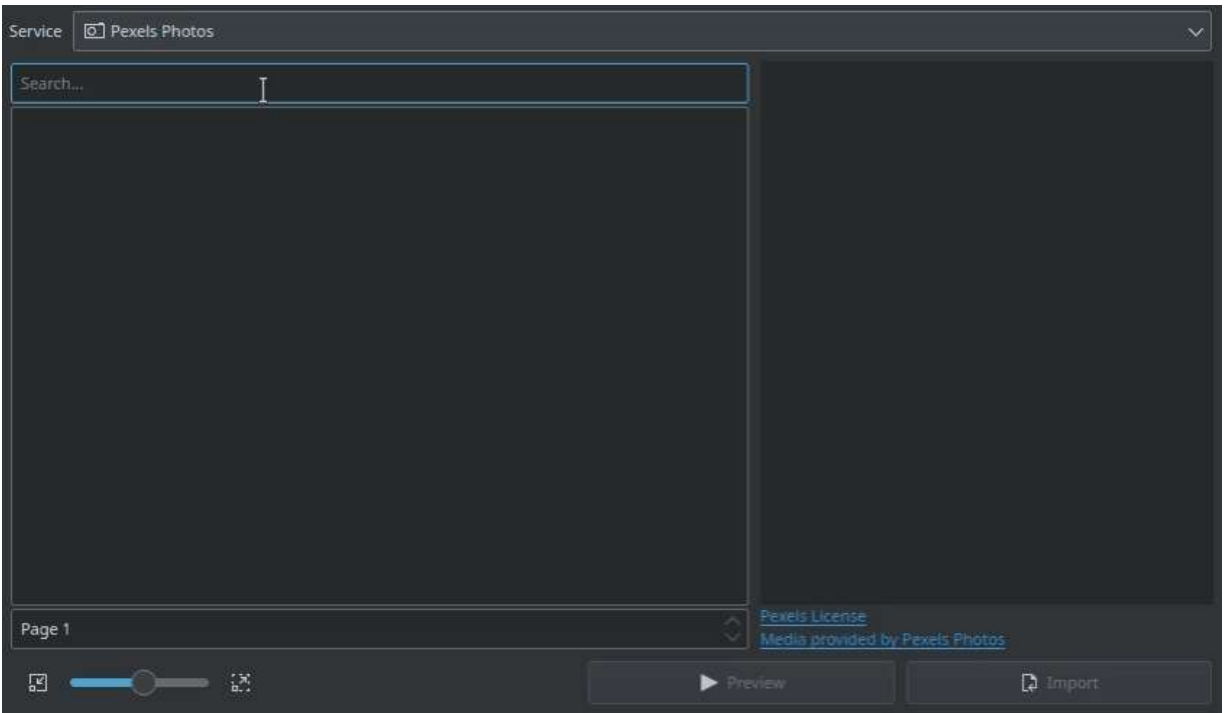
- [Online Resources](#)
 - [Freesound Audio Library](#)
 - [Freesound Audio Library - Future version](#)
 - [Archive Org Video Library](#)
 - [Open Clip Art Graphic Library](#)

Available from the [Project Menu](#) menu and the [Clips](#) dropdown, this feature allows you to search online audio, video and graphics libraries for resources to download.

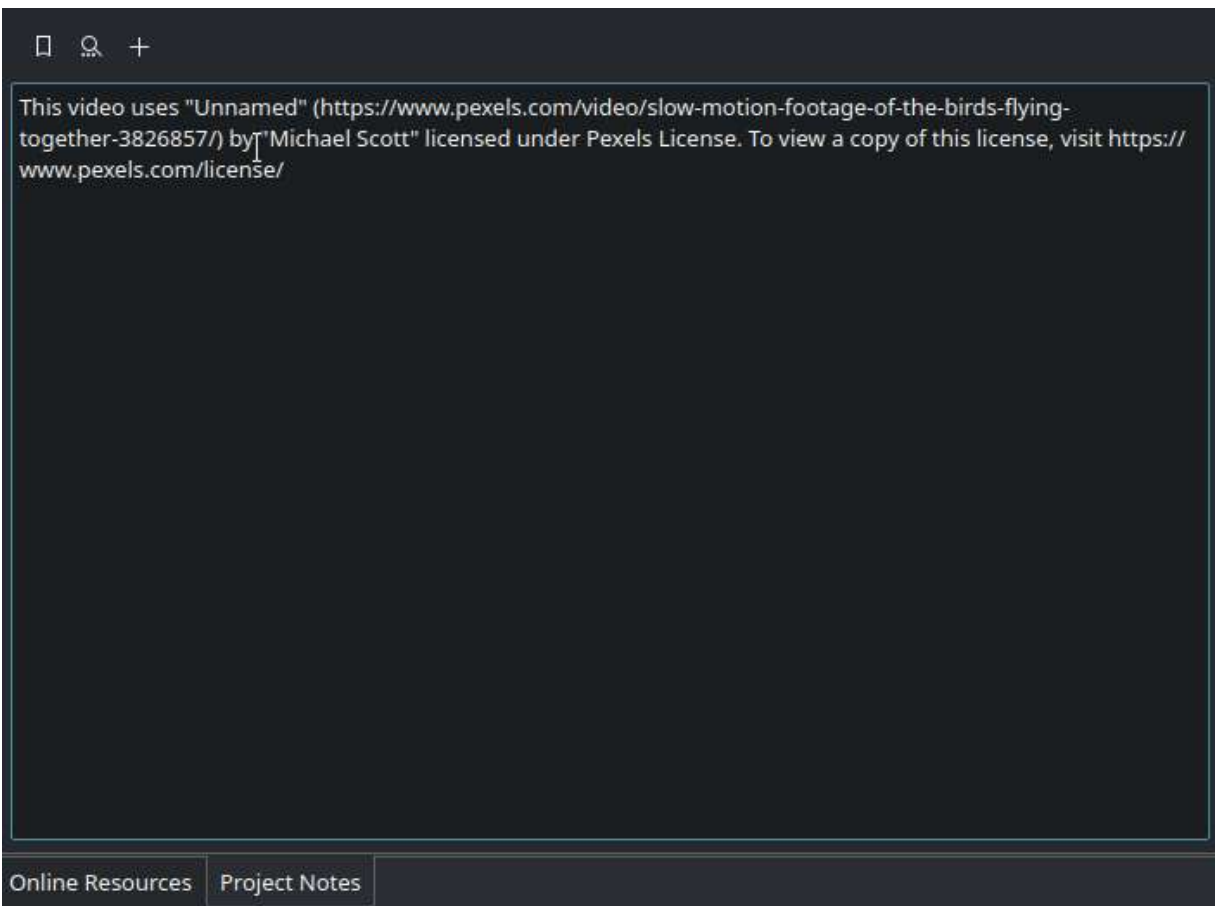
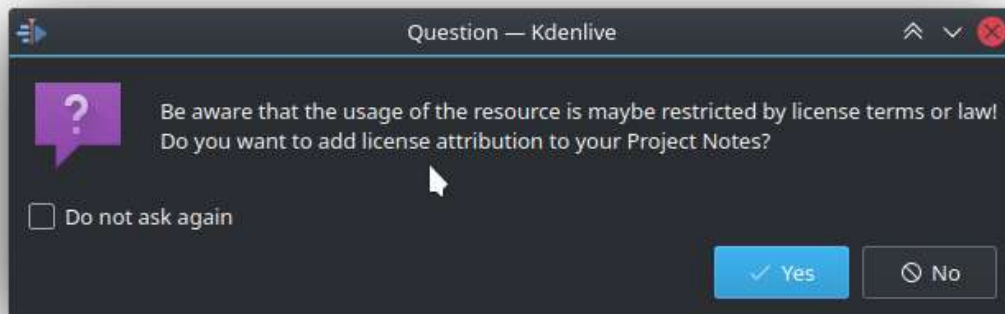


New in version 21.04.0.

The new online resources window features more source footage providers such as [Pixabay](https://pixabay.com/) [https://pixabay.com/] and [Pexels](https://www.pexels.com/) [https://www.pexels.com/] besides the already available [Freesound](https://freesound.org/) [https://freesound.org/] and [Internet Archive](https://archive.org/) [https://archive.org/]. Other possible providers are being considered, see [here](https://invent.kde.org/multimedia/kdenlive/-/issues/918) [https://invent.kde.org/multimedia/kdenlive/-/issues/918] for more details.



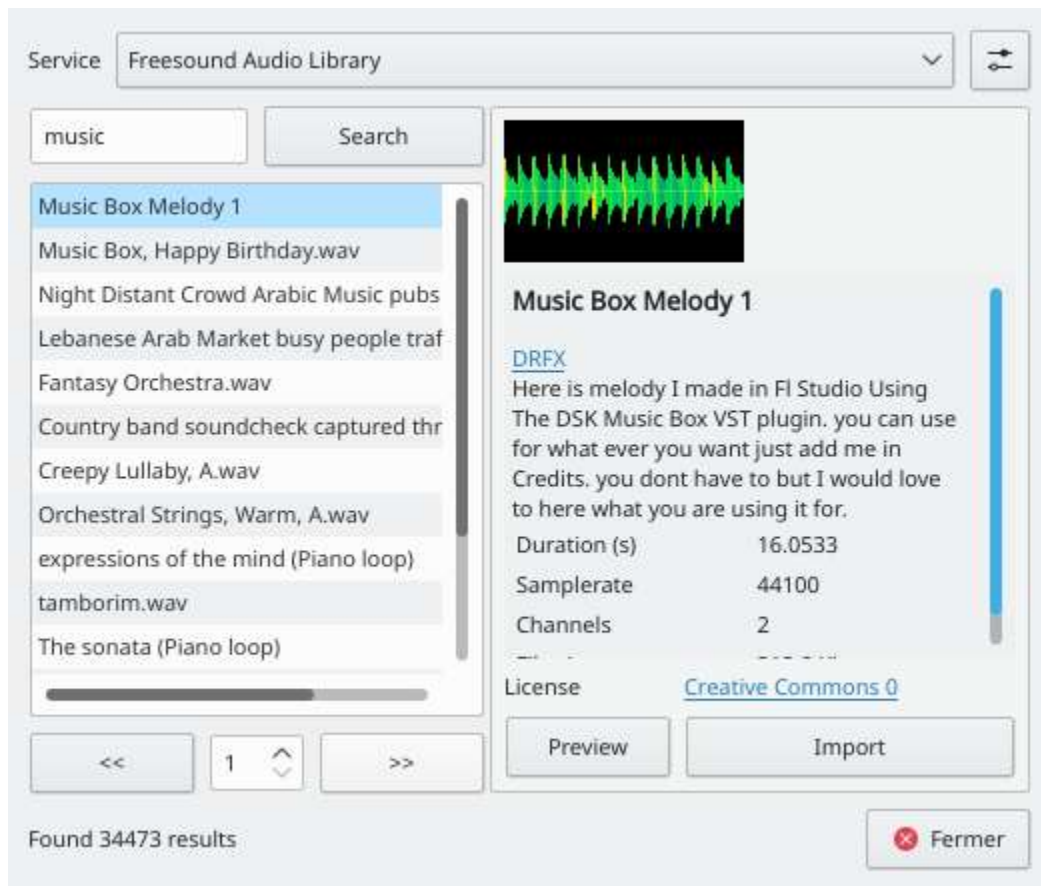
It is important to give credit to the downloaded sources so we've added an option to directly import the license attribution as a project note.



[Freesound Audio Library](#)

The Freesound Audio Library part of this became non-functional on old versions of Kdenlive in October 2015 because freesound now requires user

registration. If you are using an old version of Kdenlive, you can still download great audio clips from <https://www.freesound.org/> – just not through the Kdenlive interface.



Version 15.12 (December 2015) allowed users to automatically download the high-quality .mp3 preview file from freesound using the **Online Resources** module.

[Freesound Audio Library - Future version](#)

A future version of Kdenlive will allow you to authenticate Kdenlive with your free freesound web account and download the high-quality files.

If the **Online Resources** dialog offers up this error, Error Getting Access Token from Freesound. Try importing again to obtain a new freesound


connection hit the import button again to make it try to establish a new authentication handshake with the freesound website.

On hitting the import button, and if this is the first time you have used the freesound library, you will be presented with a login dialog where you can use your freesound account credentials to authenticate and download the highest-quality version of the audio file. If you do not have a freesound account, you can choose to download the high-quality .mp3 preview version of the file instead.

Register here.'. Below the dialog box, there are two buttons: 'Get HQ Preview File Instead' and 'Cancel'." data-bbox="123 300 801 766"/>

Freesound Login — Kdenlive

Enter your freesound account details to download the highest quality version of this file. Or use the High Quality preview file instead (no freesound account required).



Username:

Password:

Login

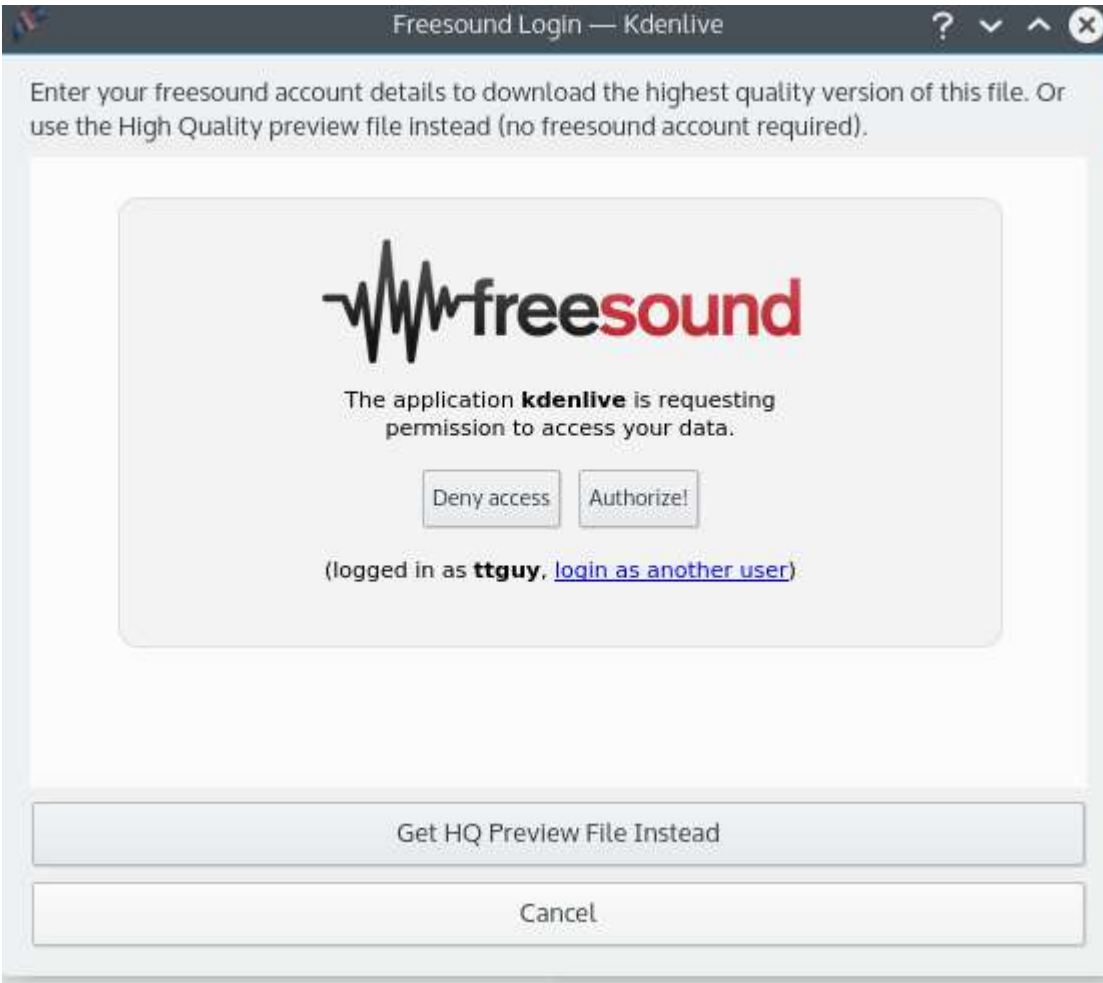
Do not have a Freesound account? [Register here.](#)

Get HQ Preview File Instead

Cancel

It might take a few seconds for the freesound web page to load in the window – be patient.

Once you have logged into the freesound system, you must grant Kdenlive permission to access your freesound account.



You can revoke Kdenlive's access to your freesound account from the freesound website. Log in to your account and click the link in the App permissions section on the settings page "Manage your list of permissions granted to API applications" http://freesound.org/home/app_permissions/.

Once permission is granted, Kdenlive obtains authentication keys that it saves to the kdenlive config file (`~/config/kdenliverc`). It uses these keys to automatically authenticate on future file import requests. Delete the tokens from the kdenlive config file to prevent this.

[Archive Org Video Library](#)

This searches the internet archives video library for video files that you can import into Kdenlive. Animated .gifs are displayed as video previews

[Open Clip Art Graphic Library](#)

This searches the Open Clip Art library for clip art that can be imported into Kdenlive

Open Backup File

Contents

- [Open Backup File](#)

This allows you to open up the automatic backups of the projects that **Kdenlive** creates.

See [Backup](#).

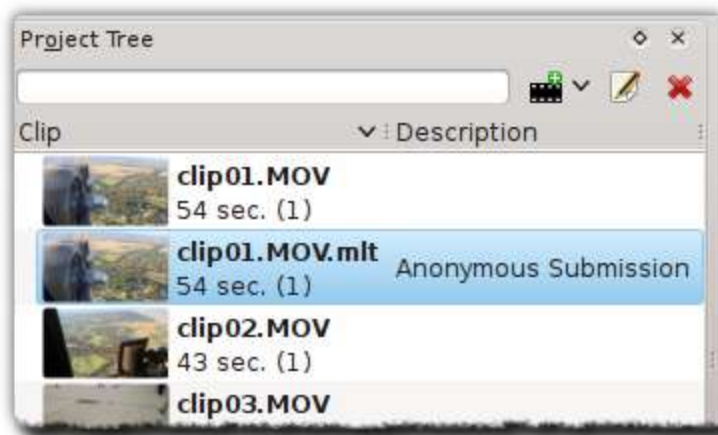
Reverse Clip

Contents

- [Reverse Clip](#)

This menu item is available from the Clip Jobs menu that appears when you [The Project Bin](#) on a clip in the Project Bin or from under the [Project Menu](#) menu when a clip is selected in the Project Bin. It is used to create a clip which plays in reverse.

This feature became available in version 0.9.6 of Kdenlive.



When you select the *Reverse Clip* option from the menu, a new clip is created in the Project Bin. It has the same file name as the clip from which it was created, but with a .mlt extension appended. You can then add this clip to the timeline and when you play it, the video of the original source clip will played, but in reverse.

Note

1=According to legacy Mantis bug tracker ID 2933 some clips will only produce white image and error on reverse.

Stop Motion Capture

Contents

- [Stop Motion Capture](#)

Capture images a frame at a time from a camera plugged into the HDMI port of a Linux-compatible capture card to create stop motion animation. You can also transparently overlay the last captured frame on the monitor to easily see the difference with current live feed.

See [j-b-m's blog](http://kdenlive.org/users/j-b-m/coming-soon-your-desktop) [http://kdenlive.org/users/j-b-m/coming-soon-your-desktop] on this feature.

View Mode

Contents

- [View Mode](#)

Available from the [Project Menu](#) menu this function allows switching between *Tree view* and *Icon view* on the Project Bin.

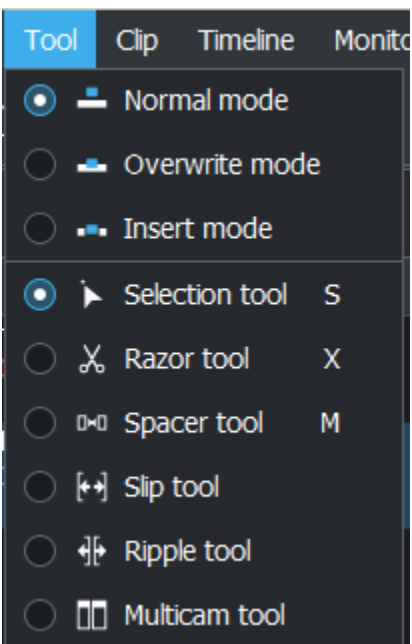
In the *Tree view* mode, the Project Bin shows items as a hierarchy. Each item in the list can have several respectively indented subitems.

The Project Bin in the *Icon view* is a flat grid of items shown by their thumbnails with captions.

Tool Menu

Contents

- [Tool Menu](#)



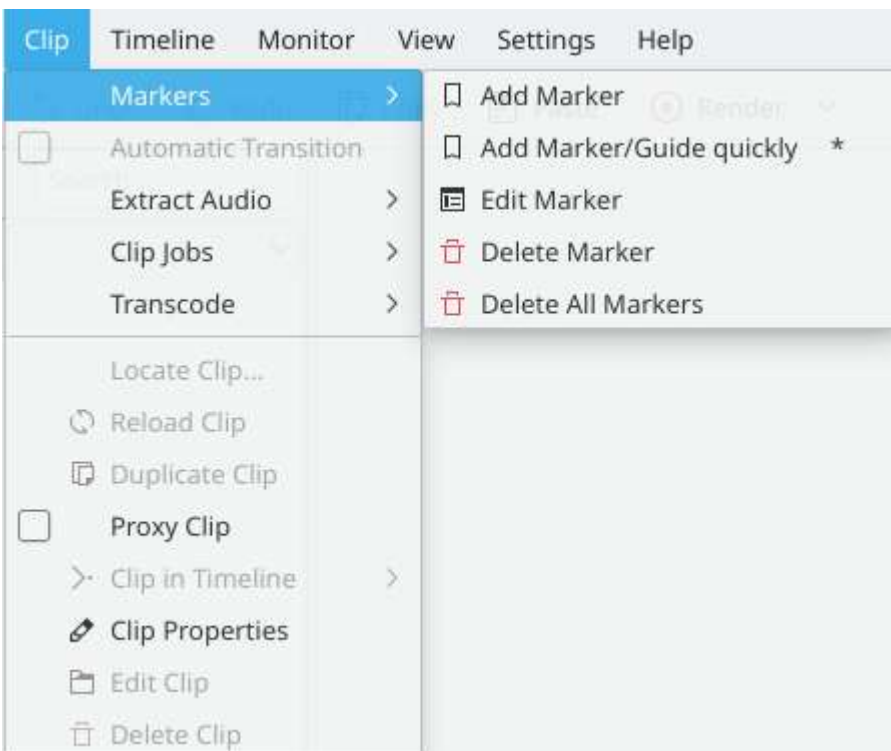
The options on this menu provide three modes and six tools which affect how operations are performed on clips in the timeline. These same options can also be accessed from [Track Compositing](#) and [Timeline Edit Tools](#). More details on their usage can be found there.

Clip Menu

Contents

- [Clip Menu](#)
 - [Markers Menu Item](#)
 - [Automatic Transition](#)
 - [Other Items](#)

The functions controlled from this menu affect the clip that is selected in the timeline. This is in contrast to [Project Menu](#) functions which affect the clips selected in the Project Bin.



Markers Menu Item

The menu allows you to *Add*, *Edit* and *Delete* in [Clip Menu - Markers](#).

Automatic Transition

When a transition is selected, this menu item allows you toggle the transition to and from [Transitions](#) mode.

Other Items

The other menu items which appear when in the Clip menu are also available from the [The Project Bin](#).

- [Extract Audio](#)
- *Clip Jobs*
 - [Stabilize](#)
 - [Automatic Scene Split](#)
 - [Duplicate Clip with speed change](#)
- [Transcode Menu Item](#)
- [Locate Clip...](#)
- [Reload Clip](#)
- [Duplicate Clip](#)
- [Proxy Clip](#)
- [Clip In Timeline](#)
- [Clip Properties](#)
- [Edit Clip](#)
- [Rename...](#)
- [Delete Clip](#)

Contents:

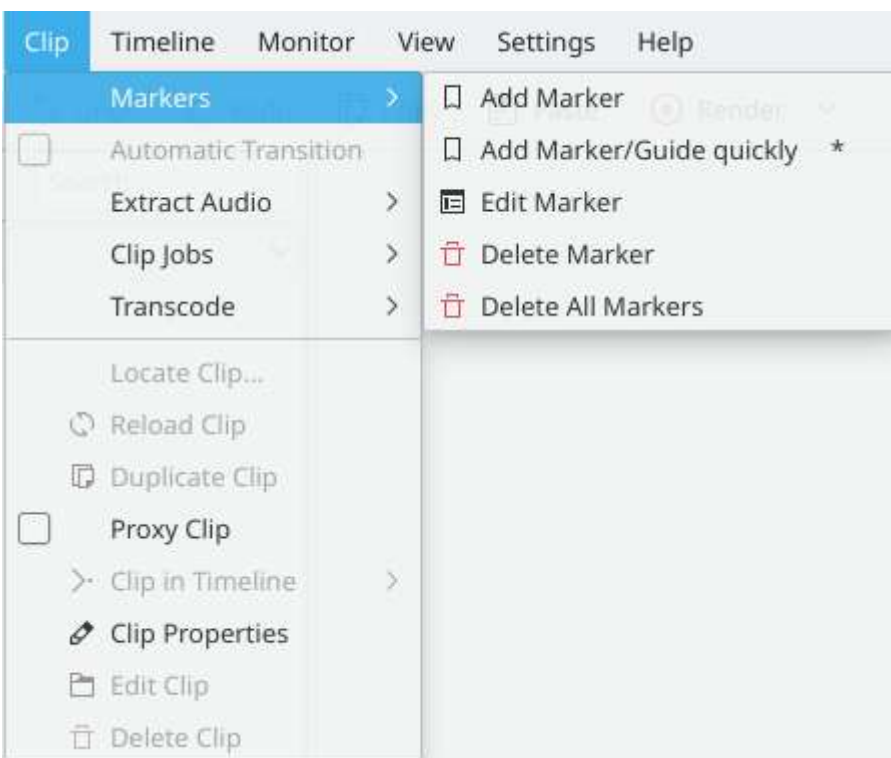
- [Clip Menu - Markers](#)
 - [Add Marker](#)
 - [Edit Marker...](#)
 - [Delete Marker](#)
 - [Delete All Markers](#)

- [Go To marker ...](#)
- [Clip In Timeline](#)
- [Delete Clip](#)
- [Edit Clip](#)
- [Extract Audio](#)
- [Stabilize](#)
- [Transcode Menu Item](#)
- [Rename Clip](#)
- [Clip Menu — Locate Clip](#)
- [Clip Menu — Replace Clip](#)
- [Clip Menu — Reload Clip](#)
- [Clip Menu — Duplicate Clip](#)
- [Automatic Scene Split](#)
- [Duplicate Clip with speed change](#)

Clip Menu - Markers

Contents

- [Clip Menu - Markers](#)
 - [Add Marker](#)
 - [Edit Marker...](#)
 - [Delete Marker](#)
 - [Delete All Markers](#)
 - [Go To marker ...](#)



These menu items are for modifying the clip that is currently selected in the timeline. The Markers menu is also available from [Right-Click Menus](#)

The items that appear as sub-menu items on the Clip>Markers menu item are ...

Add Marker

Adds a marker to the clip at the current timepoint. Markers are properties of the clips in the project bin. So this action puts a marker in the clip in the project bin.

Edit Marker...

For this to work the cursor caret needs to be right on top of a marker. If you are not then you get an error on the bottom left “No Marker found at Cursor time”. Since the Go To Marker for the clip menu does not work, it is sometimes a bit tricky to make this menu item work.

Editing a marker in the timeline causes the marker to update in the project bin and thus it also updates anywhere else the clip appears in the timeline.

Delete Marker

For this to work the cursor caret needs to be right on top of a marker. If you are not then you get an error on the bottom left “No Marker found at Cursor time”. Since the Go To Marker for the clip menu does not work, it is sometimes a bit tricky to make this menu item work.

Markers are properties of the clips in the project bin. So this action removes the marker from the clip in the project bin and thus from any other instances of this clip in the timeline.

Delete All Markers

Deletes all markers from the current clip. Does not appear to work - get “Cannot find clip to remove marker”

Go To marker ...

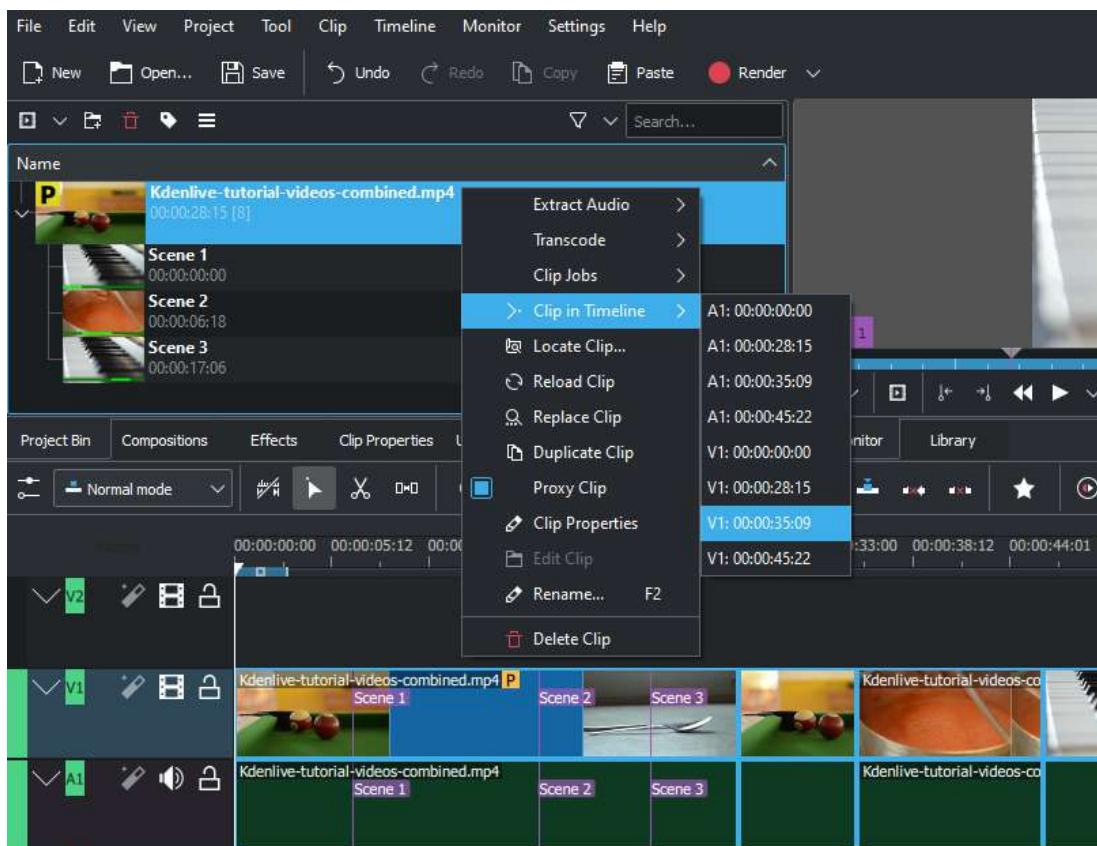
The Go To Marker menu item (clip menu) does not appear to work properly. Choosing a marker from this menu item causes the cursor caret to scoot to the end of the clip - it does not stop at the marker chosen. The [Clip Monitor - Right Click Menu](#) on the Clip Monitor right click menu does work.

Clip In Timeline

Contents

- [Clip In Timeline](#)

This menu item is available from [The Project Bin](#) on a clip in the Project Bin or under the [Project Menu](#) menu when a clip is selected in the Project Bin. It is useful for quickly locating all the places where a clip is used on the timeline.



Selecting the *Clip In Timeline* menu item brings up a flyout that lists all instances of the selected clip, identified by their track and position on the

timeline. Clicking on an entry in the list will reposition the playhead to the beginning of indicated clip.

In the example, we have clicked on the third video entry which is located on video track 1 at the 00:35;09 mark and the playhead is now located at the start of that clip.

This option will be greyed out if the clip is not being used in the timeline.

See also *Clip in Project Bin* found by [Right-Click Menus](#) on a clip in the timeline.

Delete Clip

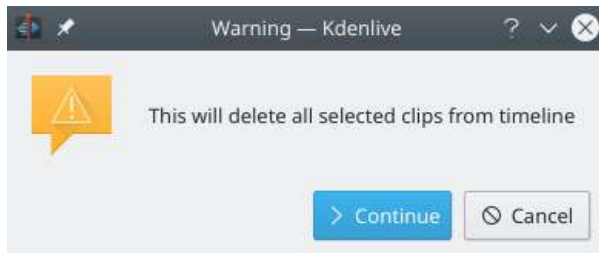
Contents

- [Delete Clip](#)

This menu item is available from [The Project Bin](#) on a clip in the Project Bin or under the [Clip Menu](#) when a clip is selected in the Project Bin.

This function removes the clip from the Project Bin and from the timeline if it is being used on the timeline.

You are warned if the clip is in use on the timeline.



Edit Clip

Contents

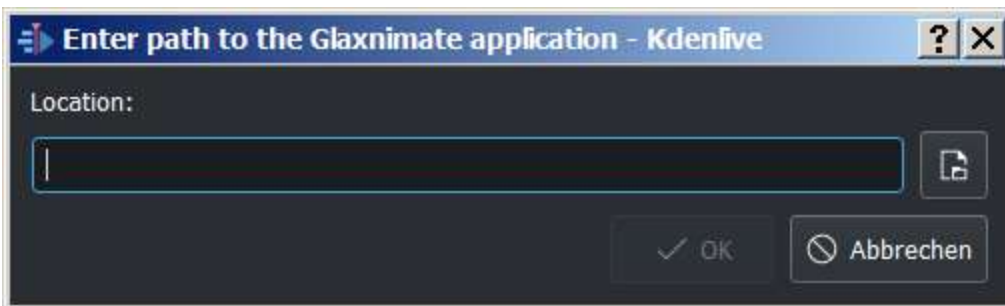
- [Edit Clip](#)

This option is available from [Clip Menu](#) or by right-click on the clip in the [project bin](#) for following clip types:

- audio
- image
- animation (*new in version 22.08*)

It opens the clip in an external software specified in [Default Apps](#) (*Settings* ▶ *Configure Kdenlive...* ▶ *Environment page* ▶ *Default Apps tab*) ready for editing.

If the path is not set a pop-up window appears to define the path to the external software on your computer:



Once the path is set the application starts and opens the clip you like. The entered path gets added automatically in [Default Apps](#).

More details for installing the external software and how to set the path see [Default Apps](#).

Hint

The option is greyed out for video clips because **Kdenlive** is the video editor - only audio, image and animation clips are edited by external software.

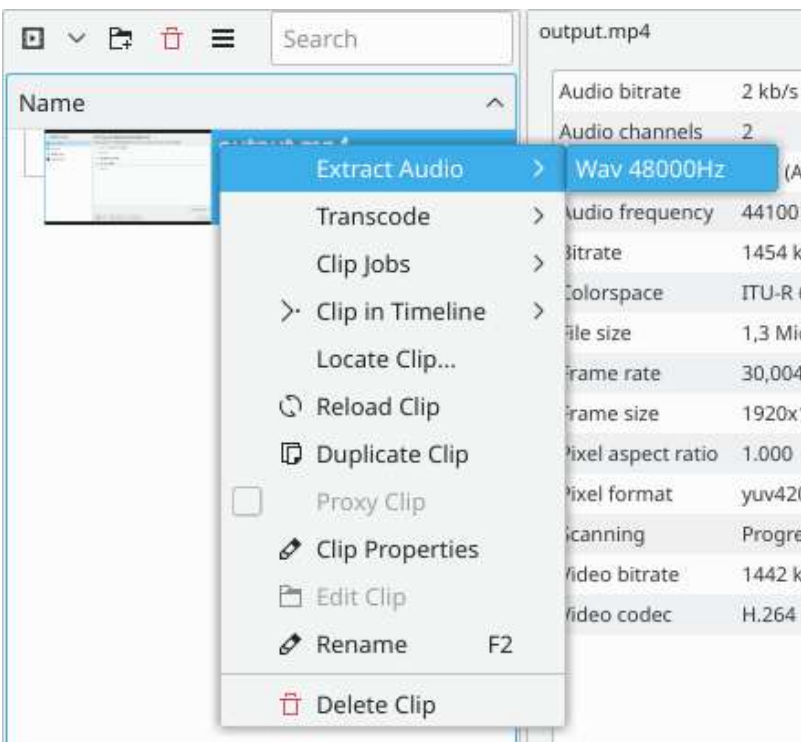
Extract Audio

Contents

- [Extract Audio](#)

This feature extracts the audio out of a video clip into a `.wav` file and adds it to the [The Project Bin](#).

This menu item is available from [The Project Bin](#) on a clip in the Project Bin or under the [Clip Menu](#) when a clip is selected in the Project Bin.



The process runs as a job in the Project Bin.



Stabilize

Contents

- [Stabilize](#)

This menu item is available from [The Project Bin](#) on a clip in the Project Bin or under the [Project Menu](#) menu when a clip is selected in the Project Bin.

This feature applies image stabilization algorithms to the clip which can reduce the shakiness of a bit of footage.

Stabilize



Based on the tooltips from this screen and the [docs here](http://public.hronopik.de/vid.stab/features.php?lang=en) [http://public.hronopik.de/vid.stab/features.php?lang=en], this is what all the options mean:

Accuracy

Accuracy of shakiness detection. Should be \geq shakiness factor. 1: low (fast processing). 15: high (slow processing). Default: 4. Recommended: 8.

Shakiness

How shaky is the video? And how quick is the camera? 1: little (fast processing). 10: very strong/quick (slow processing). Default = 4. Note: large values may also reduce the accuracy. This is due to the internals of the movement-detection. Typically you don't need a value greater than 7.

Stepsize

Step size of search process. Region around minimum is scanned with 1 pixel resolution. Default = 6.

Min. contrast

Below this contrast, the field is discarded. Range 0-1. Default = 0.3. You may want to use a smaller value for a really low contrast clip.

Smoothing

Controls the amount of smoothing/stabilization. The larger the value for smoothing, the more camera movements are compensated. The resulting clip has a lower change in camera speed. Technically it is the number of frames for lowpass filtering = $(\text{smoothing} * 2) + 1$.

For example, with a with 25 fps clip, a value of 12 for the smoothing factor means we would smooth over one second - 12 frames behind the current frame + the current frame (1) + 12 frames after the current frame. Default = 10.

Demo of the difference [here](#)

[http://public.hronopik.de/vid.stab/files/skiing_veryshaky_short_vs_longsmoothing_above.ogv]
(top:3, bottom: 30).

Max shift

Maximal number of pixels to translate image. Default = -1. No limit.

Max angle

Maximum angle to rotate in radians. Default = -1, which means no limit.

Crop

Unchecked means the border of the transformed frames contains the pixels from previous frames. Checked = black background. Default = unchecked.

Zoom

Additional zoom during transform. Percentage to zoom > 0 = zoom in, < 0 = zoom out. The zoom specified here is in addition to the optimum zoom calculated by the program when optzoom is checked. Default = 0.

Optimal Zoom

Use optimal zoom (calculated from transforms). Causes video to zoom until 90% of transformations are hidden. Default is checked. Hint: You can further zoom in with the zoom option.

Optimal Zoom

Zoom per frame (used when “Optimal Zoom” = 2)

Sharpen

Sharpen transformed image. Amount of sharpening: 0: no sharpening. Uses filter unsharp with 5x5 matrix. Default = 0.8.

Show fields

0 = draw nothing, 1 or 2 = show fields and transforms. Use 1 or 2 to preview what the process is going to do. [Example](http://public.hronopik.de/vid.stab/files/skiing_veryshaky_visualized8_short.ogv) [http://public.hronopik.de/vid.stab/files/skiing_veryshaky_visualized8_short.ogv]. Default = 0. Non-zero values of this parameter are not relevant in the **Kdenlive** implementation - use zero.

Tripod

Reference frame

Example of the effect of running stabilize - transcode from the original author - Georg Martius.

Side by side <https://youtu.be/HYE3KA18RAQ>

Deshaked <https://youtu.be/c3CEm8bgVQ0>

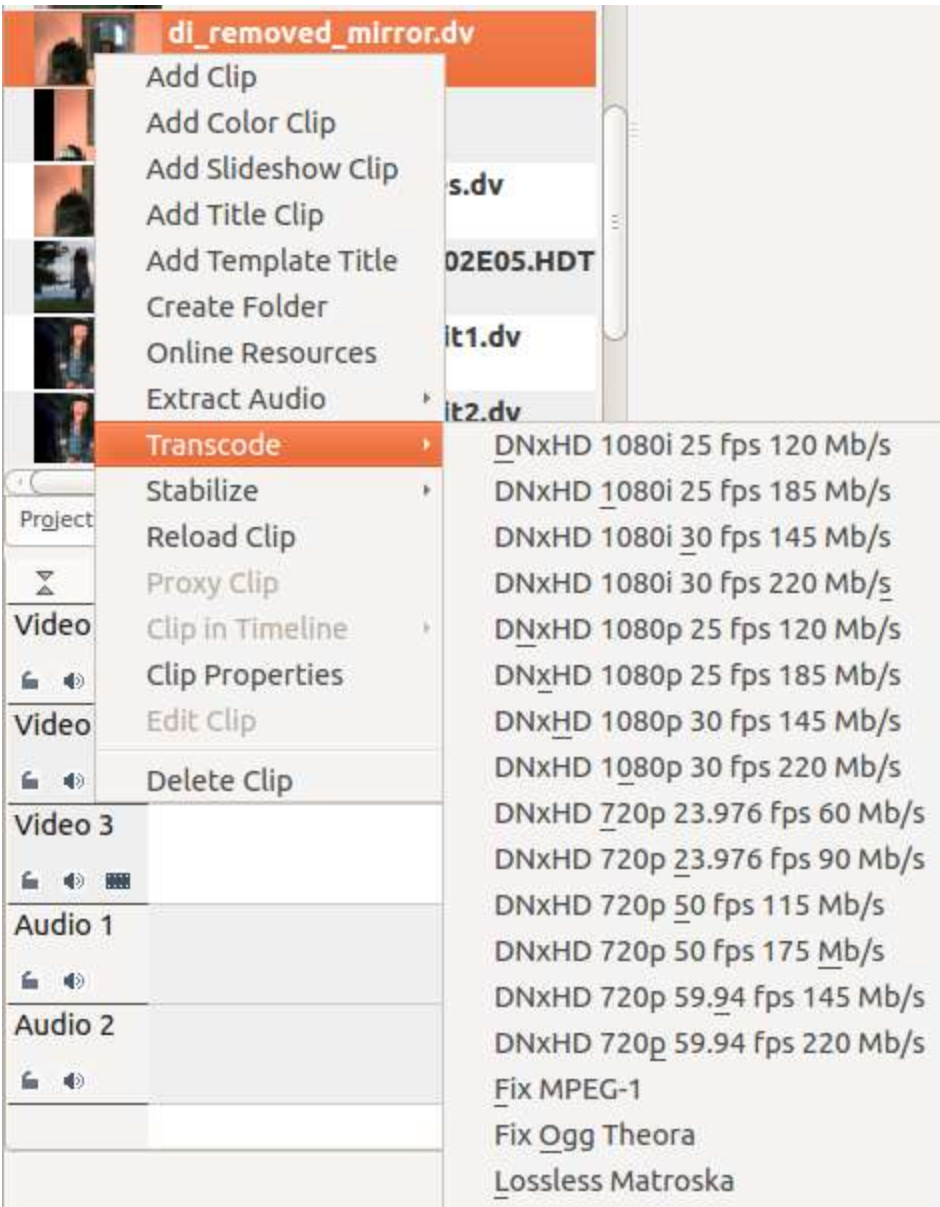
Original <https://youtu.be/cRA5H1LYzM4>

Transcode Menu Item

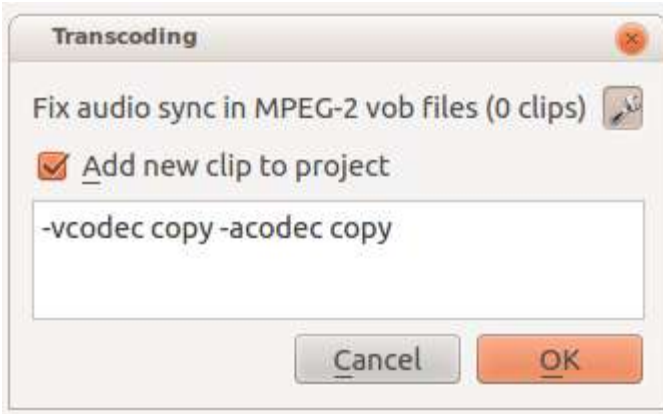
Contents

- [Transcode Menu Item](#)

From right-click on a clip in [The Project Bin](#), one of the items that appears in the menu is the *Transcode* submenu.



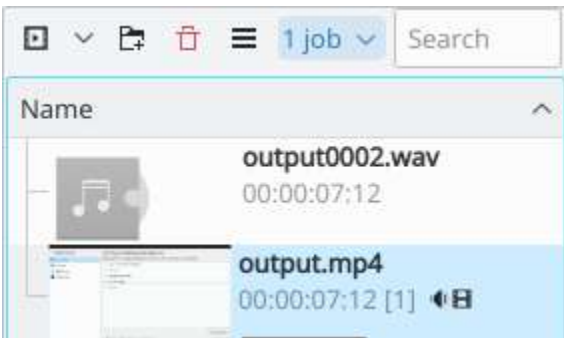
Choose a transcode profile from the available list to transcode the selected clip into a different video format. The options are controlled by [Configure Kdenlive](#). The transcoding is done by the [ffmpeg](http://www.ffmpeg.org/) program.



The above screenshot is the dialog presented after choosing a transcode profile for transcoding the clip. The wrench icon toggles the display of the details of the command that will be used for transcoding. The description comes from the description supplied in the [Configure Kdenlive](#) for this functionality.

Use the checkbox to cause the transcoded clip to be added to the Project Bin once the transcode job has finished.

While the transcode job is running, the Project Bin will display a progress bar on the thumbnail of the clip and a job list menu item will appear at the top of the Project Bin.



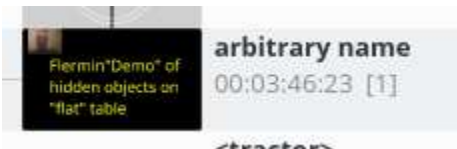
Rename Clip

Contents

- [Rename Clip](#)

Change the name of a clip in the Project Bin to an arbitrary name. Does not rename the file on the file system.

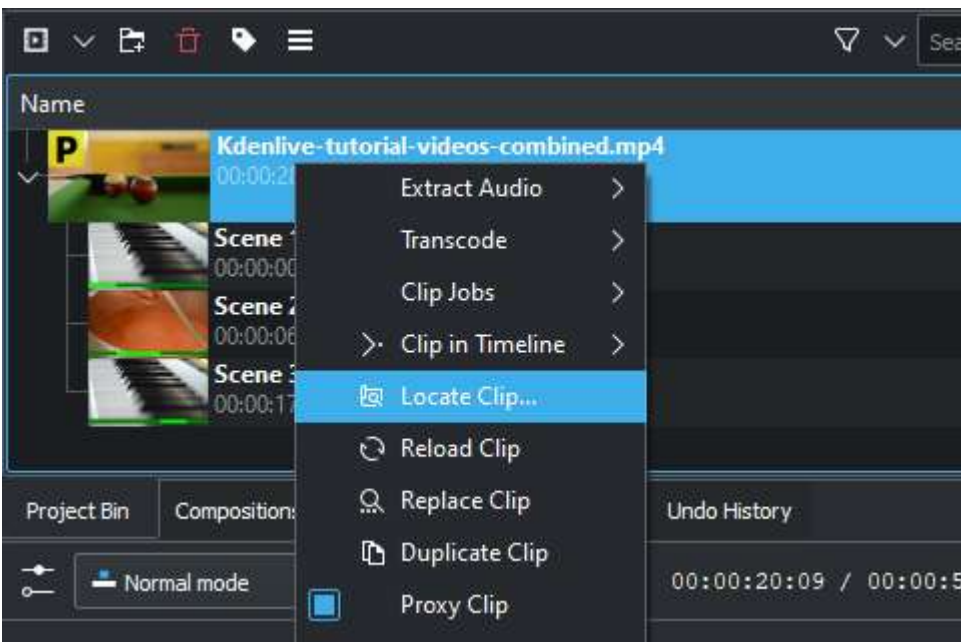
This menu item is available from [The Project Bin](#) on a clip in the Project Bin.



Clip Menu — Locate Clip

Contents

- [Clip Menu — Locate Clip](#)



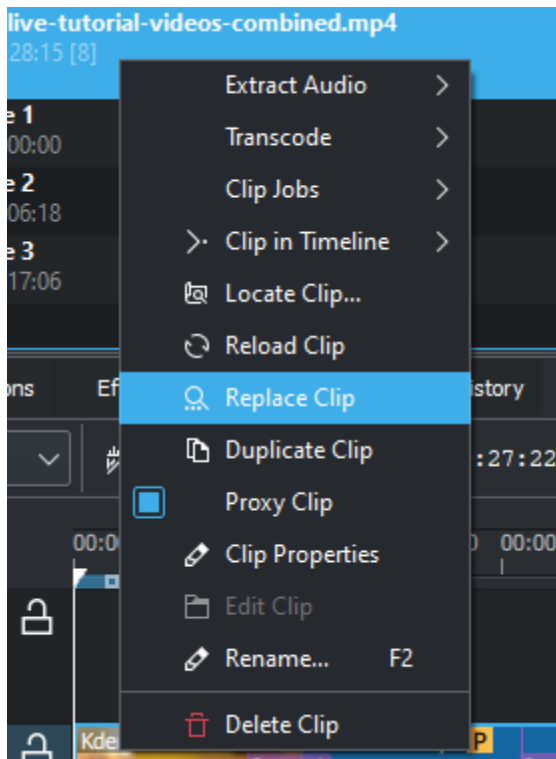
This menu item is available from [The Project Bin](#) a clip in the Project Bin. Locate Clip opens up the systems file browser at the location on the file system where the selected clip is stored. Useful for tracking down the sources of clips in the project bin.

Clip Menu — Replace Clip

Contents

- [Clip Menu — Replace Clip](#)

New in version 20.04.0.

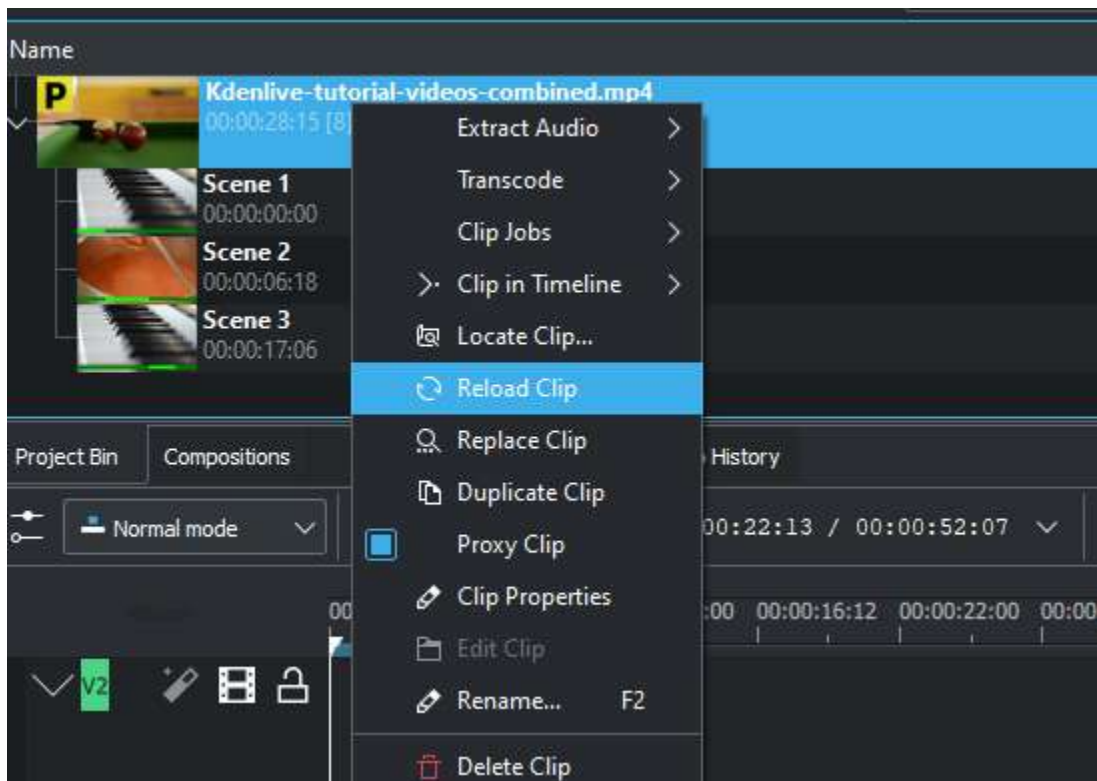


This menu item is available from [The Project Bin](#) a clip in the Project Bin. Replace Clip will allow you to select a different file but keep all of the uses on the timeline. This can be useful if you work first with placeholder clips (i.e. low resolution) and on the end, before rendering, you replace the clip with the final clip.

Clip Menu — Reload Clip

Contents

- [Clip Menu — Reload Clip](#)

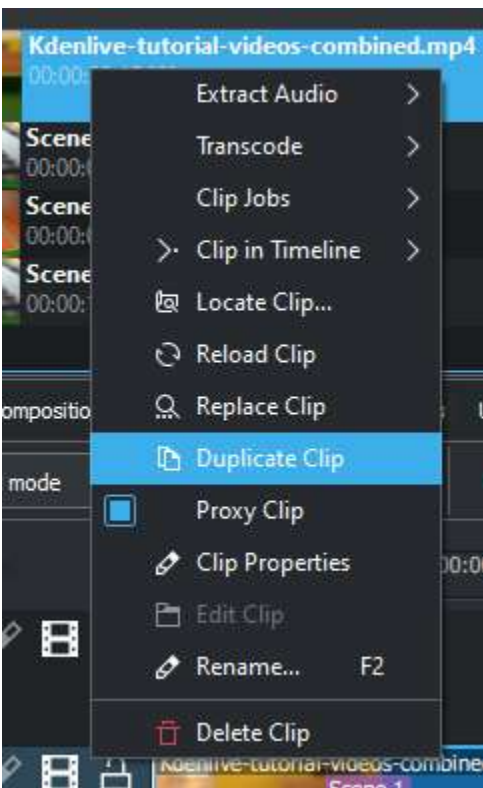


This menu item is available from [The Project Bin](#) a clip in the Project Bin. Reload Clip will re-import the clip into Kdenlive from the system. This is useful when you edit a clip outside of Kdenlive and want Kdenlive to update it in the project.

Clip Menu — Duplicate Clip

Contents

- [Clip Menu — Duplicate Clip](#)



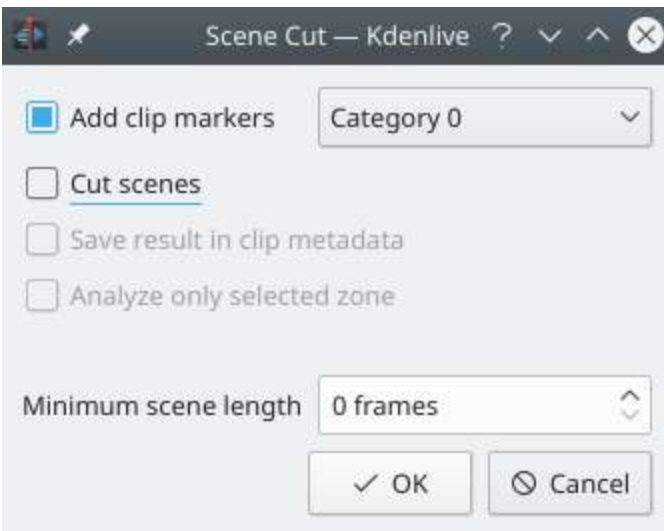
This menu item is available from [The Project Bin](#) a clip in the Project Bin. Duplicate Clip will add another clip in the project bin from the first clip. This can be useful when applying effects to clips, and allowing you to have the same source file with two different sets of applied effects.

Automatic Scene Split

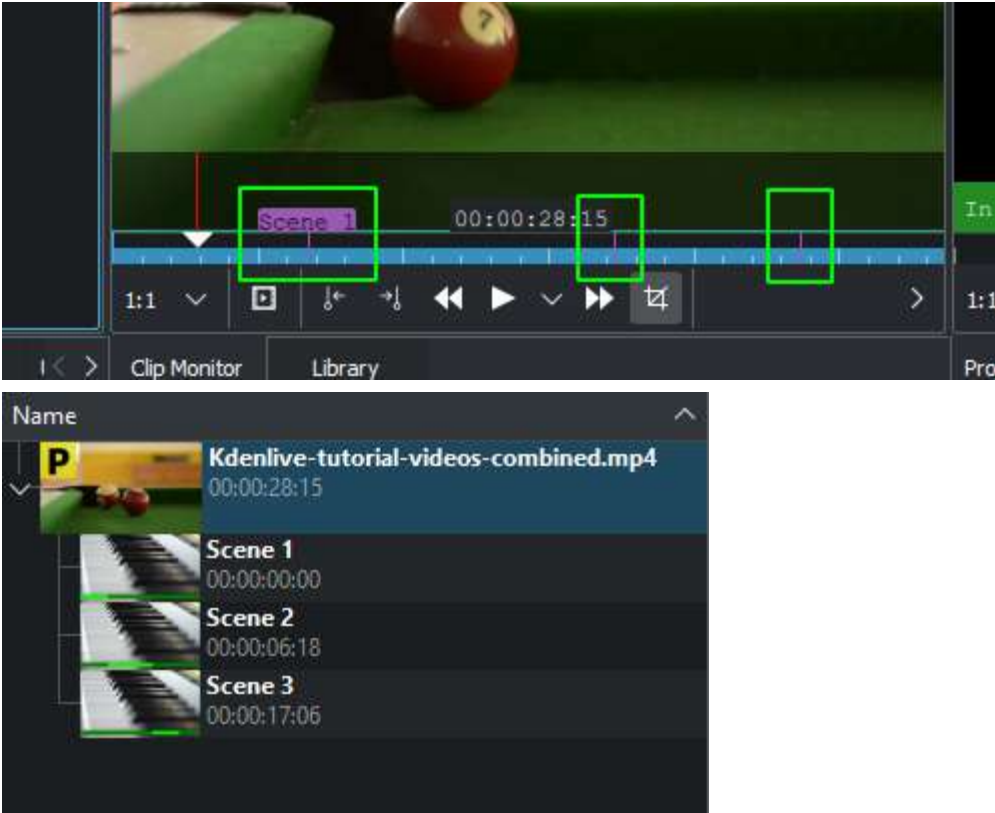
Contents

- [Automatic Scene Split](#)

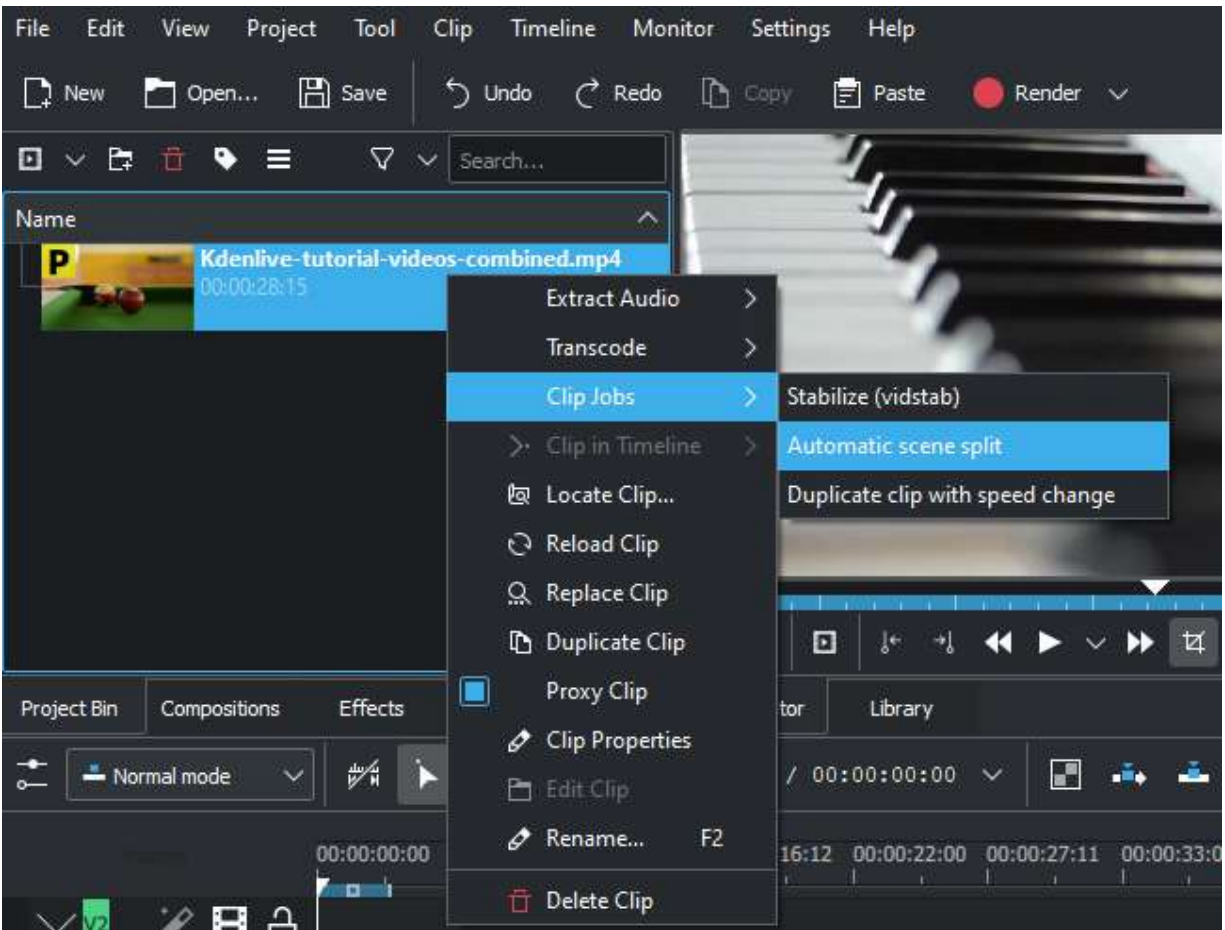
This job detects Scene changes in the clip and create markers or cut the clip into sub clips.



Cut scenes are numbered and sorted under the clip in the project bin window and will be saved with your project.



This menu item is available from the Clip Jobs menu that appears when you [The Project Bin](#) on a clip in the Project Bin.

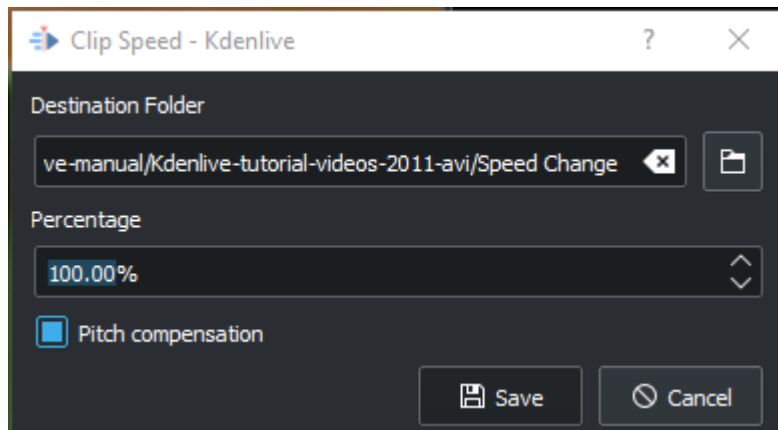


Duplicate Clip with speed change

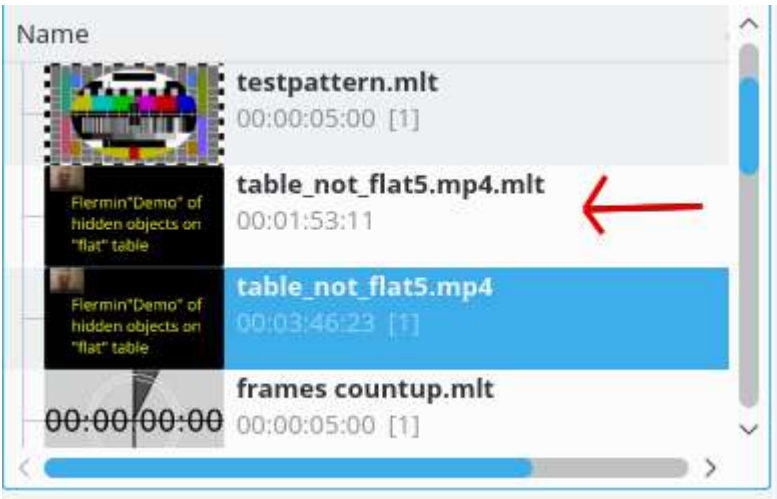
Contents

- [Duplicate Clip with speed change](#)

This menu item is available from the Clip Jobs menu that appears when you [The Project Bin](#) on a clip in the Project Bin or from under the [Project Menu](#) menu when a clip is selected in the Project Bin.



This feature used to be *Reverse Clip* and was available from version 0.9.6 of Kdenlive. From version 17.04 it can still be used to reverse the clip - by entering a speed of minus 100%. But you can create clips of other speeds too. With the new version of the clip job the sound in the clip is also reversed - so you can learn backwards talking!

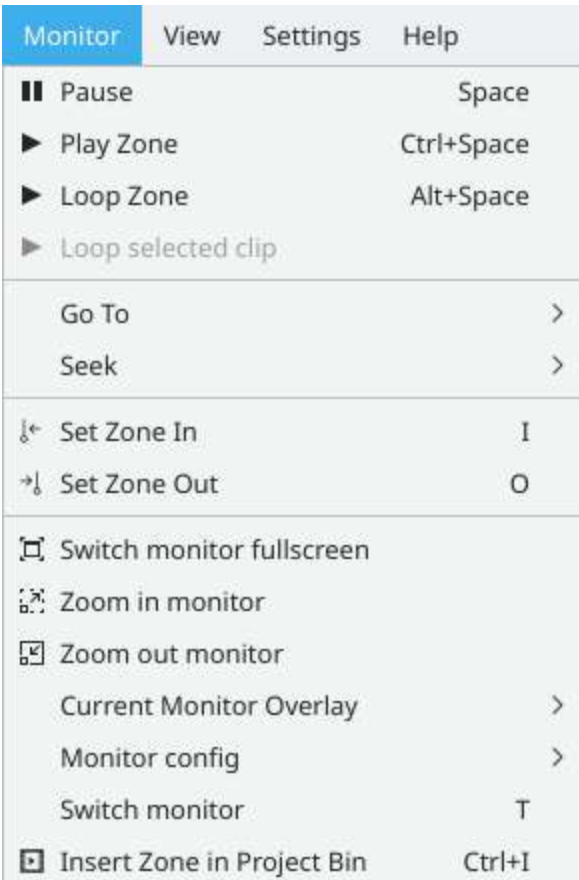


When you select the *Duplicate Clip with speed change* option from the menu, a new clip is created in the Project Bin. It has the filename you supplied in the dialog with a .mlt extension. You can then add this clip to the timeline and when you play it, the video of the original source clip will played, but at the new speed (or in reverse).

Monitor Menu

Contents

- Monitor Menu
 - Play
 - Play Zone
 - Loop Zone
 - Loop selected clip
 - Go To
 - Rewind
 - Rewind 1 frame
 - Rewind 1 second
 - Forward 1 Frame
 - Forward 1 Second
 - Forward
 - Set Zone In
 - Set Zone Out
 - Switch monitor fullscreen
 - Deinterlacer
 - Interpolation
 - Switch monitor
 - Insert zone in project bin
 - Insert zone in timeline



The monitor menu contains controls for viewing and navigating through the clips in your project for the purpose of making edits and seeing the effects of your changes. Depending on which monitor window you have selected at the time, the controls will affect either the currently selected clip in the Project Bin (**Clip Monitor**) or the playhead in the Timeline (**Project Monitor**).

With the exception of the *Deinterlacer* and *Interpolation* items, it is much more practical to perform the actions on this menu using the associated keyboard shortcuts or the buttons at the bottom of the monitor windows.

[Play](#)

[Play Zone](#)

[Loop Zone](#)

Loop selected clip

Go To

Rewind

Rewind 1 frame

Rewind 1 second

Forward 1 Frame

Forward 1 Second

Forward

Set Zone In

Set Zone Out

Switch monitor fullscreen

Deinterlacer

Interpolation

Switch monitor

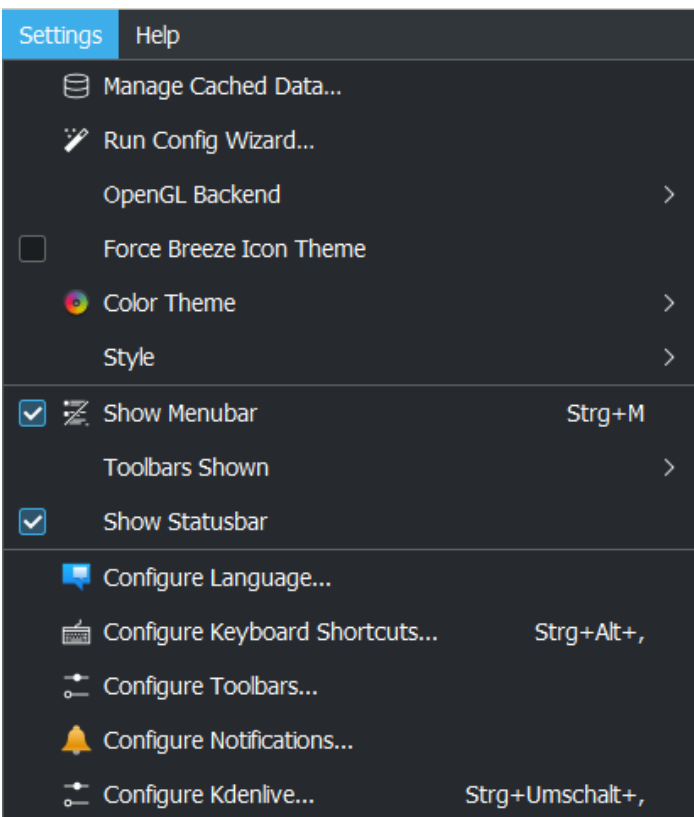
Insert zone in project bin

Insert zone in timeline

Settings Menu

Contents

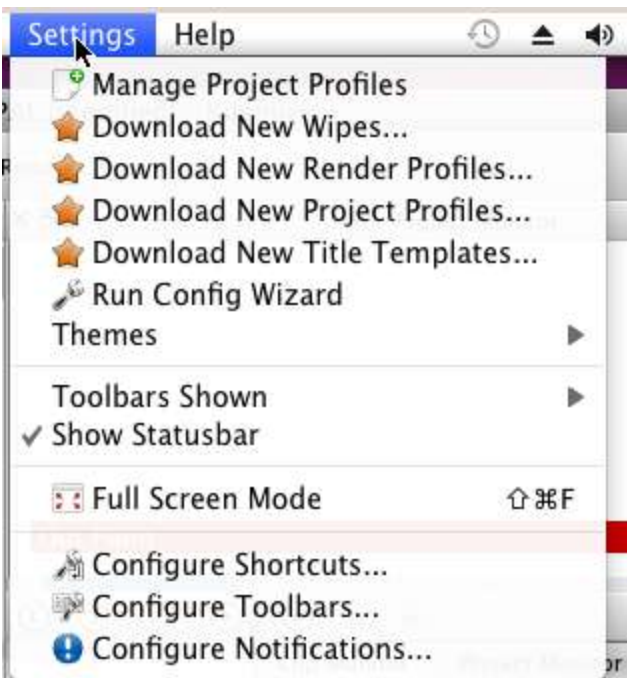
- [Settings Menu](#)
 - [Settings Menu - Mac OS X](#)
 - [Configure Language](#)



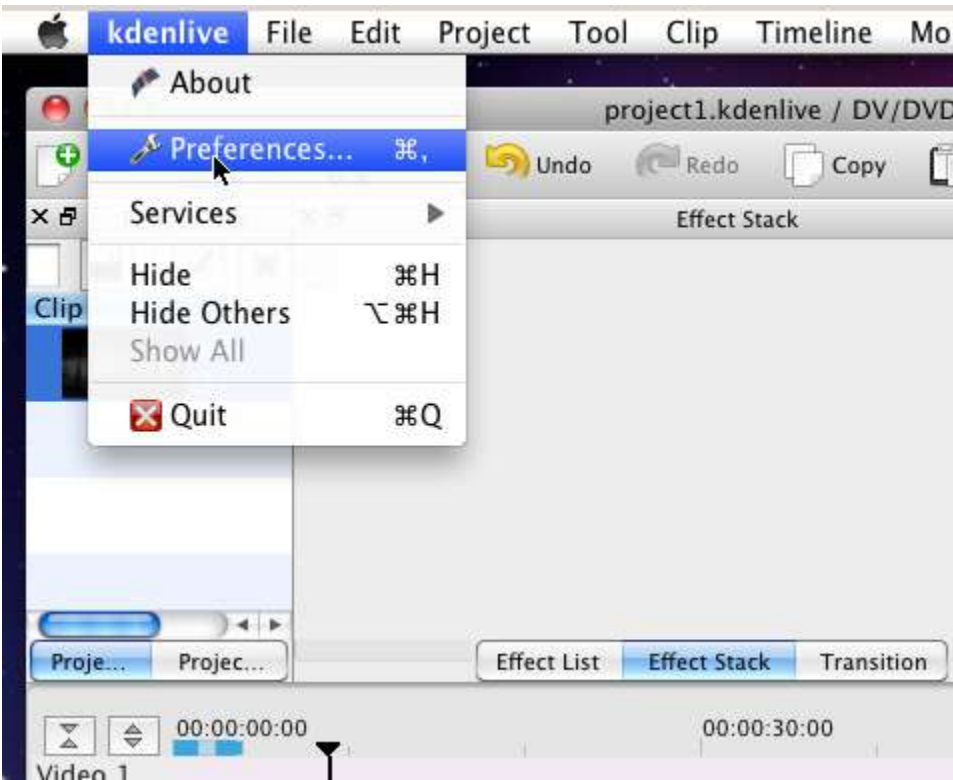
- [Manage Cached Data](#)
- [Run Config Wizard](#)
- [OpenGL Backend](#) Windows only: You can switch the OpenGL backend if you have playback issues.
- [Force Breeze Icon Theme](#)
- [Color Theme](#)
- [Style](#)

- [Show Menubar](#)
- [Toolbars Shown](#)
- [Show Status bar](#)
- [Configure Language...](#)
- [Configure Keyboard Shortcuts](#)
- [Configure Toolbars](#)
- [Configure Notifications](#)
- [Configure Kdenlive](#)

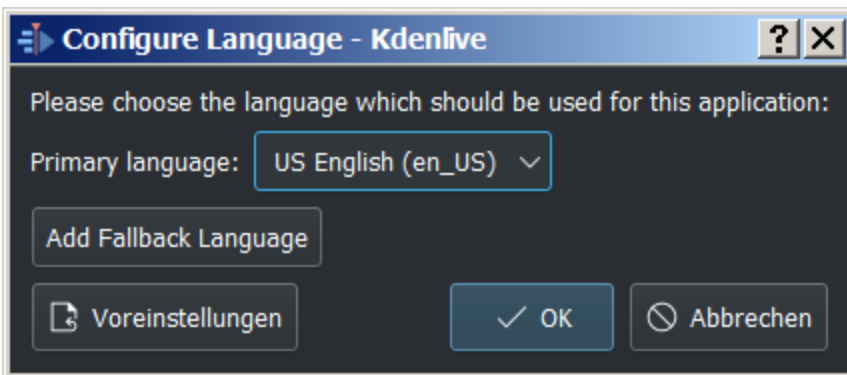
Settings Menu - Mac OS X



On the Mac OS X build of Kdenlive the *Settings* menu does not contain the *Configure Kdenlive* menu item. The equivalent on Mac OS X is the *Preferences* menu item found under the *Kdenlive* menu.



[Configure Language](#)



Setting Kdenlive to your preferred language.

Contents:

- [Configure Kdenlive](#)
 - [Misc](#)
 - [Project Defaults](#)

- [Proxy Clips](#)
- [Timeline](#)
- [Environment](#)
 - [MLT Environment](#)
 - [Default Folders](#)
 - [Default Apps](#)
 - [Mime types](#)
- [Colors](#)
- [Speech To Text](#)
- [Capture](#)
 - [Configure Firewire Capture](#)
 - [Configure Screen Grab Capture](#)
 - [Blackmagic](#)
 - [Audio](#)
- [Jog Shuttle](#)
 - [Linux](#)
 - [Windows](#)
- [Playback](#)
- [Transcode](#)
 - [Transcode Options](#)
- [Configure Notifications](#)
- [Configure Shortcuts](#)
- [Download New Project Profiles](#)
- [Download New Render Profiles](#)
- [Upload/Share Render Profiles](#)
- [Download New Wipes](#)
- [Full Screen Mode](#)
- [Manage Project Profiles](#)
- [Run Config Wizard](#)
- [Color Theme](#)
- [Toolbars Shown](#)

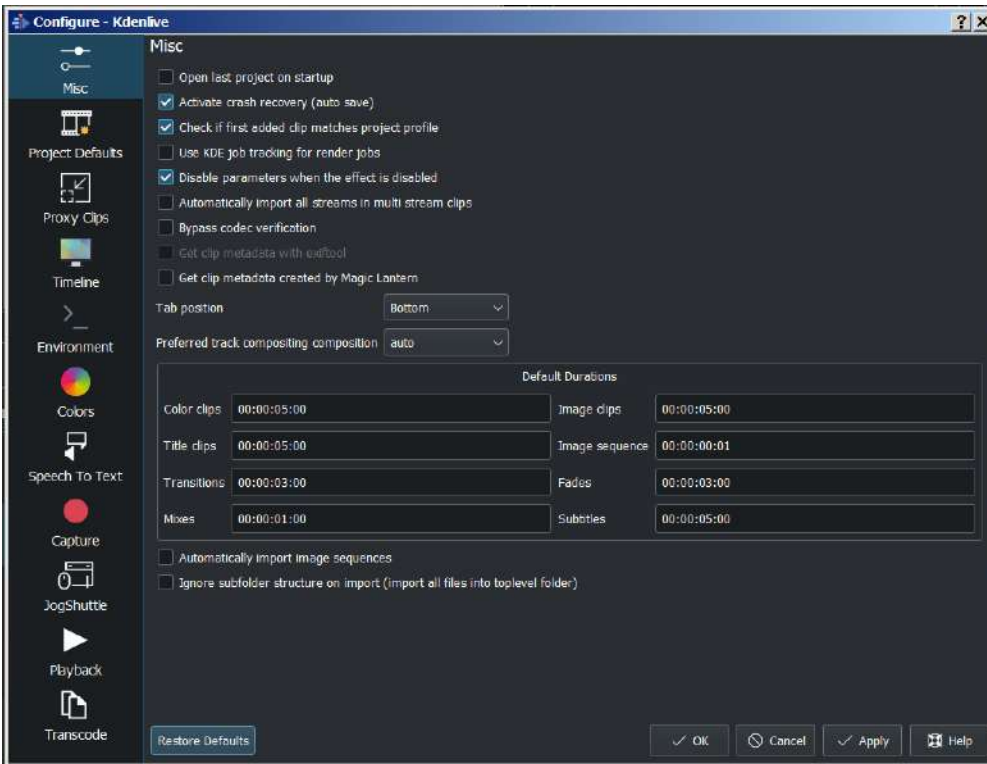
Configure Kdenlive

Contents

- [Configure Kdenlive](#)
 - [Misc](#)
 - [Project Defaults](#)
 - [Proxy Clips](#)
 - [Timeline](#)
 - [Environment](#)
 - [MLT Environment](#)
 - [Default Folders](#)
 - [Default Apps](#)
 - [Mime types](#)
 - [Colors](#)
 - [Speech To Text](#)
 - [Capture](#)
 - [Configure Firewire Capture](#)
 - [Configure Screen Grab Capture](#)
 - [Blackmagic](#)
 - [Audio](#)
 - [Jog Shuttle](#)
 - [Linux](#)
 - [Windows](#)
 - [Playback](#)
 - [Transcode](#)
 - [Transcode Options](#)

Following settings applies when you start a project with [New](#).

Misc



Open the last project on startup

Check if the first added clip matches the project profile

Crash recovery ([Auto Save](#))

Use KDE job tracking for render jobs

Use on-monitor effects

Disable parameters when the effect is disabled

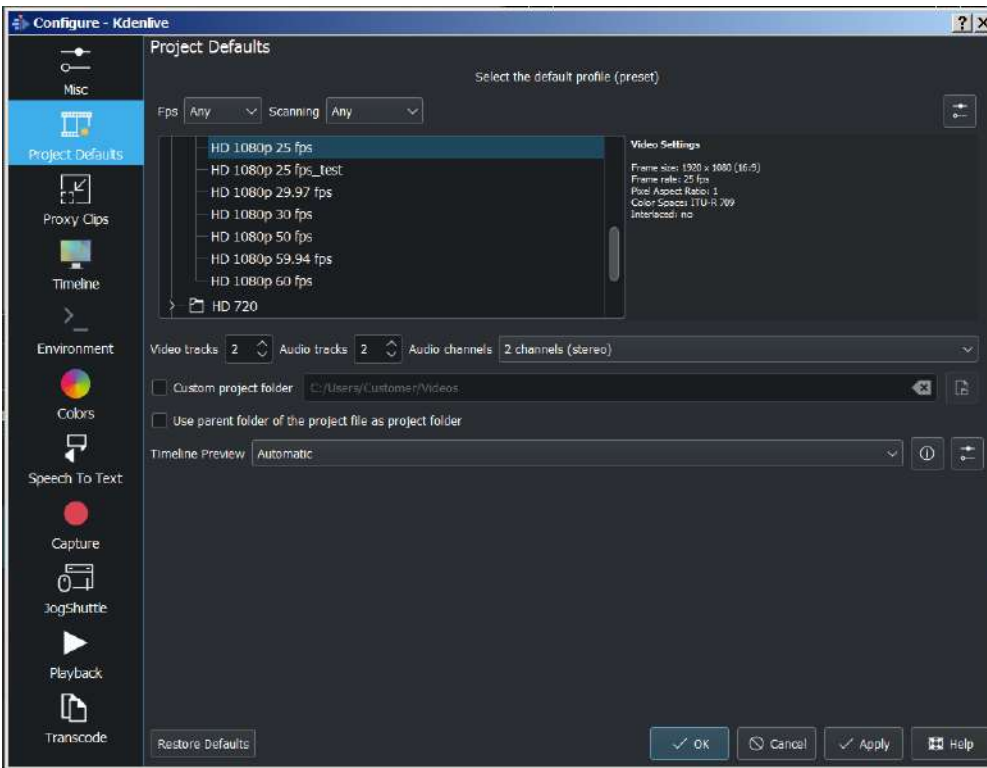
Default Durations

Automatically import image sequences

Transparent background for imported images

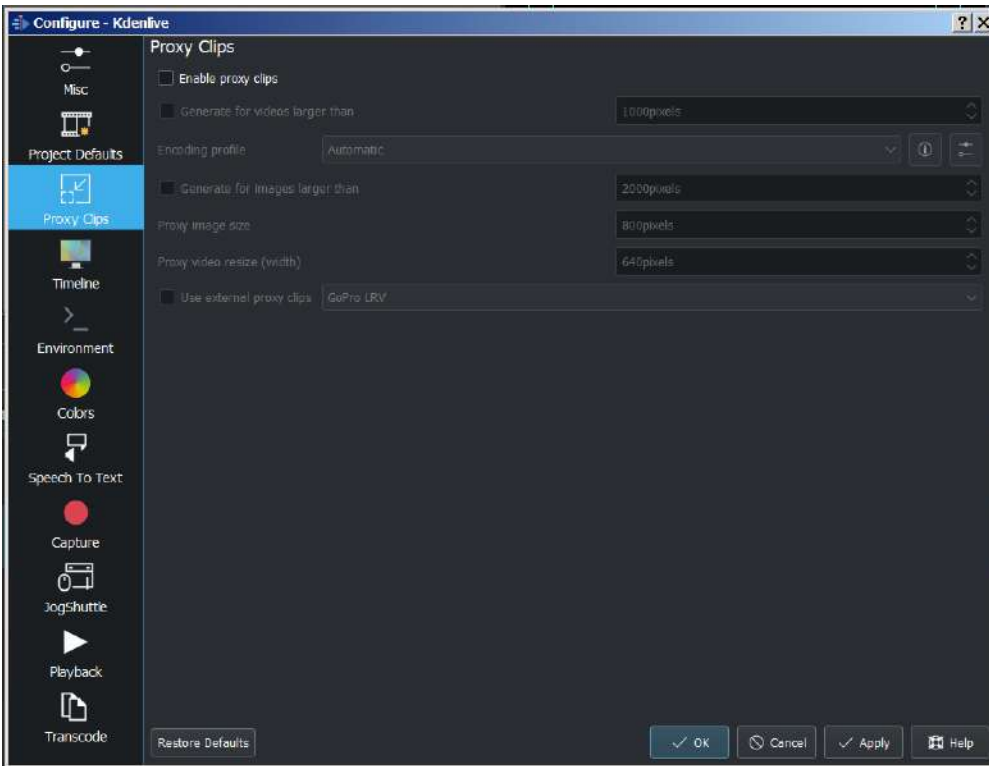
[Project Defaults](#)

Configures what the project settings will look like by default when you choose File → [New](#).



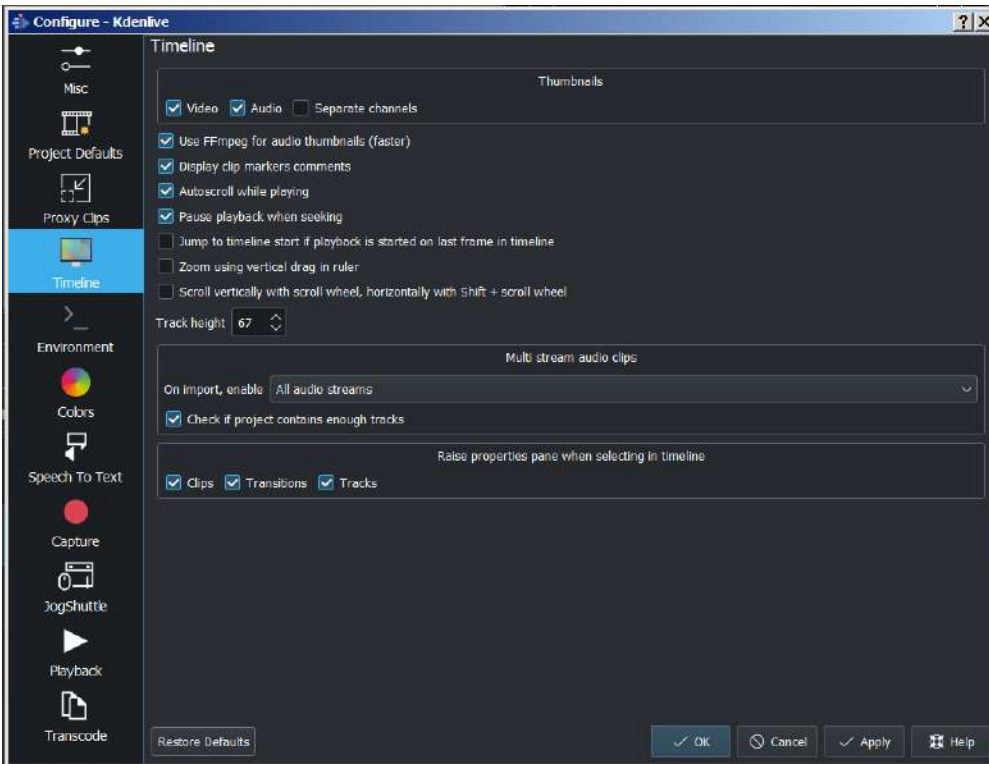
[Proxy Clips](#)

Configures what the proxy settings will be when you choose File → [New](#).



Timeline

Configure how the timeline appears in **Kdenlive**



Thumbnails

- Video: Turns on video thumbnail by default.
- Audio: Turns on audio thumbnail by default.
- Separate channels: If checked you will get a separate waveform in the audio thumbnail for each audio channel in the audio track. If unchecked you will get a single waveform as the audio thumbnail.

Settings

- Autoscroll while playing
- Pause playback when seeking: **Enabled:** It stops playback while you click on a new position in the timeline. **Disabled:** Playback is ongoing while you click on a new position in the timeline. It allows looping playback, see [Continuously loop playback](#).
- Zoom using vertical drag in the ruler
- Track Height: defines the default track height in pixels for the tracks on the timeline.

Multi stream audio clips

On import, enable: select if *all audio streams, first audio stream, first 2 audio streams* should be imported.

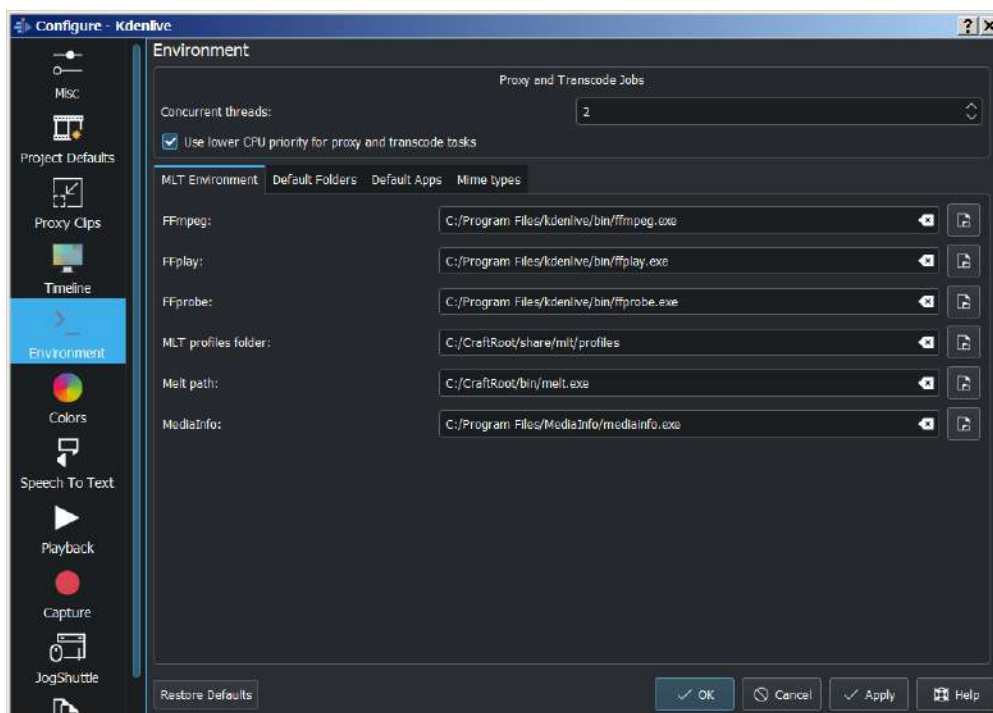
- Check if project contains enough audio tracks. If enabled Kdenlive asks if it should generate the additional audio tracks needed automatically.

Raise properties pane when selecting in timeline

More details [here](#)

Environment

MLT Environment



Environment variables on Windows

FFmpeg	/usr/bin/ffmpeg	✕	📁
FFplay	/usr/bin/ffplay	✕	📁
FFprobe	/usr/bin/ffprobe	✕	📁
MLT profiles folder	/usr/local/share/mlt-7/profiles	✕	📁
Melt path	/usr/local/bin/melt-7	✕	📁
MediaInfo	/usr/bin/mediainfo	✕	📁

Environment variables on Kdenlive normal installed on Linux (Appimage, Flatpak, Snap may have integrated paths)

FFmpeg	/Applications/kdenlive.app/Contents/MacOS/ffmpeg	✕	📁
FFplay	/Applications/kdenlive.app/Contents/MacOS/ffplay	✕	📁
FFprobe	/Applications/kdenlive.app/Contents/MacOS/ffprobe	✕	📁
MLT profiles folder	/Applications/kdenlive.app/Contents/Resources/mlt/profiles	✕	📁
Melt path	/Applications/kdenlive.app/Contents/MacOS/melt	✕	📁
MediaInfo	/Applications/MediaInfo.app	✕	📁

Environment variables on MacOS

This setting tells **Kdenlive** where to find the MLT executables and profile files. Only advanced users would really need to change these settings. **Kdenlive** is basically a front end to the MLT program and this setting tells **Kdenlive** where to find the engine that runs the whole application.

Path to the MediaInfo file. If filled in Kdenlive shows more details in clip properties.

Proxy and Transcode Jobs

Concurrent threads This will set the number of threads the program will attempt to use when calling ffmpeg to encode [Clips](#). This will be what kdenlive passes to the ffmpeg *-threads* parameter. Increasing this parameter may not have an effect if you have changed the proxy encoding settings using [Project Settings Dialog](#) to a codec that ffmpeg does not do multi-thread on. (Multi-threading is supported for MPEG-2, MPEG-4, H.264, and VP8)

New in version 22.08.

Use lower CPU priority for proxy and transcode tasks

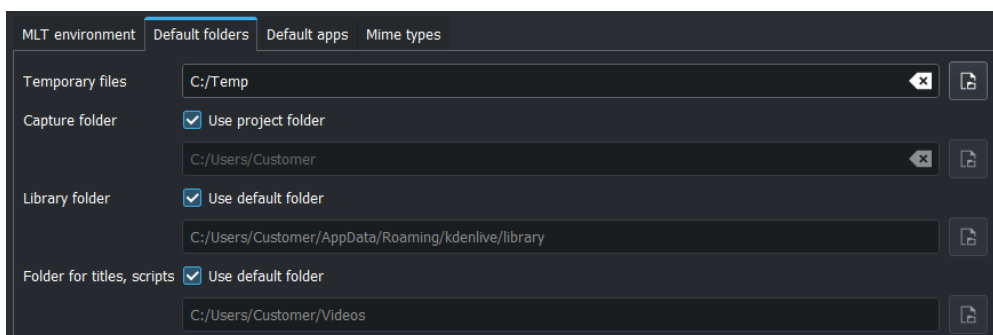
This adds a Kdenlive setting to lower the priority of the proxy rendering (QProcess). This helps keep the main UI responsive when proxies are rendering.

Deprecated since version 19.04.

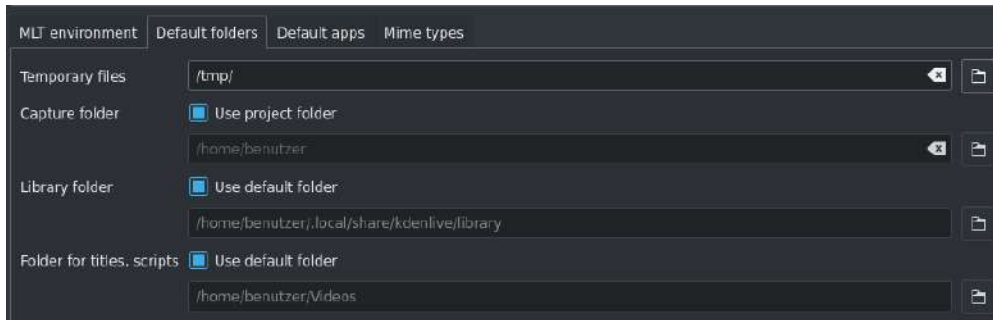
Processing and transcode jobs: This is experimental and was removed in ver 0.9.10. This number was passed to melts *real_time* consumer property. This parameter increases the number of threads the program uses for video decoding and processing (but not encoding which is controlled via [Rendering](#)). See [mlt doco](#) [https://www.mltframework.org/faq/#does-mlt-take-advantage-of-multiple-cores-or-how-do-i-enable-parallel-processing]. Using this has potential side effects - see [this](#) [https://forum.kde.org/viewtopic.php?f=265&t=122140#p317318] forum post from the author of the Melt program.

If you want to experiment with multi threading in versions higher than 0.9.10 you could add something like “real_time=-4” to a custom render profile. And yes that is a minus 4 in the example - as per the [mlt doco](#) [https://www.mltframework.org/faq/#does-mlt-take-advantage-of-multiple-cores-or-how-do-i-enable-parallel-processing] - numbers <0 implement threading without dropping frames.

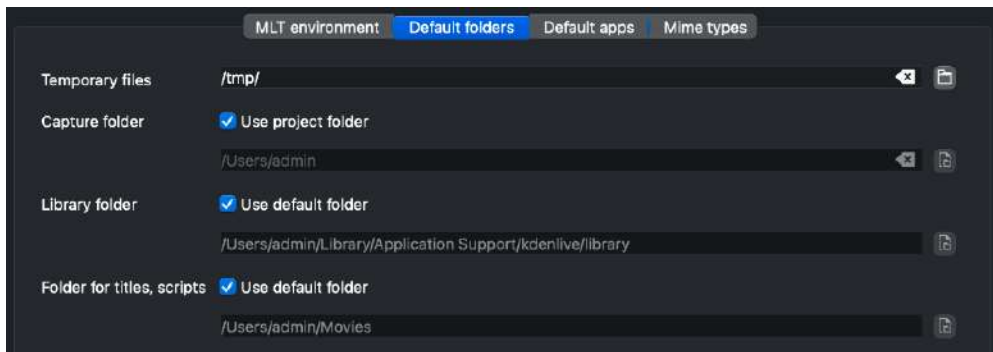
Default Folders



Default folders on Windows.



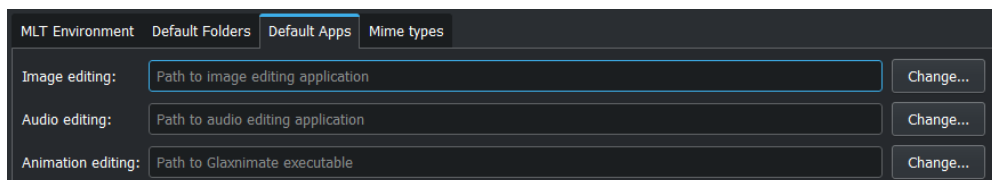
Default folders on Linux.



Default folders on MacOS.

This setting controls where **Kdenlive** expects project files to be by default. It also controls what folder **Kdenlive** will use as a temporary file storage location and it controls where files captured from an external source will be saved.

Default Apps



This setting controls what external application opens when you choose [Edit Clip](#) for a clip in the project bin.

Image editing: A free software would be [Krita](https://www.audacityteam.org/) [https://www.audacityteam.org/].

Audio editing: A free software would be [Audacity](https://krita.org/en/) [https://krita.org/en/].

Animation editing: Kdenlive updates automatically files which are saved in Glaxnimate. Glaxnimate can be downloaded from [here](https://glaxnimate.mattbas.org/) [https://glaxnimate.mattbas.org/] (Linux, Windows, Mac).

Mac user: [Instruction](#) how to install and run *dmg* files.

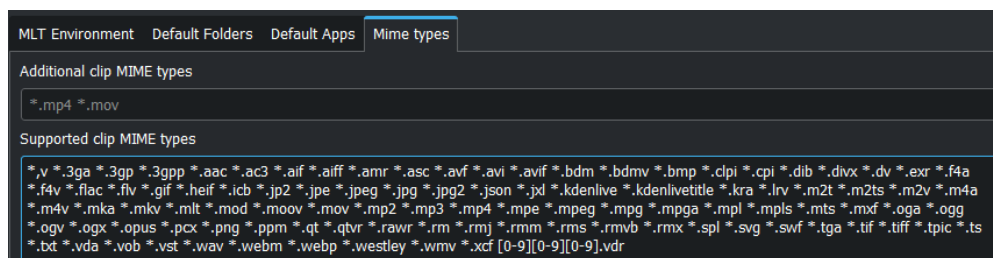
Windows user: Make sure all the paths points to an *.exe* file.

Glaxnimate.exe is in folder *C:/YourPath/glaxnimate-x86_64/glaxnimate/bin/glaxnimate.exe*.

Hint

There is no application for video editing - because **Kdenlive** is a video editor.

Mime types



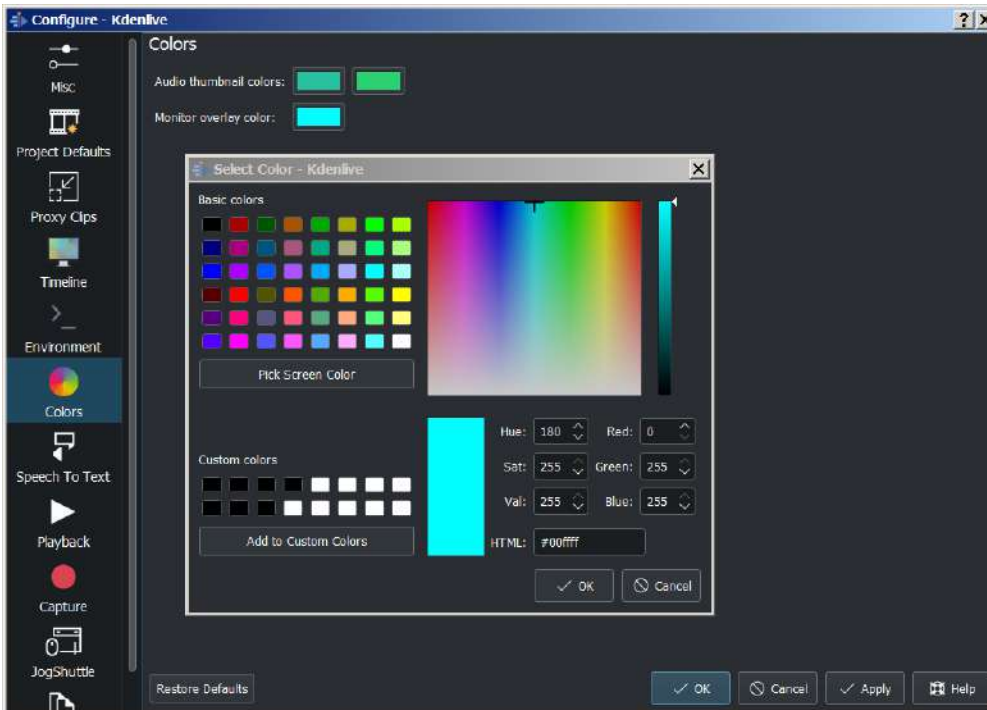
Specifies the Media Types (formerly known as MIME types) which Kdenlive can working with.

New in version 22.08.

Added file type: *AVIF*, *HEIF* and *JPEG XL*

Added animation file type: *Json* (Lottie animations) and *rawr* (Glaxnimate animation)

Colors

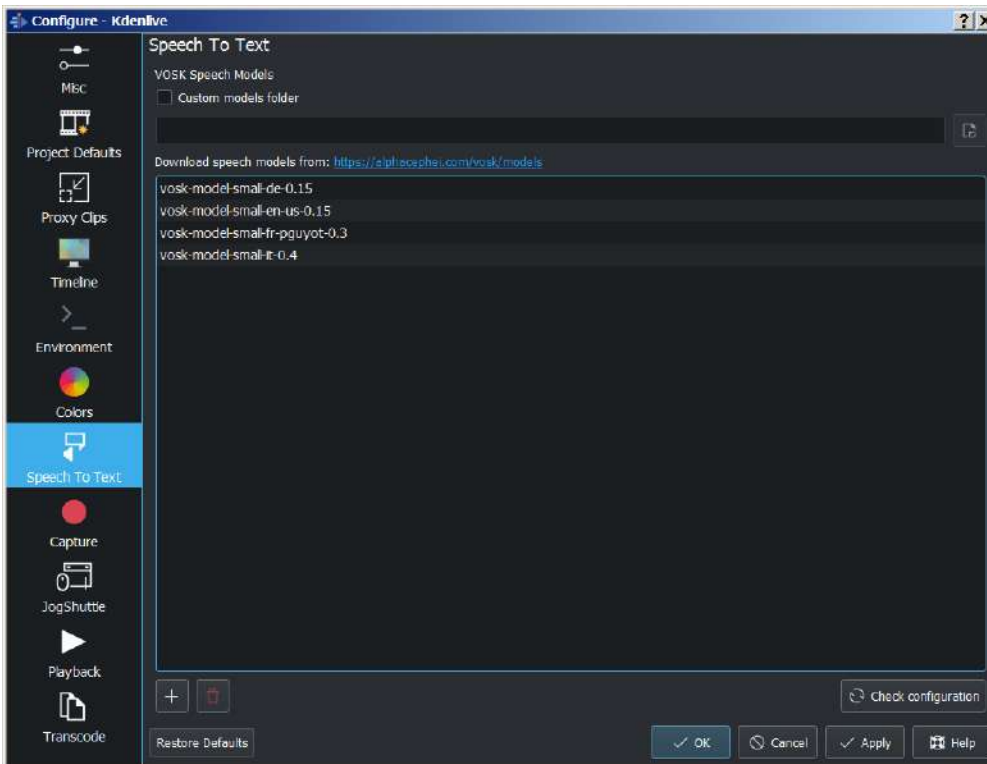


Audio thumbnail colors Click on the color bar and change the color of the audio wave thumbnail.

New in version 22.08.0.

Monitor overlay color Click on the color bar and change the color of the monitor overlay lines. See [Monitor toolbar](#)

Speech To Text



More details about speech to text see [here](#).

Capture

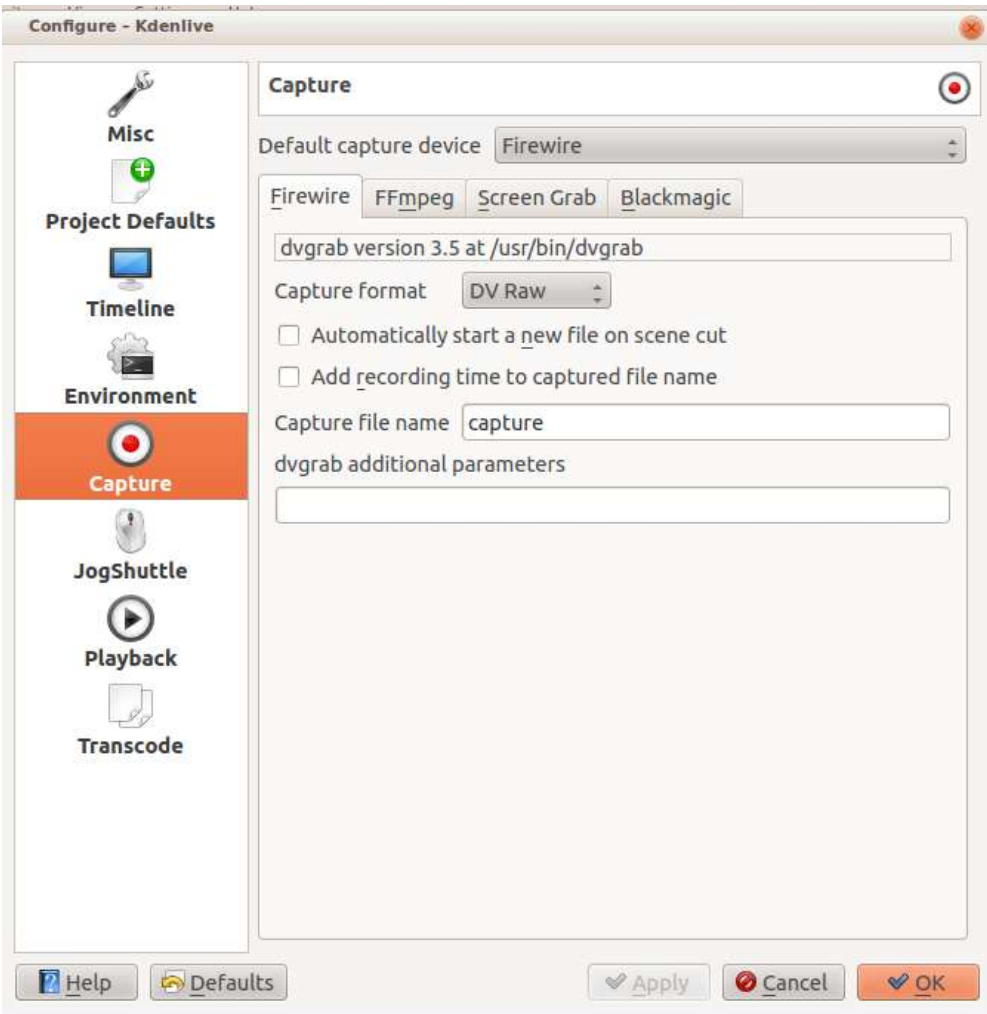
Note

At least Firewire capture was removed in porting to KDE 5 due to lack of manpower.

Configure the [Capturing Video](#) devices (Firewire, FFmpeg, Screen Grab, Blackmagic, Audio) from this section.

Configure Firewire Capture

The image shows the Configure Firewire capture tab which can be accessed from the *Settings* ▶ *Configure Kdenlive* menu or from the spanner icon in the [Capturing Video](#)



The firewire capture functionality uses the [dvgrab](http://linux.die.net/man/1/dvgrab) [http://linux.die.net/man/1/dvgrab] program. The settings applied here to define how dvgrab will be used to capture the video.

Capture Format options are

- DV RAW
- DV AVI Type 1
- DV AVI Type 2
- HDV

The first three are quality-wise the same (exactly the same DV 25Mb/s standard definition codec), just packed differently into the file. Type 2 seems to be the most widely supported by other applications.

The raw format contains just the plain video frames (with audio interleaved) without any additional information. Raw is useful for some Linux software. Files in this format can also be played with Windows QuickTime when renamed to `file.dv`.

AVI files may contain multiple streams. Typically, they include one video and one audio stream. The native DV stream format already includes the audio interleaved into its video stream. A type 1 DV AVI file only includes one DV video stream where the audio must be extracted from the DV video stream. A type 2 DV AVI file includes a separate audio stream in addition to the audio data already interleaved in the DV video stream. Therefore, the type 2 DV AVI file is redundant and consumes more space.

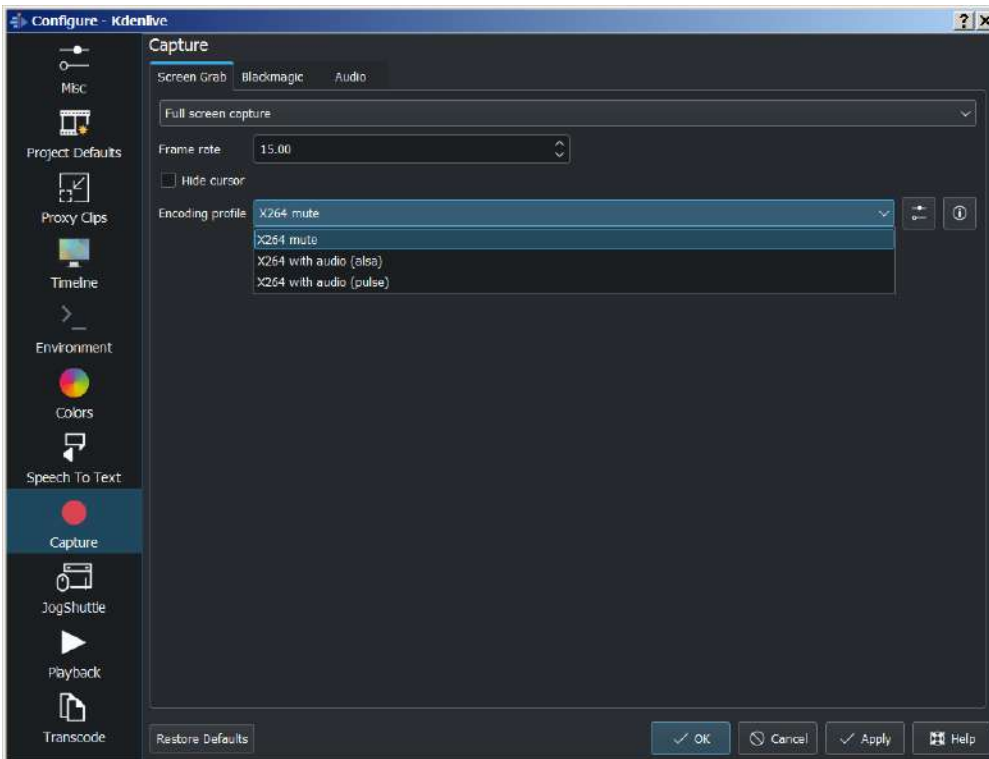
HDV is a high-definition format used on tape-based HD camcorders.

Add recording time to captured file name option: If this is unchecked then each captured file will get a sequential number post-pended to the file names listed in the Capture file name setting. With this checked, date and timestamp (derived from when the footage was captured) is post-pended to the capture file name, e.g. **capture2012.07.15_11-38-37.dv**

Automatically start a new file on scene cut option: With this checked it tries to detect whenever a new recording starts, and store it into a separate file. This is the `-autosplit` parameter in [dvgrab](http://linux.die.net/man/1/dvgrab) and it works by detecting timecode discontinuities from the source footage. Where a timecode discontinuity is anything backward or greater than one second it will start a new capture file.

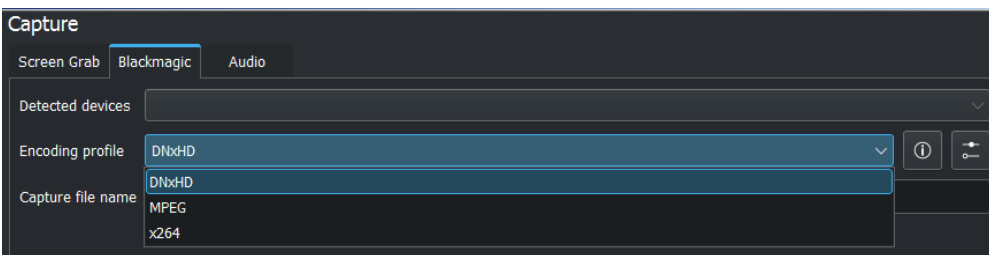
The **dvgrab additional parameters** edit box allows you to add extra dvgrab switches to the capture process that will run. See [dvgrab manual](http://linux.die.net/man/1/dvgrab) [http://linux.die.net/man/1/dvgrab] for more info.

[Configure Screen Grab Capture](#)



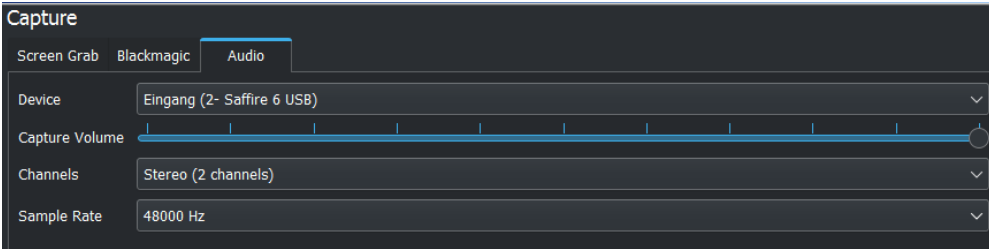
These settings configure screen grab within **Kdenlive**. More details see [here](#).

[Blackmagic](#)



If you have a Blackmagic DecLink video capture card you can set here the import parameter.

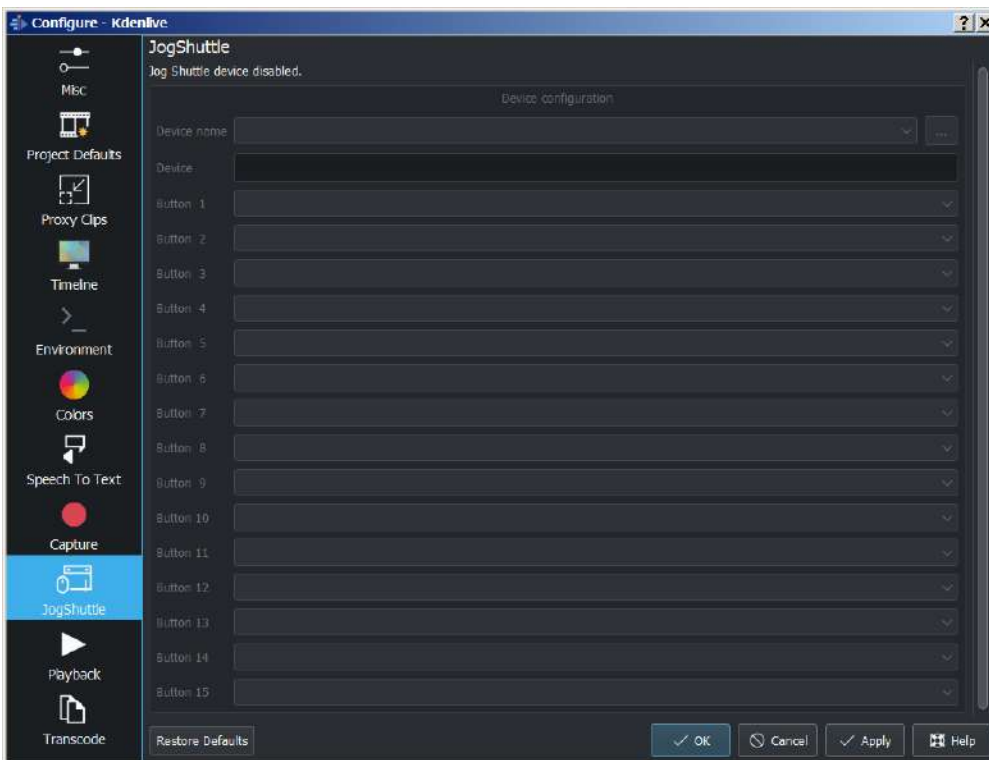
[Audio](#)



Microphone settings, either for screen [Capturing Video](#) or for [Capturing Audio \(Dubbing\)](#) direct into the timeline.

Jog Shuttle

Configure a connected Jog-Shuttle device. Contour ShuttlePro and Contour ShuttleXpress are known to work.



Linux

Ensure that your Jog-Shuttle device is connected via USB and working. An udev rule is necessary to correct the access rights to the device file: Create a

file `/etc/udev/rules.d/90-contour-shuttleXpress.rules` with the line:

```
SUBSYSTEMS"usb", ATTRS{idVendor}  
"0b33", ATTRS{idProduct}=="0020", MODE="0444"
```

for Contour ShuttleXpress or

```
SUBSYSTEMS"usb", ATTRS{idVendor}  
"0b33", ATTRS{idProduct}=="0030", MODE="0444"
```

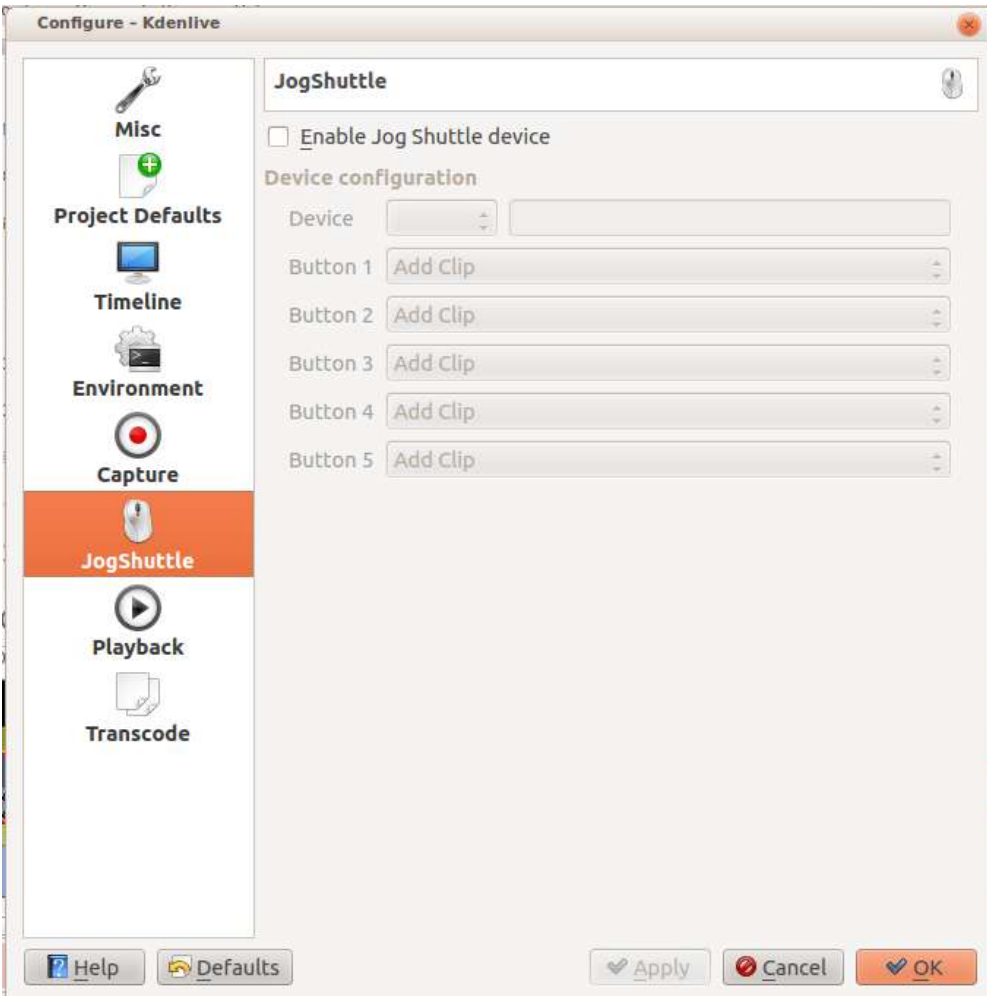
for Contour ShuttlePRO V2. Obtain the device file by a command

```
fgrep Contour -A4 /proc/bus/input/devices
```

The last line of the output says

```
H: Handlers=mouse0 event3
```

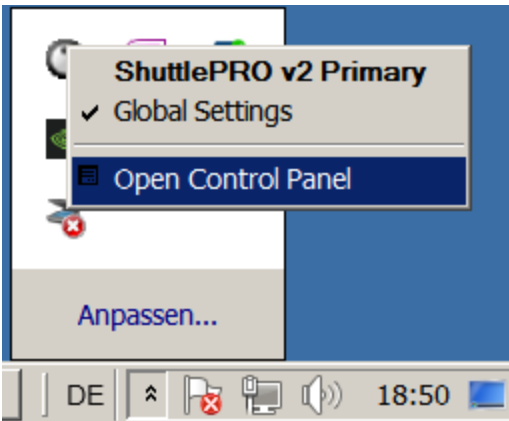
which should tell the device file to be entered into kdenlive's setting dialog: In the text field enter `/dev/input/event3` (use the last word on the line above to specify the device file in `/dev/input`), set the buttons and apply the changes.



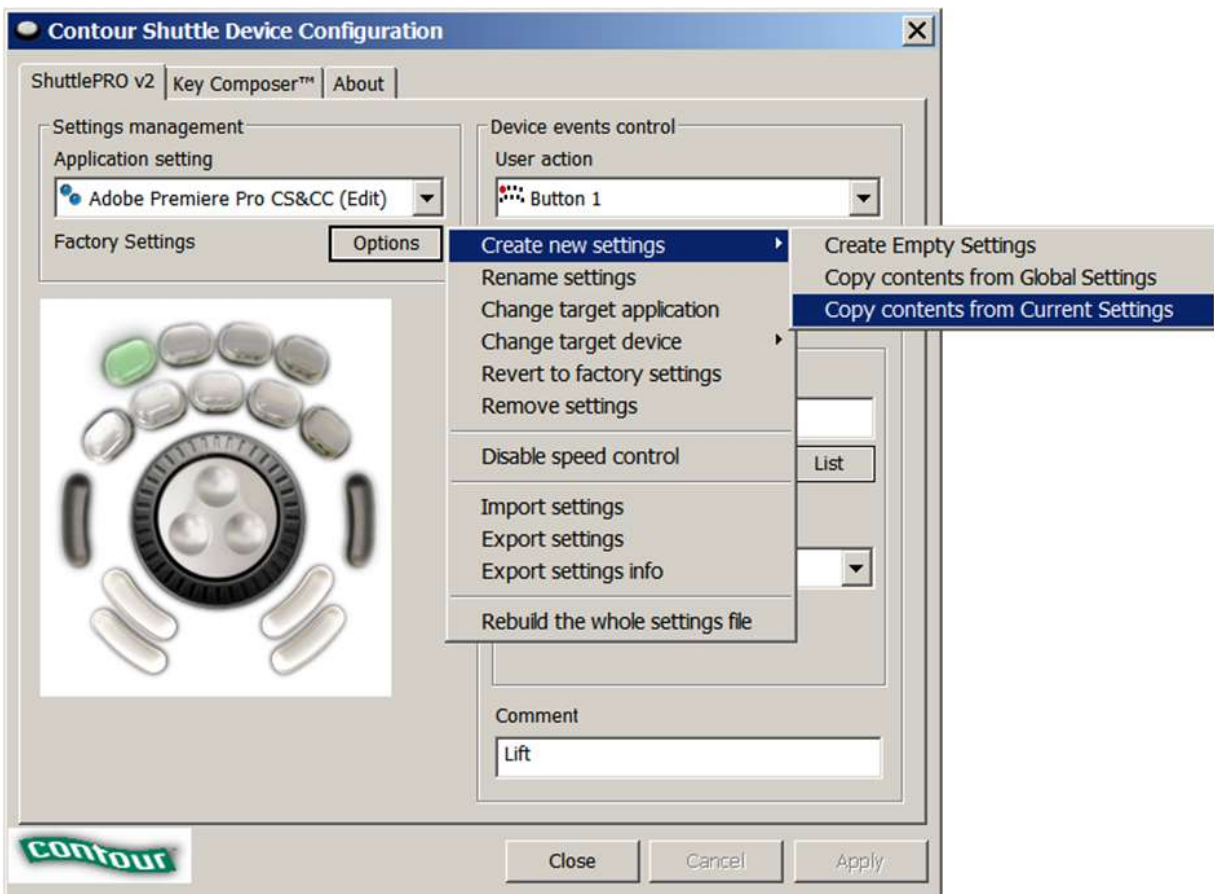
Enable Jog-Shuttle. For the Contour ShuttleXpress the buttons 5 - 9 are relevant, whereas Contour ShuttlePro uses all buttons. The actions for the jog- and the shuttle wheel are working as expected.

Windows

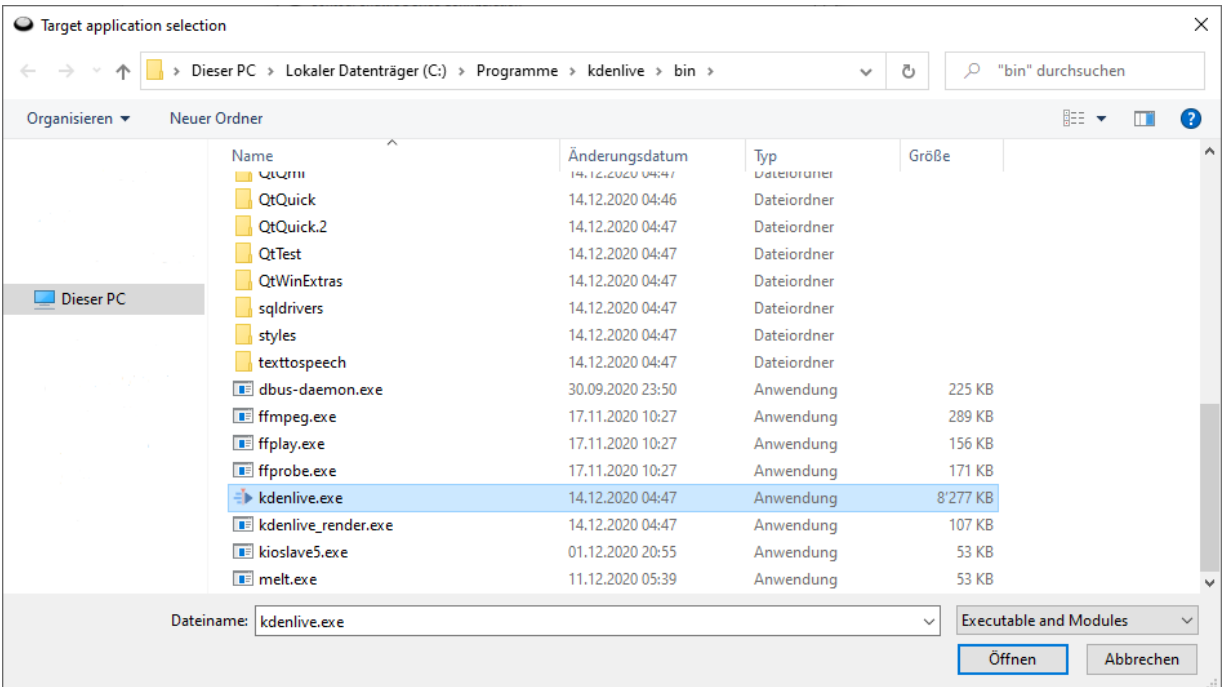
On the desktop, bottom-right opens the system tray. Right-click on the Contour icon and choose “Open control Panel”.



In the configuration window choose under “Application setting” the program “Adobe Premiere Pro CS&CC (Edit)”. Then click on *Options* ▶ *Create new settings* ▶ *Copy contents from Current Settings*.



Then choose Kdenlive.exe in C:Program Fileskdenlivebin.



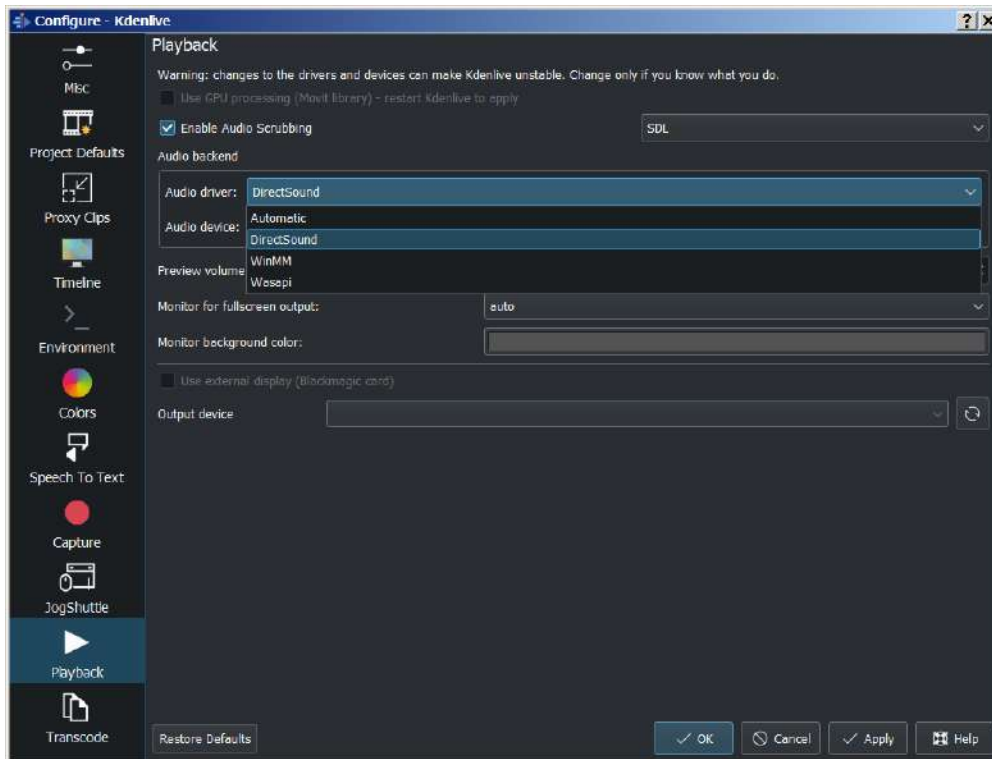
Now the basic functionality should work. Adjust the buttons of the shuttle with shortcuts as you like.

Hint

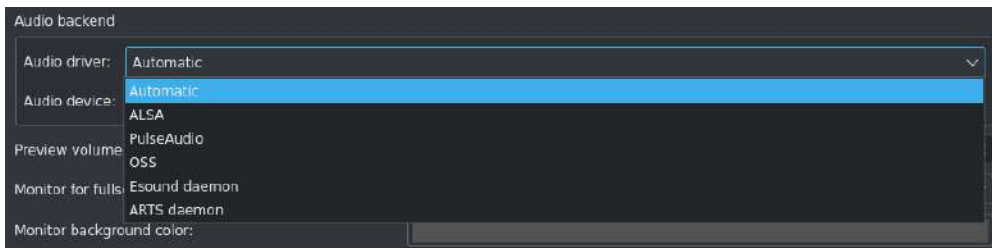
You can make Kdenlive settings from scratch using *Options* ▶ *Create new settings* ▶ *Create Empty Settings* when creating new settings.

Playback

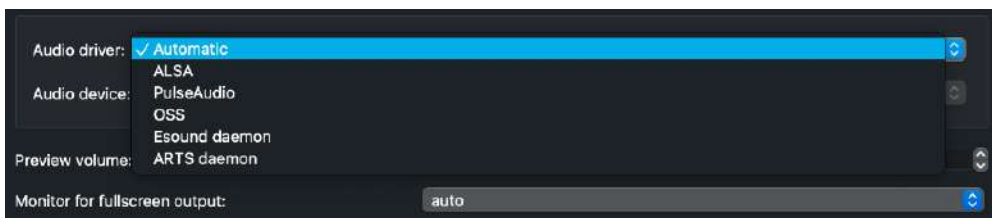
Configure the Video and Audio drivers and devices. For advanced users only.



Playback view on Windows.



Audio driver on Linux.



Audio driver on macOS.

Audio driver

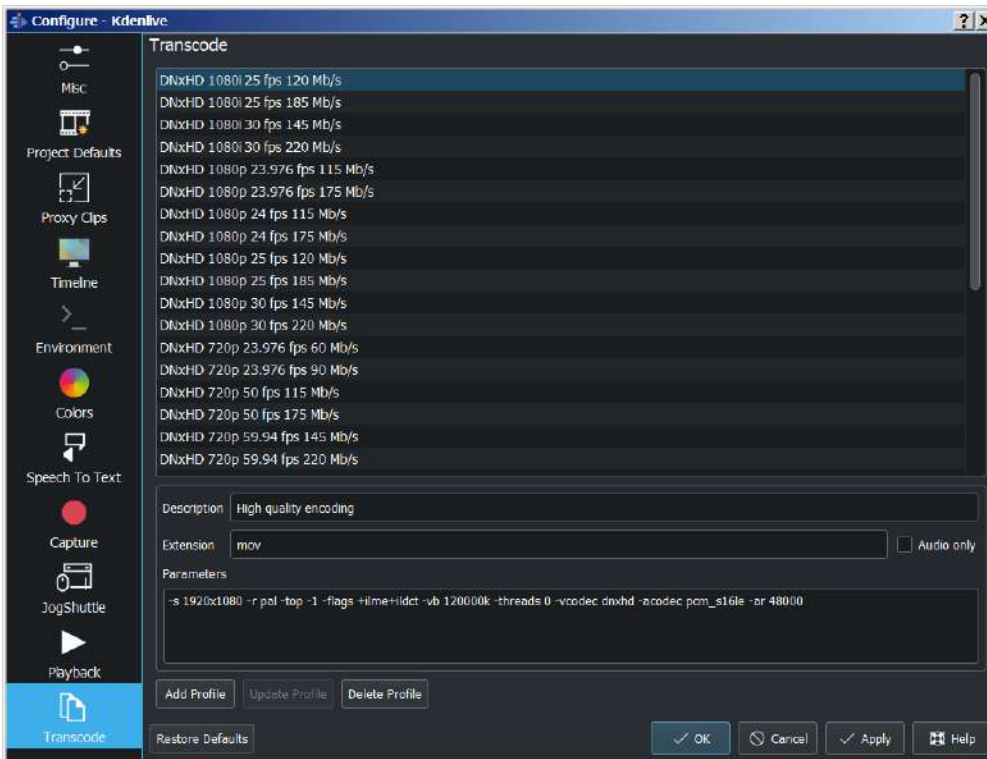
- **Windows:** WinMM (Win7), Wasapi (Win10), DirectSound. If you have any audio issue or playback stuttering you may change to another audio driver.

In version 0.9.4 of **Kdenlive**, checking the “use Open GL for video playback” checkbox turns on the ability to have audio scrubbing available for use in the clips. Audio scrubbing lets you hear the audio at the playhead position as you drag the playhead so you can quickly find a particular sound or event in the audio. This feature can be useful for placing the play head at the correct spot in the clip relative to an important bit of audio.

In ver 15.04 or higher, there is no “use Open GL for video playback” checkbox - Open GL is used by default. On Windows you can set the OpenGL backend under *Settings* ▶ *OpenGL Backend*

[Transcode](#)

This controls the [Transcode Menu Item](#) functionality. The parameters section are ffmpeg parameters. Find help on them by issuing `ffmpeg -h` at a command line.



Transcode Options

Option	Description	Parameters	Meanings of Parameters
Wav 48000Hz	Extract audio as WAV file	-vn -ar 48000	-vn=disable video, -ar 48000 = set audio sampling rate to 48kHz
Remux with MKV	•	-vcodec copy - acodec copy -sn	copy the video and the audio. -sn = disable subtitles

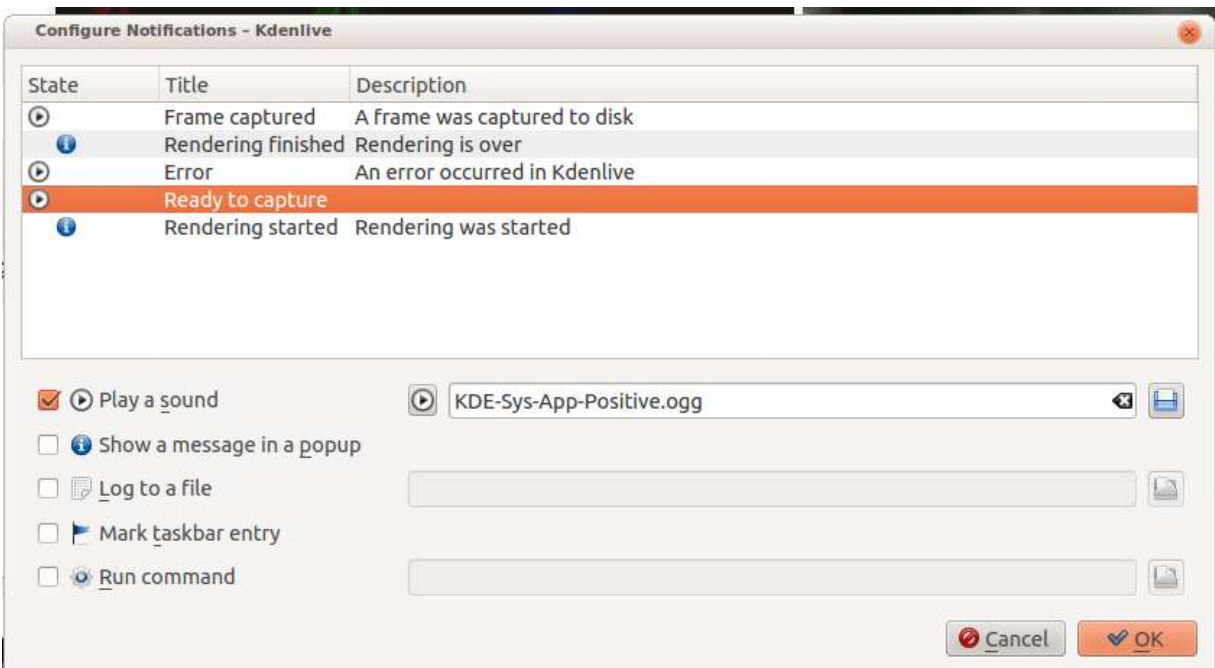
Option	Description	Parameters	Meanings of Parameters
Remux MPEG-2 PS/VOB	Fix audio sync in MPEG-2 vob files	-vcodec copy - acodec copy	copy the video and the audio

Configure Notifications

Contents

- [Configure Notifications](#)

This feature allows you to customize the feedback the application provides when certain events happen. For example, you can change the sound effect that fires when rendering finishes.

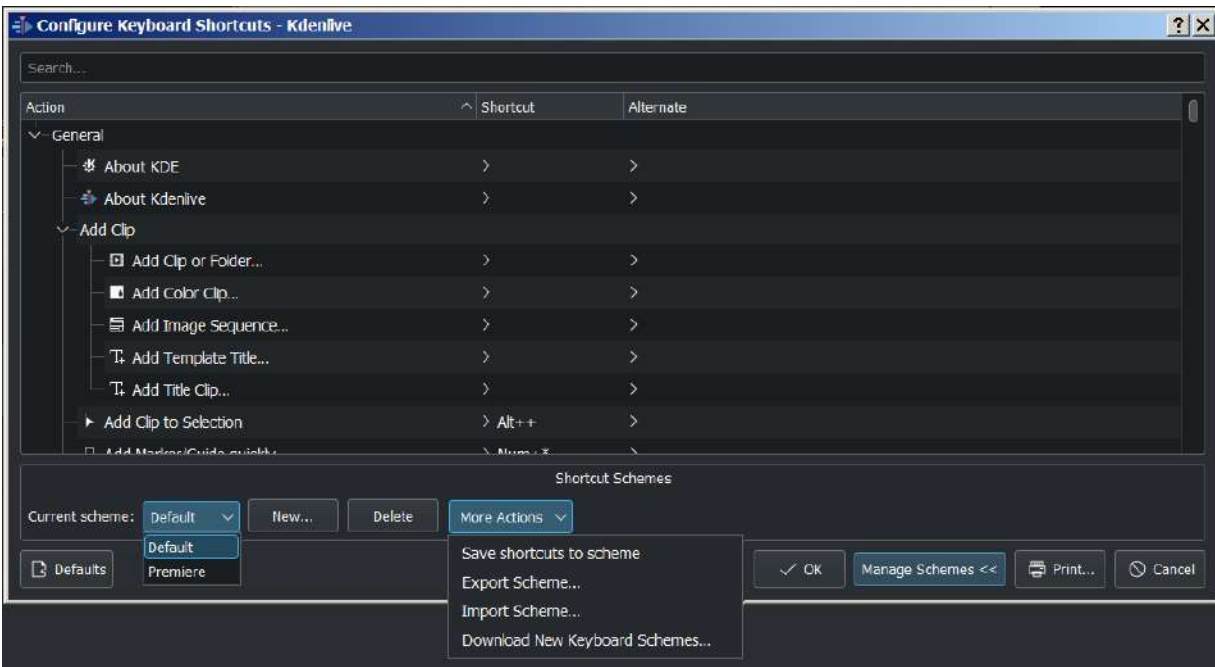


Configure Shortcuts

Contents

- [Configure Shortcuts](#)

Allows modification of the keyboard shortcuts for various **Kdenlive** tasks.



Icons, bottom row

Defaults: set back the shortcuts to default.

Manage Schemes: opens the Shortcut Schemes.

Print...: opens the printer window dialog and you can print the actual shortcuts.

Icons, Shortcut Schemes

Current scheme: switching between schemes you have saved on your computer.

New...: creates a new empty shortcut scheme

Delete: deletes your actual scheme.

More Actions: your actual scheme can be:

- saved (storage place see [Configuration Information](#))
- exported
- imported
- or download new schemes from the KDE server.

[Download New Project Profiles](#)

Contents

- [Download New Project Profiles](#)

Note: Since around August, 2013 when the kdenlive.org web site was refurbished, this feature has been unavailable and the “Get Hot New Stuff” window will wait forever to update. See Mantis [3133](#)

[<https://bugs.kdenlive.org/view.php?id=3133>].

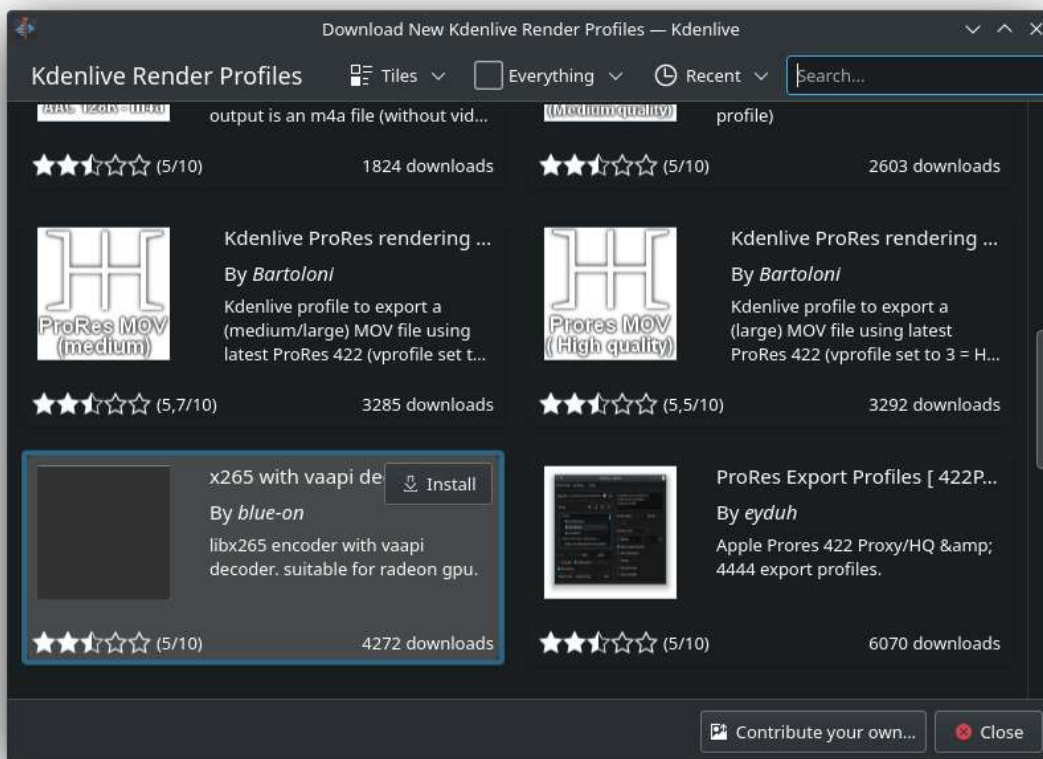
The Download new Render profiles is now working as at Oct 2015.
However the download New Project Profiles is still not working as at Oct 2015.

Download New Render Profiles

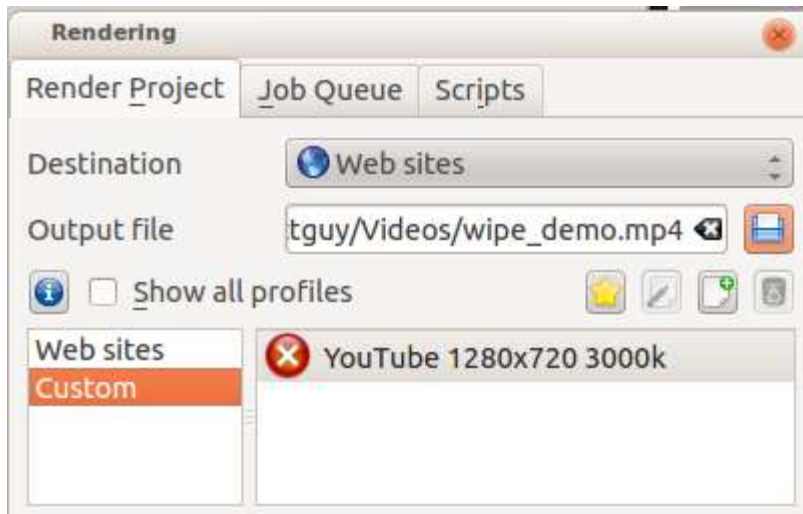
Contents

- [Download New Render Profiles](#)
- [Upload/Share Render Profiles](#)

This feature allows you to download new render profiles that have been shared by the community. These will then appear as options in the [Rendering](#) window.



The new render profile installed above shows up in the Web Sites category under Custom.



Note

It has the big red cross because the render profile is in need of an audio codec not installed on this machine

The installed files are placed in

`/usr/share/mlt/presets/consumer/avformat`

[Upload/Share Render Profiles](#)

If you want to share a render profile you can do so at the [KDE Store page](https://store.kde.org/browse?cat=334) [https://store.kde.org/browse?cat=334]. You need to create a login, then you can upload your custom rendering profile file, which is on Linux stored in `.local/share/kdenlive/export/customprofiles.xml` and on Windows stored in `%LocalAppData%\kdenliveexportcustomprofiles.xml`. The file contains all your custom rendering profiles so you should copy it and remove the ones you don't want to export.

Profiles submitted there appear in the *Download New Render Profiles*.

Download New Wipes

Contents

- [Download New Wipes](#)

This feature allows you to download and install files that can be used as Wipe files in the [Composition - Wipe](#) transition. These files are greyscale images in the pgm format.

If you have your own wipe files that you would like to share with the community you can upload them to store.kde.org [https://store.kde.org/browse/cat/185/] which should make them available from this *Download New Wipes* function.

Full Screen Mode

Contents

- [Full Screen Mode](#)

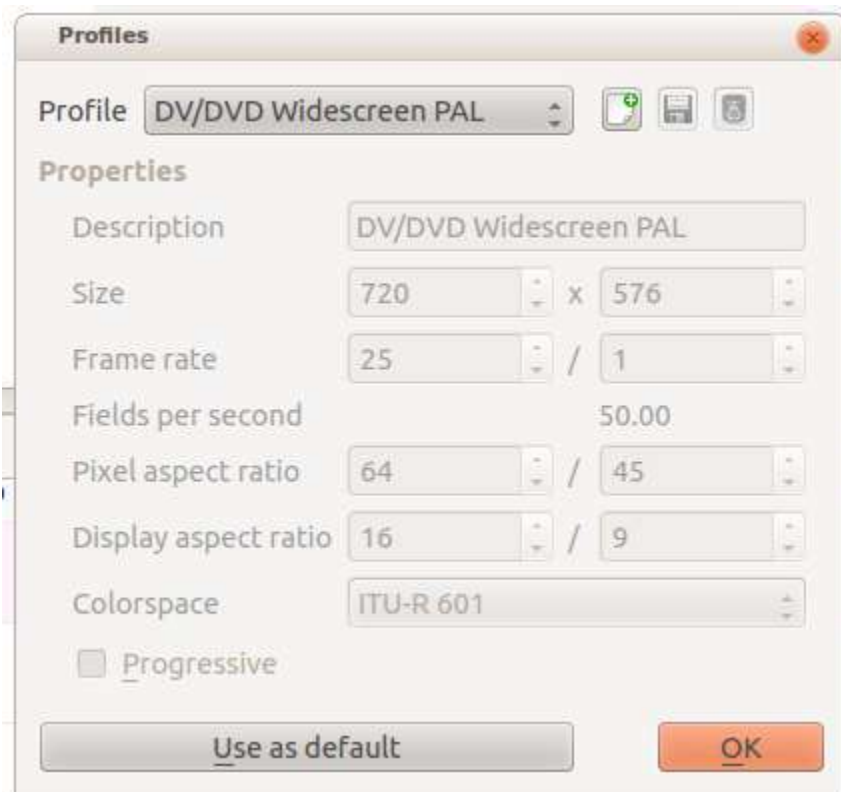
Selecting this causes **Kdenlive** to fill the entire screen. Select this menu item again to undo full screen mode.

Manage Project Profiles

Contents

- [Manage Project Profiles](#)

This is available from the **Settings** menu.



Once the dialog appears, select a profile to modify from the drop down.

Next, click the button with a green plus on it. This will make all the *Properties* fields editable.

Fill in the settings for your project profile, give it a new *Description* and click the **OK** button.

See also [HOWTO Produce 4k and 2K videos, YouTube compatible](https://forum.kde.org/viewtopic.php?f=272&t=124869)
[<https://forum.kde.org/viewtopic.php?f=272&t=124869>]

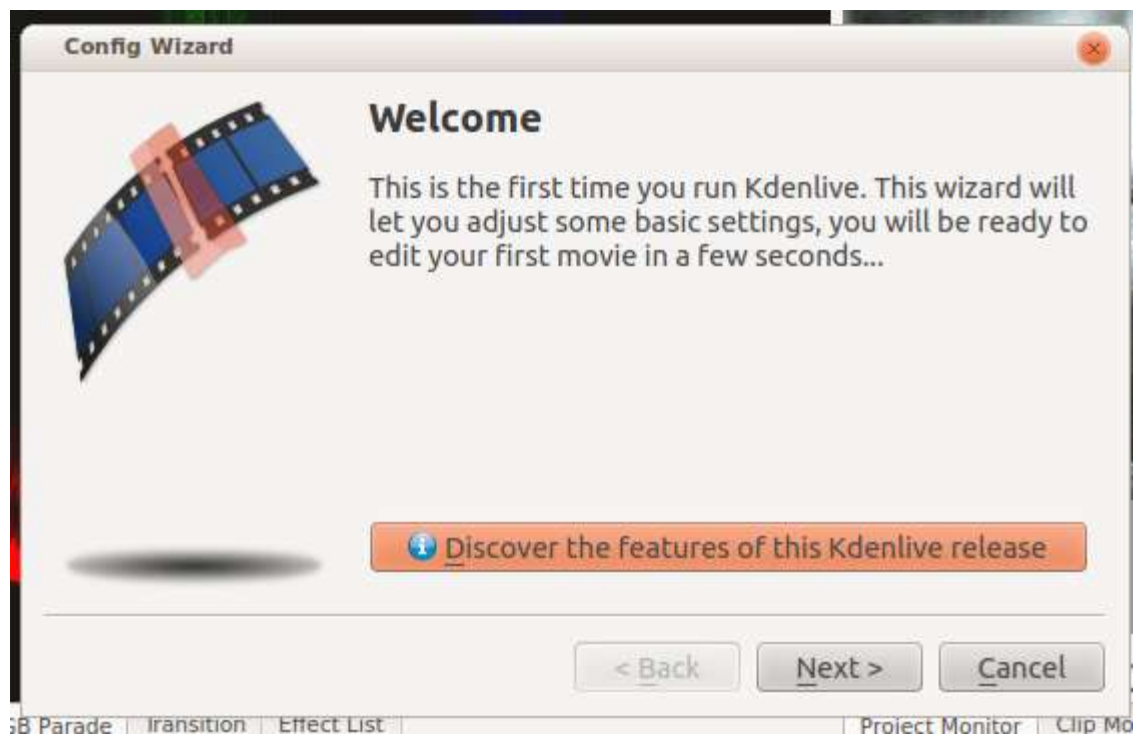
[Download New Project Profiles](#)

Run Config Wizard

Contents

- [Run Config Wizard](#)

This feature re-runs the config wizard that runs when you first install or upgrade **Kdenlive**. It gives you the opportunity to choose the default settings again for things like the default project settings. It also resets many settings back to “factory defaults” so it can be useful to run this if the **Kdenlive** application is misbehaving.



Color Theme

Contents

- [Color Theme](#)



Brings up a list of pre-configured color themes to choose from. Some people have strong preferences about whether light or dark themes are better for a video editor. There are some of both to choose from here.

Toolbars Shown

Contents

- [Toolbars Shown](#)

Toggles the display of the Main and Extra [Toolbars](#)

Importing and assets management

Contents:

- [Capturing Video](#)
 - [Firewire](#)
 - [FFmpeg](#)
 - [Screen Grab](#)
 - [Blackmagic](#)
 - [Footnotes](#)
- [Capturing Audio \(Dubbing\)](#)
 - [Version 19.04](#)
- [Media Browser](#)
- [The Project Bin](#)
 - [Create additional project bins](#)
 - [Clip - Right-Click Menu](#)
- [Project and File management](#)
 - [File Structure](#)

Capturing Video

Contents

- [Capturing Video](#)
 - [Firewire](#)
 - [FFmpeg](#)
 - [Screen Grab](#)
 - [Blackmagic](#)
 - [Footnotes](#)

Note

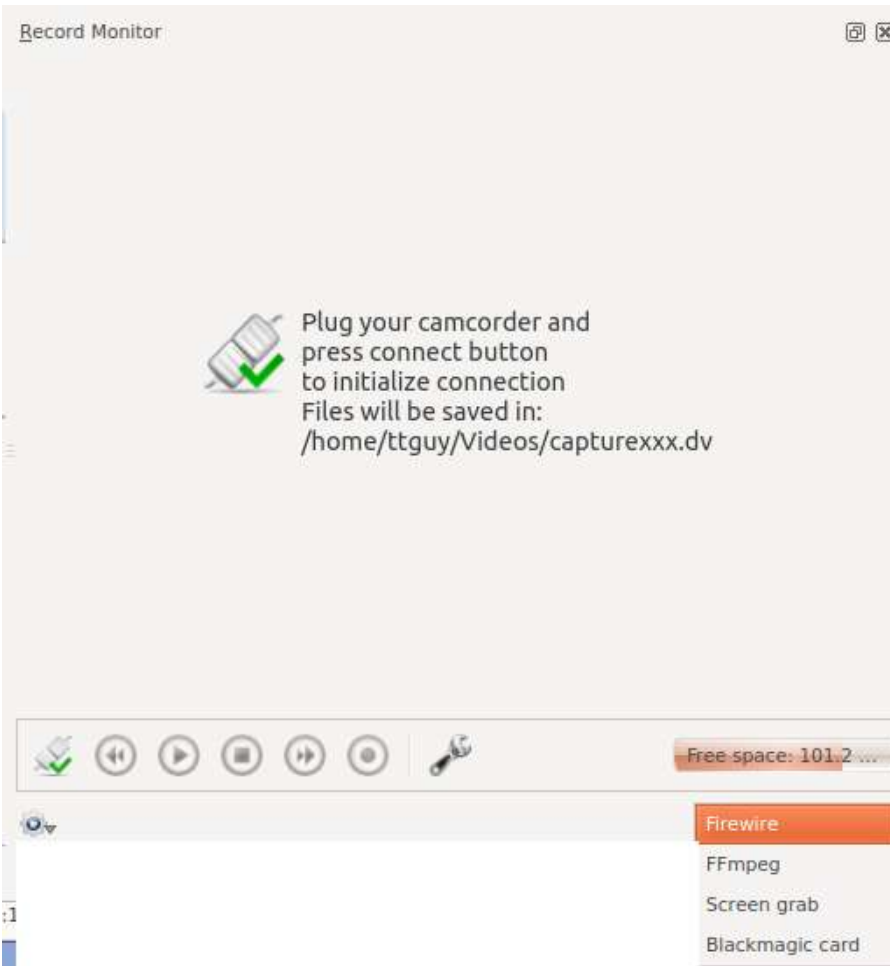
At least Firewire and webcam capture were removed in porting to KDE 5 due to lack of manpower.

Kdenlive provides functionality for capturing video from external devices; e.g., Firewire, FFmpeg, Screen Grab and Blackmagic.

You configure video capturing from *Settings* ▸ *Configure Kdenlive* ▸ *Capture* (more on this [Configure Kdenlive](#)).

You define the destination location for your captures by using *Settings* ▸ *Configure Kdenlive* ▸ *Environment* ▸ *Default Folders* (more on this [Configure Kdenlive](#)).

To execute a video capture, select the [Monitors](#) and choose the capture device from the dropdown in the bottom right.



Firewire

Note

This option is not available in recent versions of Kdenlive. Use `dvgrab` directly in a terminal to capture video from firewire.

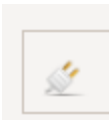
This captures video from sources connected via a firewire (also known as - IEEE 1394 High Speed Serial Bus) card and cable. This functionality uses the [dvgrab](http://linux.die.net/man/1/dvgrab) [http://linux.die.net/man/1/dvgrab] program and the settings for this can be customized by clicking the spanner icon or choosing *Settings > Configure Kdenlive*. See [Configure Kdenlive](#).

To perform a capture:

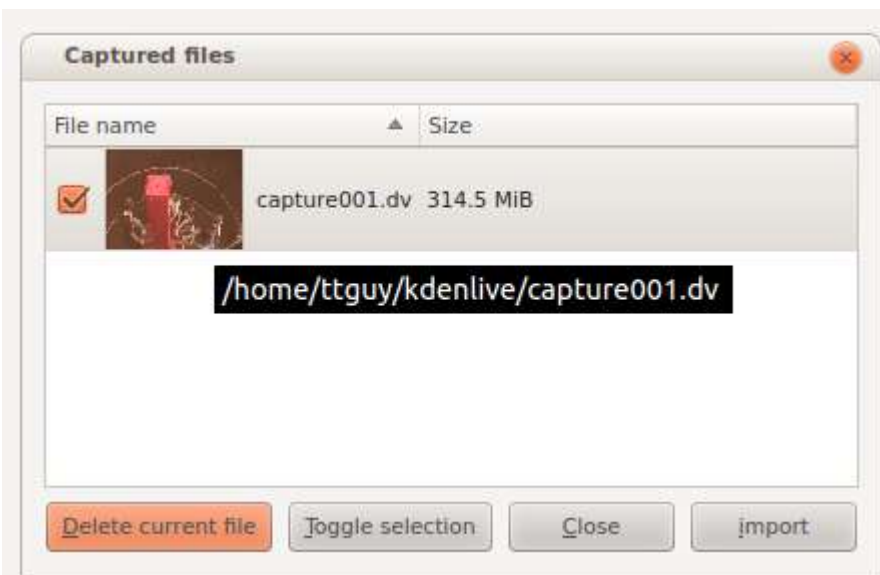
- Plug in your device to the firewire card and turn it on to play mode
- Click the *Connect Button*



- Click the Record Button – note it toggles to grey while you are recording
- Click the Record button again to stop capture. Or click the stop button.
- Once capturing is finished, click the disconnect button



- In the *Captured Files* dialog, click the import button to have the captured files automatically imported into the project bin.



Note

If your device does not start playing the source device when you click the record button, you may have to start playback on your device manually and

then click record.

FFmpeg

I believe this captures video from an installed Web Cam using *Video4Linux2*.

Screen Grab

This captures video of the PC screen.

Open screen grab: *View* ▸ *Screen Grab*.

Start recording: click the “record” button.

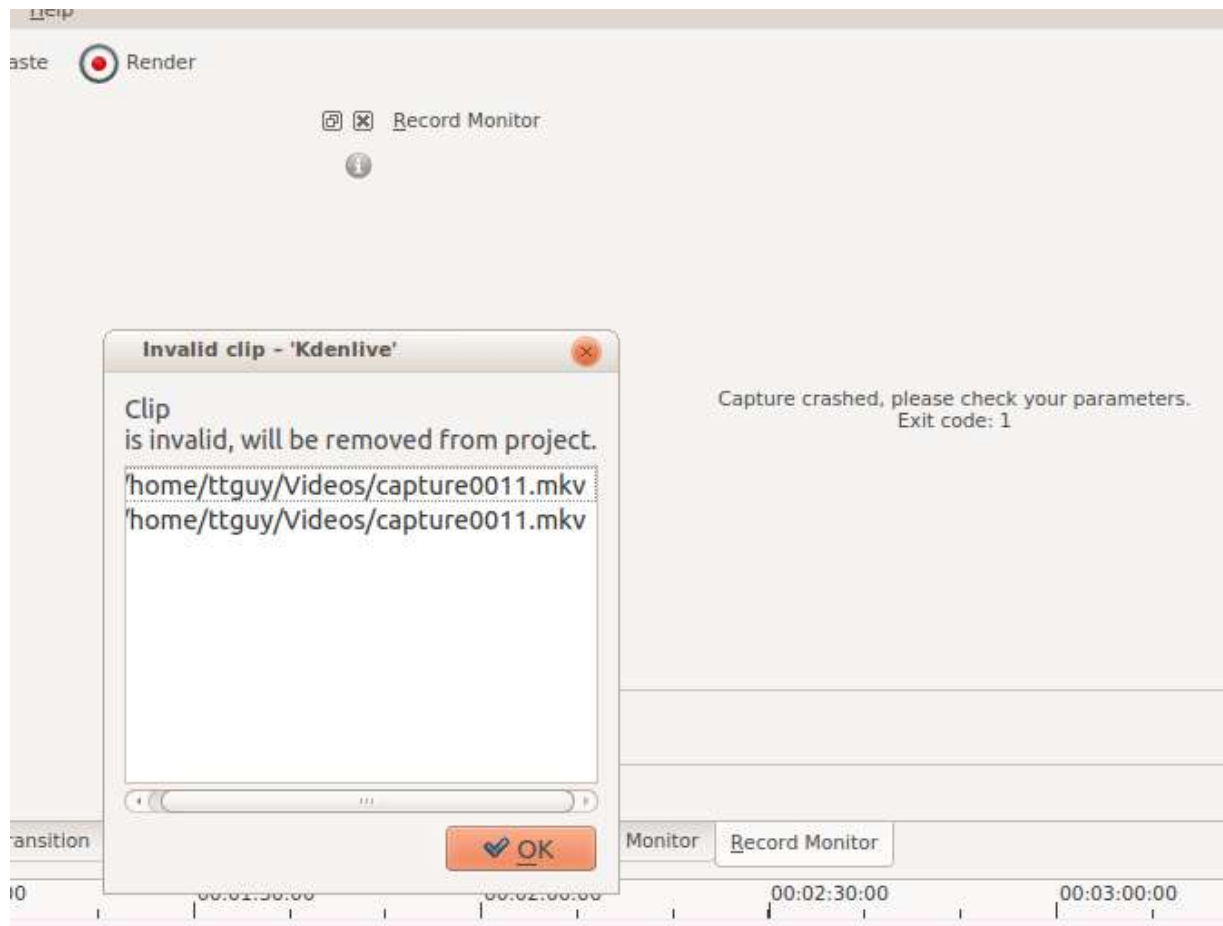
Stop record: click the “record” button again.

The recorded clip will be added in the project bin.

Settings can be adjusted in [Configure Kdenlive](#)

To check on your linux distro, type `ffmpeg -version` in a terminal and look for `--enable-x11grab` in the reported configuration info. [\[1\]](#)

If you are capturing the screen and using the X246 with audio settings and you get a crash as shown in the screen shot...



...then consider creating a profile for audio capture where `-acodec pcm_s16le` is replaced by `-acodec libvorbis -b 320k`. See [Configure Kdenlive](#).

[Blackmagic](#)

This is for capturing from Blackmagics [decklink](http://www.blackmagic-design.com/uk/products/decklink/) [http://www.blackmagic-design.com/uk/products/decklink/] video capture cards (AFAIK). Not sure how stable this code is at the moment. Mentioned in legacy Mantis bug tracker ID 2130.

[Footnotes](#)

[1] There are now two branches of *ffmpeg*: a *Libav* branch and an *ffmpeg.org* branch. The *ffmpeg* version from the latter branch reports the configuration when you run with `ffmpeg -version`. The *Libav* version

does not. So this method to check for the `--enable-x11grab` does not work if you have the *Libav* version of *ffmpeg*.

Capturing Audio (Dubbing)

Contents

- [Capturing Audio \(Dubbing\)](#)
 - [Version 19.04](#)

You can use Kdenlive to capture audio from a microphone while you play your project in the **Project Monitor**. In this way you can dub in a voiceover.

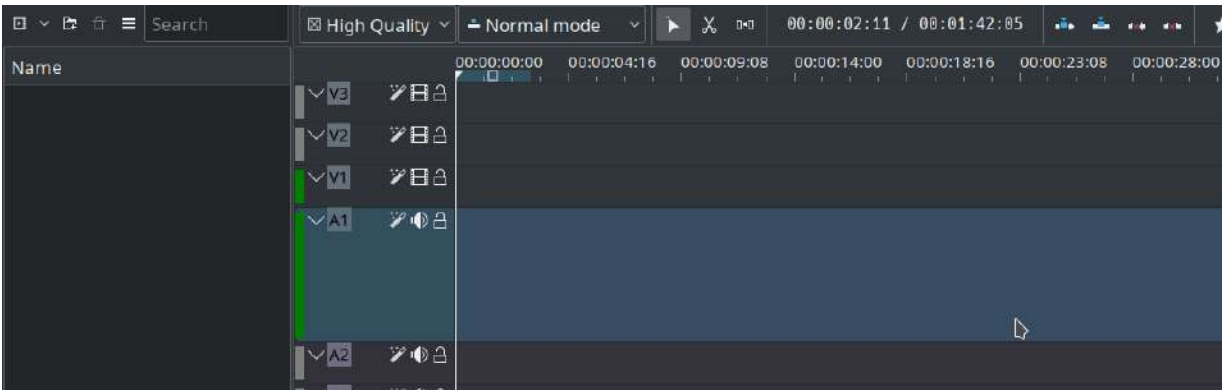
Under the **Record Monitor**, choose *FFmpeg* capture and enable *Audio* only and hit the **Record** button. Then move back to the **Project Monitor** and hit **Play**. You can now record audio only while the clip is playing. (This feature has had some issues in the past. It has worked in ver 0.9.4 - see bug [#2910](https://bugs.kdenlive.org/view.php?id=2910) [<https://bugs.kdenlive.org/view.php?id=2910>])

Version 19.04

New in version 19.04.

An option in track headers allows you to have audio record controls. This enables you to play your project while recording a voice over comment. Very handy for making tutorials.

You will need to right-click an audio track and then click **Show Record Controls**.



Note

This will likely record stereo audio, which can be mixed down to mono using the Audio correction **Copy Channels** effect.

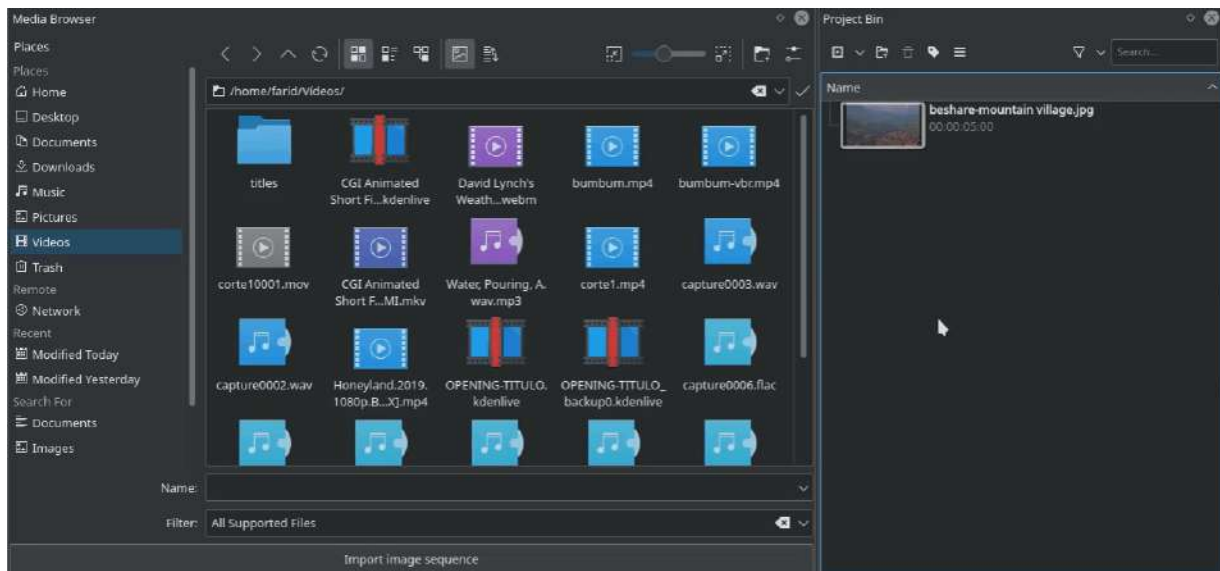
Media Browser

Contents

- [Media Browser](#)

New in version 21.04.0.

The new Media Browser allows you to easily navigate through your file system and add clips directly to the Bin or Timeline. You can enable it from View menu.

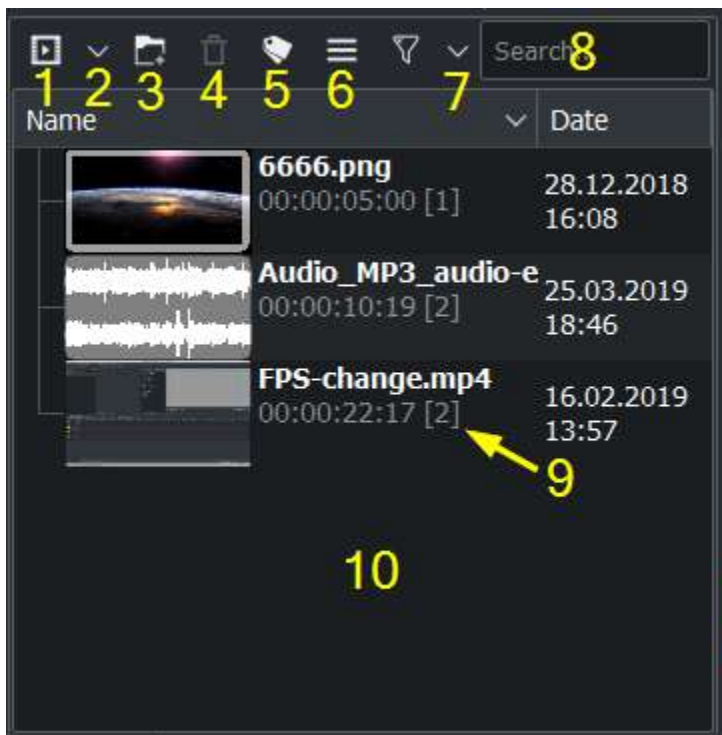


The Project Bin

Contents

- [The Project Bin](#)
 - [Create additional project bins](#)
 - [Clip - Right-Click Menu](#)

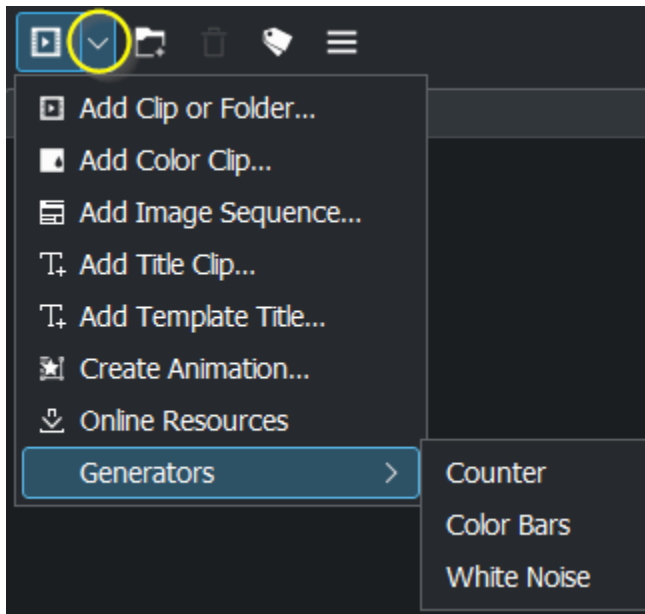
The Project Bin is a view in Kdenlive which lists all the clips that are associated with the project. In earlier versions of Kdenlive this view was known as the Project Bin. In addition to the new name, versions 15.04 and higher introduced two new options to the view's toolbar. The list following the example describes the options represented by the icons on the toolbar (identified by the numbers in the screenshots).



20.04+

1, 10. Opens the Project Folder in a window for selecting video and audio clips to be added to the bin (1). Or double click on free space (10).

2, 10. Displays a drop down list for adding other clip types to the Project Bin (2). Or right-click on free space (10).



Options from Menu under Icon 2

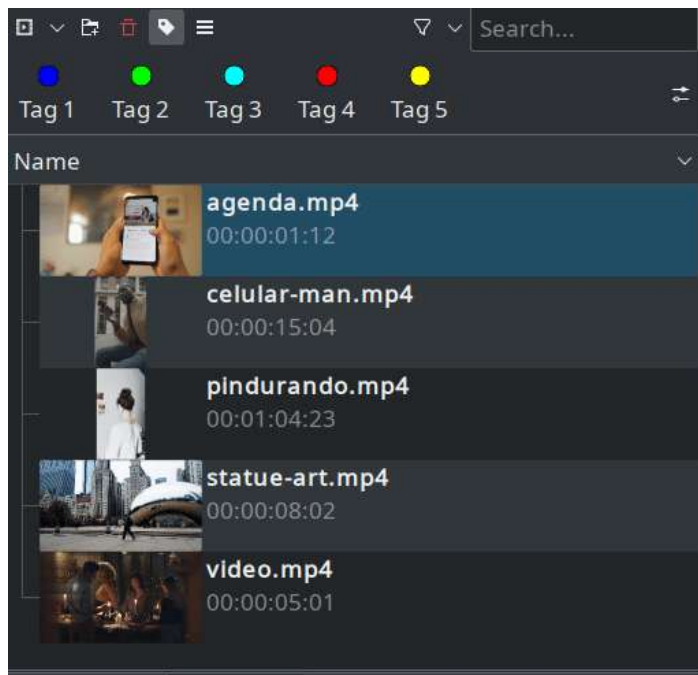
- [Add Clip or Folder](#)
- [Add Color Clip](#)
- [Add Image Clip](#)
- [Add Title Clip](#)
- [Add Template Title Clip](#)
- [Create Animation...](#) (*new in version 22.08*)
- [Online Resources](#)
- [Generators](#)

3, 10. Allows you to add folders to the Project Bin (3). Or right-click on free space (10) and select *Create Folder* to add folder. These are not actual file system folders but virtual folders to help you organize large Project Bins. See [Create Folder](#)

4. Deletes the selected clip from the Project Bin (but not from the file system).

5 Color tagging.

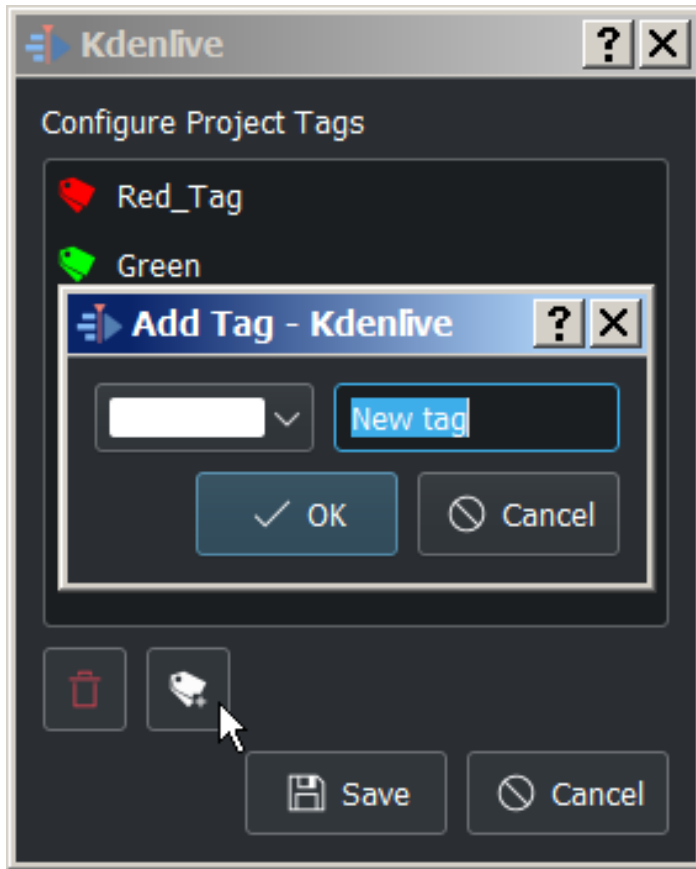
New in version 20.04.0.



Menu under Icon 5

Edit tags: double click a tag for changing the description.

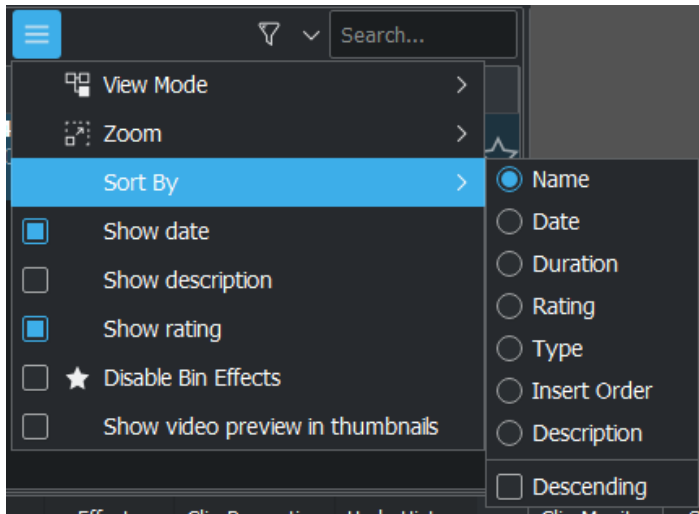
New in version 22.08.



You can: add, delete and reordering tags.

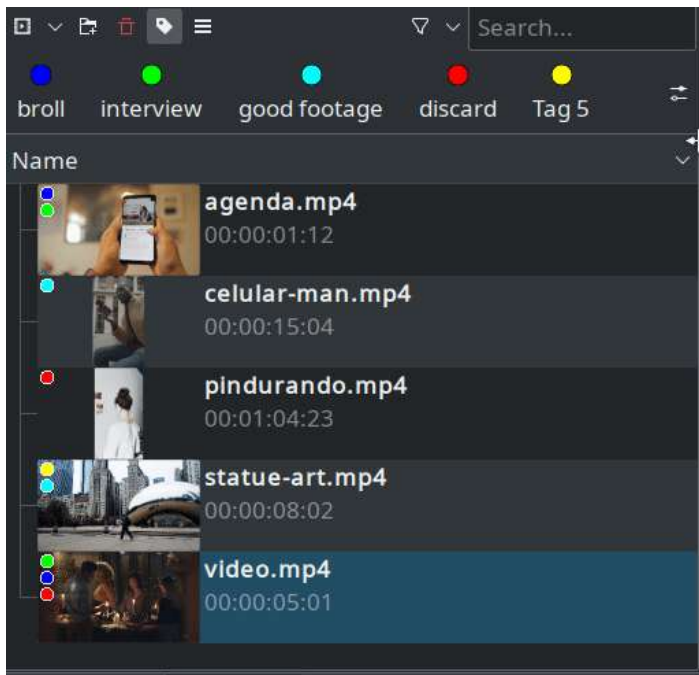
Reordering tags: grab a tag and drag it to the desired place in the list.

6. Brings up additional options shown below for customizing the Project Bin view .



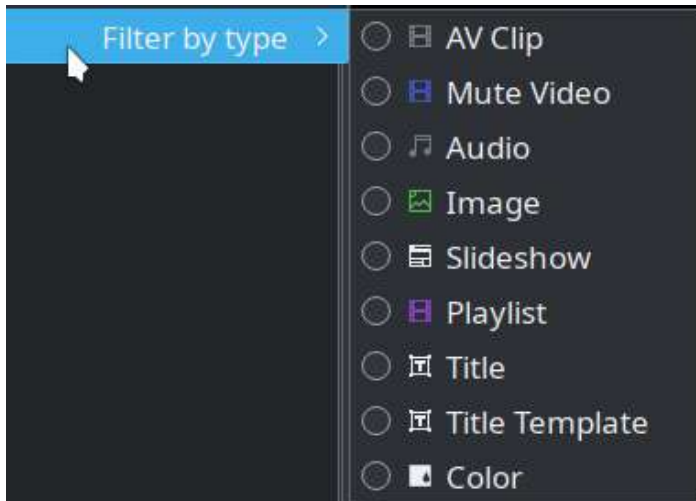
Menu under Icon 6

7 Filter by tags and stars



Menu under Icon 7

Filtering by clip type



Menu under Icon 7

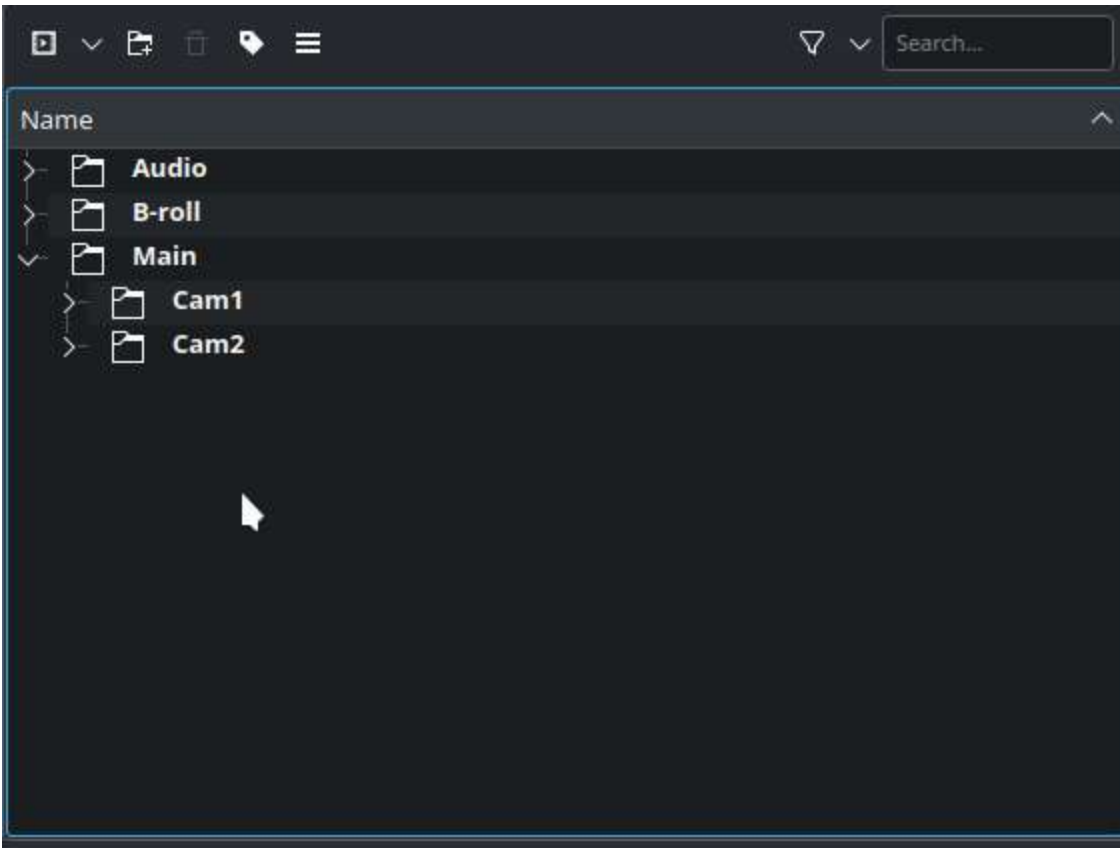
8. A search box to display all the clips in the bin whose filenames or titles contain the entered text.

9. Number of times this clip is used in the project timeline


Clips can be dragged from the Project Bin to the [Timeline](#).

[Create additional project bins](#)

New in version 21.12.

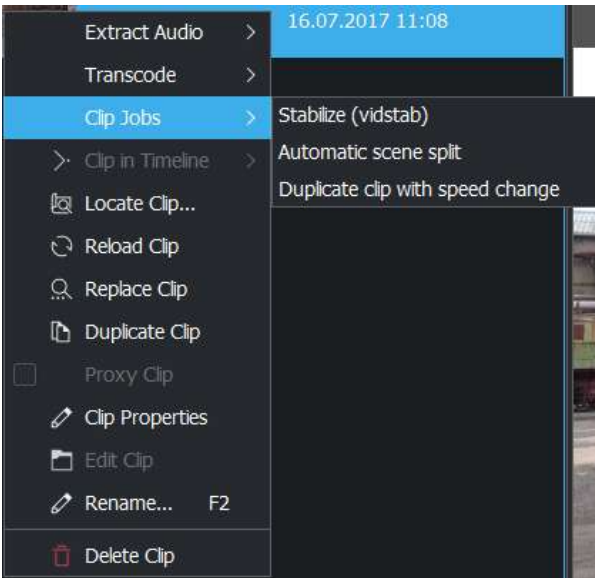


You can create various bins from [folders](#) you have created. Right-click the folder name and choose *Open in new bin*

Closing the extra bins either by pressing `CTRL + w` or on the bin you want to close click on  and choose *Close* .

[Clip - Right-Click Menu](#)

The images below show the menu items available when you right-click a clip in the Project Bin.



The menu items which appear when you right-click on an item in the Project Bin are also available from the [Clip Menu](#).

- [Extract Audio](#)
- [Transcode Menu Item](#)
- *Clip Jobs*
 - [Stabilize](#)
 - [Automatic Scene Split](#)
 - [Duplicate Clip with speed change](#)
- [Clip In Timeline](#)
- [Clip Menu — Locate Clip](#)
- [Clip Menu — Reload Clip](#)
- [Clip Menu — Replace Clip](#)
- [Clip Menu — Duplicate Clip](#)
- [Clips](#)

- [Clips](#)
- [Edit Clip](#)
- [Rename Clip](#)
- [Delete Clip](#)

If you want to reverse a clip you can do it via [Motion Effects - Speed](#) or by [Duplicate Clip with speed change](#)

Project and File management

Contents

- [Project and File management](#)
 - [File Structure](#)

File Structure

As already pointed out in the [Quick Start](#), we suggest using a different project folder for each project. **Kdenlive** will generate the following folders for caching in the project folder:

- /proxy/ for the [Clips](#) that have been generated
- /thumbs/ for thumbnails to all used clips
- /titles/ default location for the [Titles](#) saved outside the project file
- /.backup/ for your project's automatic [Backup](#) These directories can be deleted if not required anymore (for example for saving space on the harddrive). **Kdenlive** will create them again when you load the project the next time.

Warning

The /titles/ directory is the default directory for saved `.kdenlivetitle` title files. Make sure that you did not save any important files in there before deleting it.

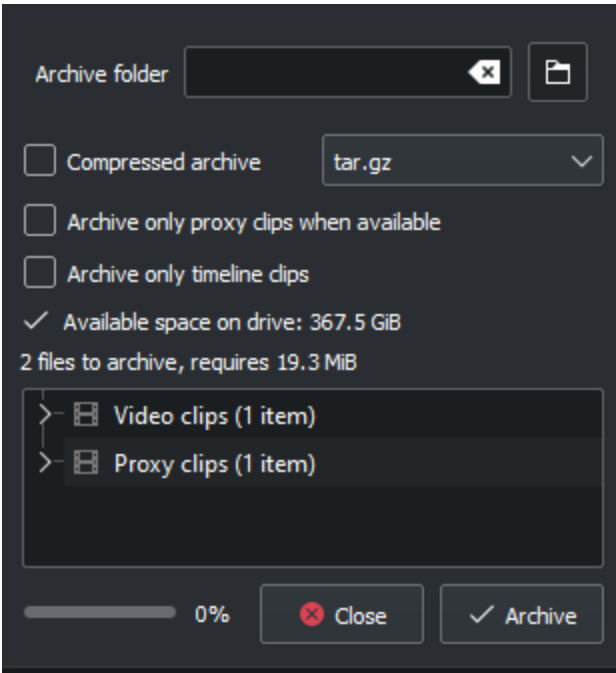
Source clips can be located anywhere. Still, here are some thoughts about their location:

- Material (images, clips, audio) that is used for one project only can be put into a subdirectory of the project folder as well. This keeps all important files together, and searching for the files takes less time.
- Material that is used by multiple projects is convenient when kept together. I've got a video collection the same way that I have a photo collection.

Contents:

- [Archiving](#)
- [Auto Save](#)
- [Backup](#)
- [Clips](#)
- [Annotating](#)
- [Project File Details](#)
- [Project Settings Dialog](#)

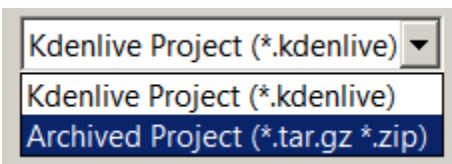
Archiving



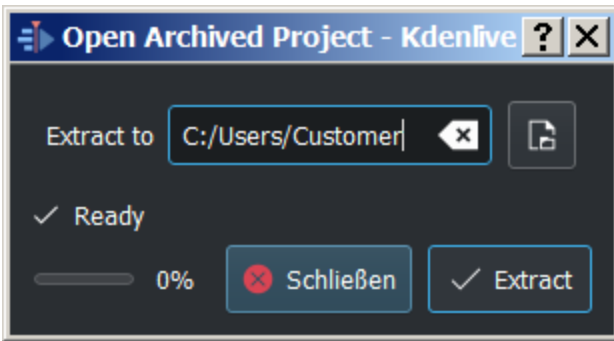
The Archiving feature (*Project* ▶ *Archive Project*, see [Project Menu](#)) in **Kdenlive** allows you to copy all files required by the project (images, video clips, project files,...) to a folder, and alternatively to compress the whole into a tar.gz or a zip file.

Archiving changes the project file to update the path of video clips to the archived versions.

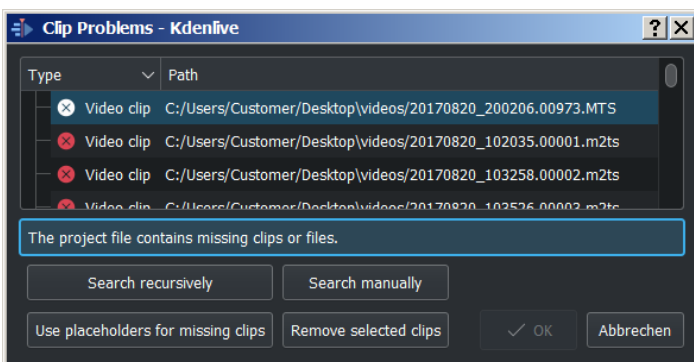
This can be useful if you finished working on a project and want to keep a copy of it, or if you want to move a project from one computer to another.



The resulting tar.gz or zip file can be opened directly in **Kdenlive** with *File* ▶ *Open*, then switch file ending to *Archived Project*.



Kdenlive will uncompress it to a location you specify before opening it.



If you have archived the project with the option *Archive only timeline clips*, **Kdenlive** ask what it should do with the not archived clips.

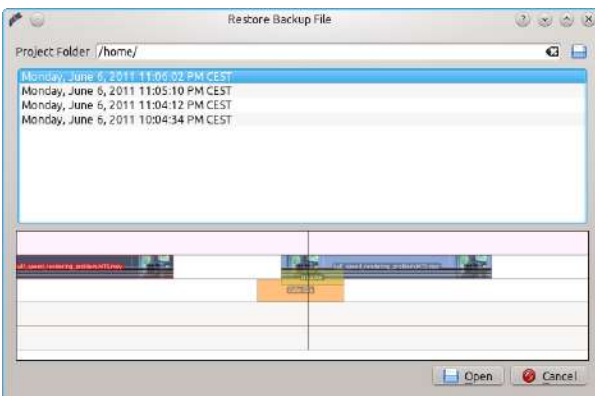
Auto Save

Autosaves are generated 3 seconds after the user do a undoable action, **BUT** only if you don't do another action within these 3 seconds. These autosaves are offered the first time after you open the project again in case the autosave is newer than the last saved project version. Autosaves are stored in stale files, not in normal *.kdenlive files

Backup

Contents

- [Backup](#)



The Backup widget, found in *Project* ▸ *Open Backup File* allows you to restore a previous version of your project file.

In case something went wrong (corrupted project file, unwanted change, ...), you can now restore a previous version of the file using this feature. Just select the version you want and click *Open*.

The backup files are automatically created each time you save your project. This means that if you save your project every hour, the backup widget will show you a list of all the saved files, with a small image of the timeline at the time you saved the project.

Kdenlive keeps up to 20 versions of your project file in the last hour, 20 versions from the current day, 20 versions in the last 7 days and 20 older versions, which should be sufficient to recover from any problem.

Clips

Contents

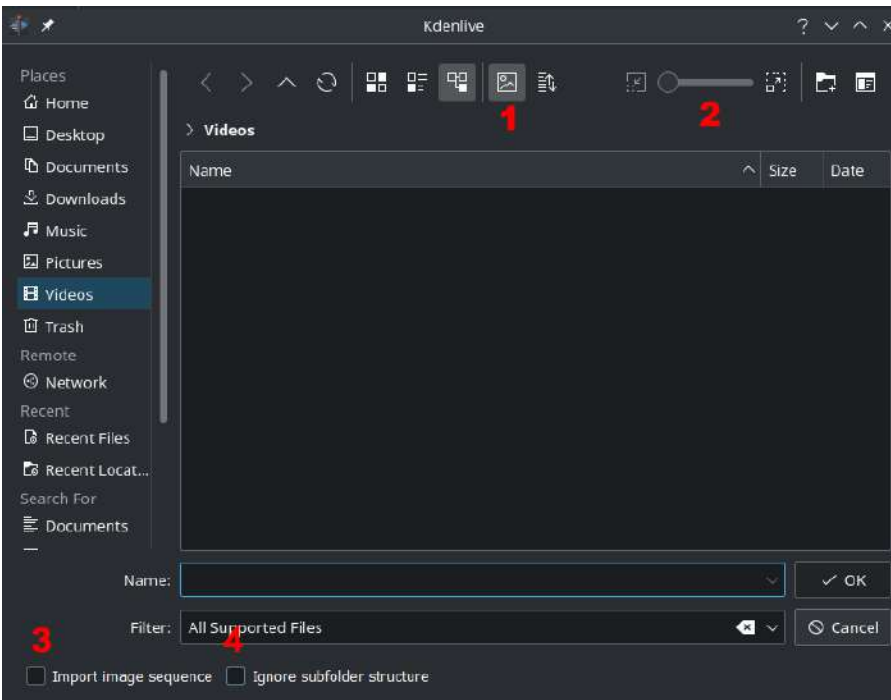
- [Clips](#)
 - [Clips \(Video, Audio, Images and Animation\)](#)
 - [Color clips](#)
 - [Image Sequence clips](#)
 - [Title clips](#)
 - [Create Animation](#)
 - [Online Resources](#)
 - [Stop Motion](#)
 - [Proxy clips](#)
 - [Clip Properties](#)
 - [File Info](#)
 - [Properties](#)
 - [Audio properties](#)
 - [Markers](#)
 - [Metadata](#)
 - [Analysis](#)
 - [Generators](#)
 - [Counter](#)
 - [White Noise](#)
 - [Color Bars](#)

See also [Clip Menu](#).

[Clips \(Video, Audio, Images and Animation\)](#)

The  button (or *Add Clip or Folder...* or double click into an empty place in the project bin) brings up the **Add Clip** Dialog where you can choose

video, audio, animation (*new in version 22.08*) or still image clips to add to [The Project Bin](#).




The button  labeled 1 toggles File Preview on and off (applies to image files only).

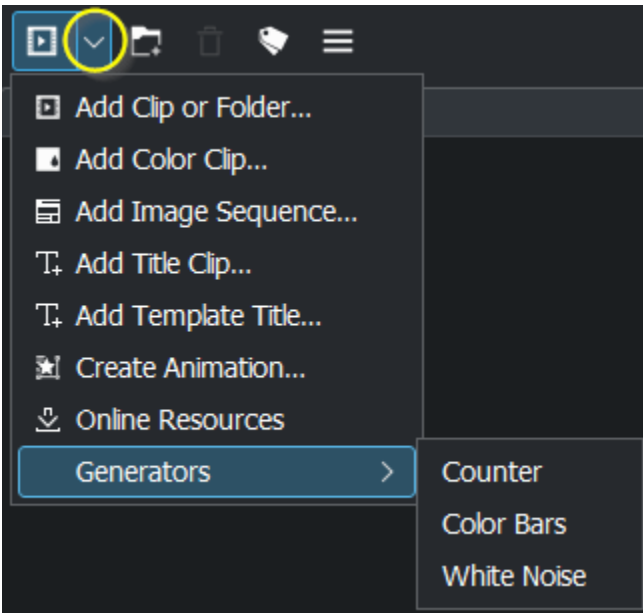
The slider labeled 2 adjusts the size of the preview icons.

Checkbox *Import image sequence* (labeled 3) enables the import of a series of images that can be used to make a stop motion animation.

New in version 21.12.

Checkbox *Ignore subfolder structure* (labeled 4) enables import video footage or audio recording folders while automatically ignoring any subfolder structures created by some devices, such as the Sony XDCam, Panasonic P2, Canon camcorders or Zoom audio recorders.

You can add other types of clips by choosing a clip type from the menu brought up from the drop down button next to the  button.

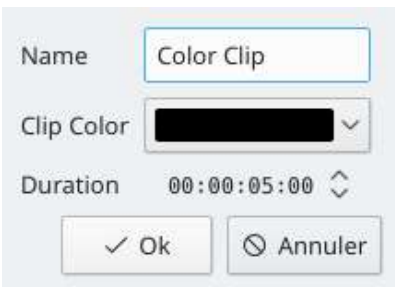


Color clips

Add Color Clip...: Color clips are images composed of a single color that can be added to the Project Bin. They can be useful to provide a background on which to place titles.

Add color clips by choosing *Add Color Clip* from the drop down button next to the  button.

This brings up the **Color Clip** dialog from which you can choose a color and a duration.



Clicking *OK* adds the clip to the project bin. The clip can then be dragged to the timeline. The duration of the color clip can be adjusted on the timeline.

Image Sequence clips

Add Image Sequence: Image Sequence clips are clips created from a series of still images. The feature can be used to make an animation from a collection of still images or to create a slideshow of still images. To create the former, use a short frame duration; to create the latter, use a long frame duration.

To create an image sequence clip, choose *Add Image Sequence* from the *Add Clip* drop down list.

Name: Slideshow Clip

Image selection method:
 MIME type Filename pattern

Folder: /home/carl/Pictures/2019

Image Type: JPG (*.jpg)

Frame Duration: 00:00:05:00 | hh:mm:ss:ff

Loop
 Center crop
 Dissolve: 00:00:01:00
 Wipe

Softness: [Slider]

Animation: None

1549582577976.jpg
1549582578066.jpg
1549582578157.jpg
1549582578876.jpg

Show thumbnails | 174 images found

Ok Annuler

From the **Image Sequence** dialog choose *Filename pattern* as **Image selection method**.

Browse to the location of the images which will make up your image sequence and select the first image. The subsequent images that are to be used in the slide show will be selected based on some sort of filename algorithm that predicts what the next image file name should be.

For example, if the first image is `100_1697.jpg` then the next will be `100_1698.jpg`, etc.

Select an appropriate frame duration – this defines how long each image be displayed.

Then hit *OK*. A video file made up of all the images in the folder from which you selected the first frame file from will be added to the Project Bin.

You can then drag this video to the timeline.

Center crop: automatically fills the output video frame with the images while maintaining their aspect ratio by zooming the image and cropping equal amounts from each edge until can fill the full frame. Without this option, the image will not be zoomed, but black bars will appear when the photo orientation or aspect does not match the video's.

Animation: adds preset slow smooth pan and zoom effects also known as the Ken Burns Effect. You can choose no animation, pans only, zooms only, or a combination of pans and zooms. Each option also has a low pass filter to reduce the noise in the images that may occur during this operation. Low pass filtering is much slower, so you should preview without it, and then enable it to render.

[Title clips](#)

See [Titles](#).

[Create Animation](#)

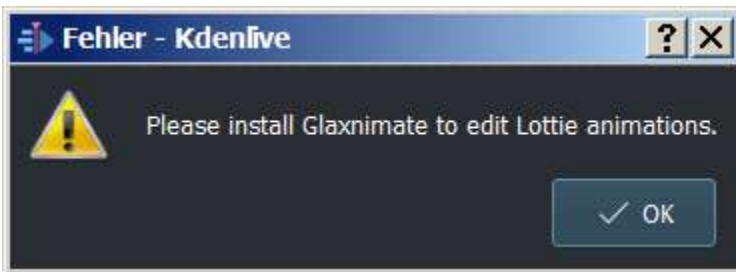
New in version 22.08.

Create Animation...: Creates a new animation. Give a name for your new animation and it opens Glaxnimate and adds the newly created animation to the project bin. You can then edit the animation in Glaxnimate by right-click on the animation and choose *Edit Clip* and whenever you save it, it is automatically updated in Kdenlive.

Kdenlive supports *Json* (Lottie animations) and *rawr* (Glaxnimate animation) animation.

Json and *rawr* files contains an alpha channel so the imported animations have a background which is not visible.

If Glaxnimate is not installed on your computer following message pops-up:



For Glaxnimate installation see [here](#).

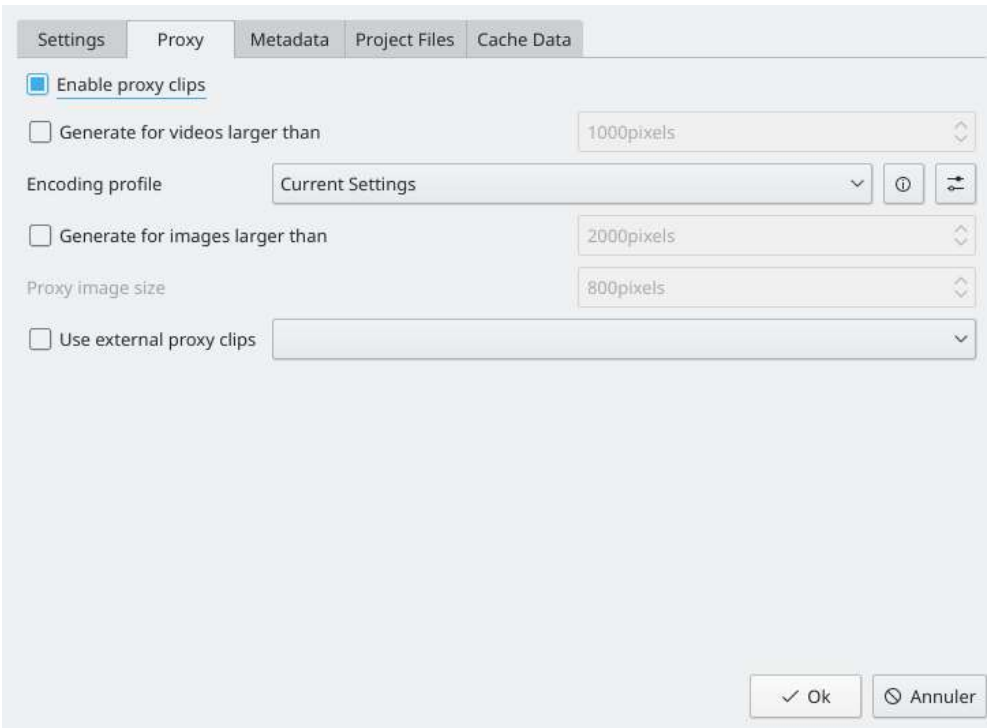
[Online Resources](#)

See [Online Resources](#).

[Stop Motion](#)

See [Stop Motion Capture](#).

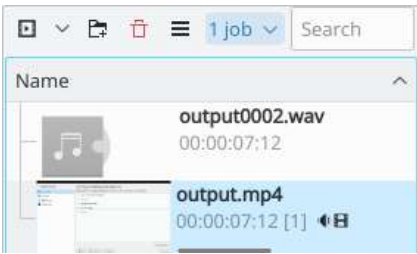
[Proxy clips](#)



Proxy clips create a lower-quality transcode of the original footage for use in real-time rendering in the project monitor. This allows for a smoother editing experience even on slower computers with High Definition footage. When rendering, by default, the original quality footage is used and not the proxy footage. For example, Video decoding of H.264 or H.265 clips, requires a lot of computing power to decode and could cause playback *stutter* when rendering effects in real time.

Proxy clips can be enabled/disabled for the current project in the Project Settings (*Project* ▶ *Project Settings...* ▶ *Proxy tab* ▶ *Enable Proxy Clips option*).

To enable proxy clips by default for new projects, go to *Settings* ▶ *Configure Kdenlive...* ▶ *Proxy Clips page* ▶ *Enable Proxy Clips option*. See also the [Project Settings Dialog](#) page.



As soon as proxy clips are enabled, they can be generated for specific project clips in the Project Bin widget via the context menu *Proxy Clip*. After you select *Proxy Clip* for a clip, a job will start to create the clip. You can view the progress of this job by looking at the little gray progress bar that appears at the bottom of the clip in the Project Bin – see picture. Clicking *Proxy Clip* again disables the proxy for this clip.

You can multi-select clips in the Project Bin and select *Proxy Clip* to start a batch proxy clip generation job which will queue up multiple proxy clip generation jobs.



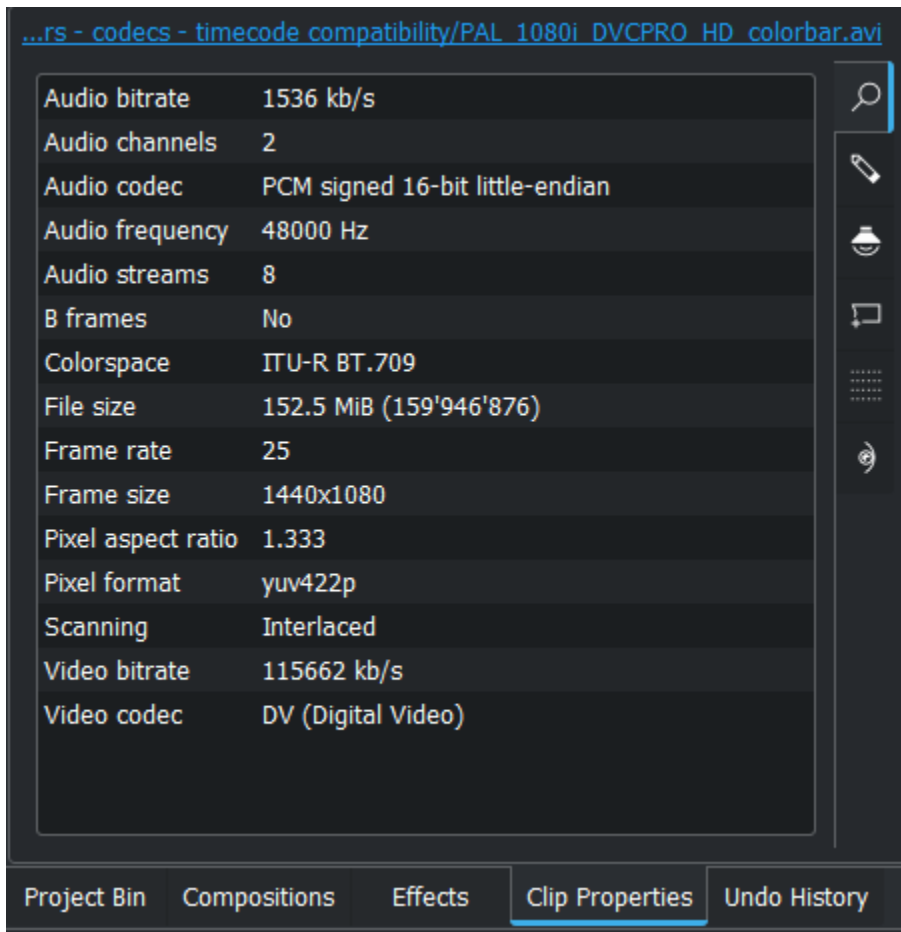
Once the proxy clip creation has completed, the proxy clip will appear with a **P** icon in the Project Bin.

When rendering to the final output file, you can choose whether to use the proxy clips as well. It is disabled by default, but for a quick rendering preview it is useful.

[Clip Properties](#)

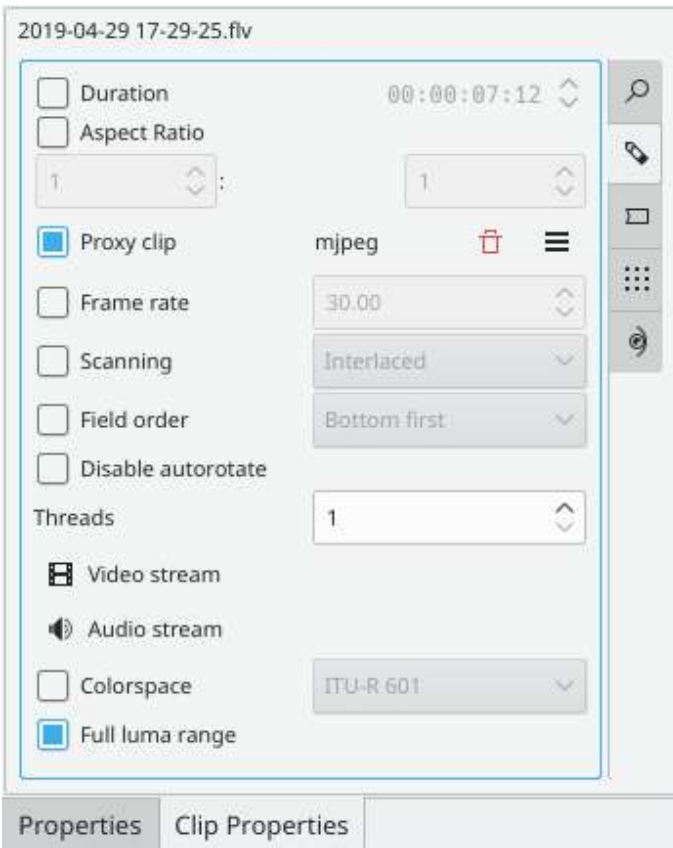
You can display and edit clip properties by selecting a clip in the [The Project Bin](#) and choosing *Clip Properties* from the *Project* menu or from the right-click menu. Or by turning on the display of clip properties the *View* and enable *Clip Properties*.

[File Info](#)



The *File Info* tab displays information about the file.

Properties



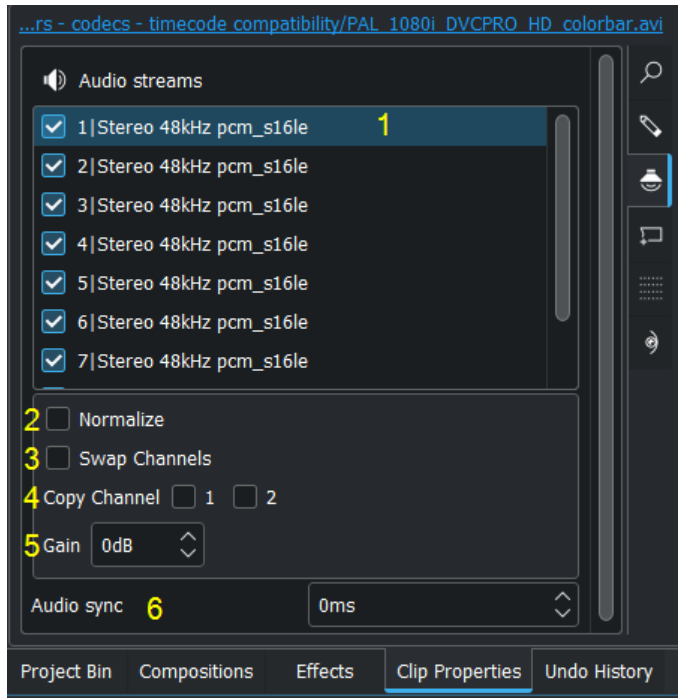
The *Properties* tab displays advanced properties of the clip where you can select a check box and then force the clip to take the property you specify. For example, you can use *Aspect ratio* to tell a clip that seems to have forgotten it was 16:9 ratio that it really is 16:9 ratio.

Advanced Clip property options are:

- **Duration:** Change the clip duration. If the duration is shorter than the clip duration, then the clip is **cropped**. If the duration is bigger than the clip duration, then the last image is repeated until the new duration is over.
- **Aspect ratio:** Change the clip aspect.
- **Proxy clips:** Enable a proxy clip for this clip. See [Clips](#).
- **Frame rate:** Change the clip frame rate. See [Wikipedia Frame rate](https://en.wikipedia.org/wiki/Frame_rate) [https://en.wikipedia.org/wiki/Frame_rate].
- **Scanning**
- **Field order**
- **Disable autorotate**

- Threads
- Video stream
- Audio stream
- Colorspace
- [Full Luma](#)

Audio properties



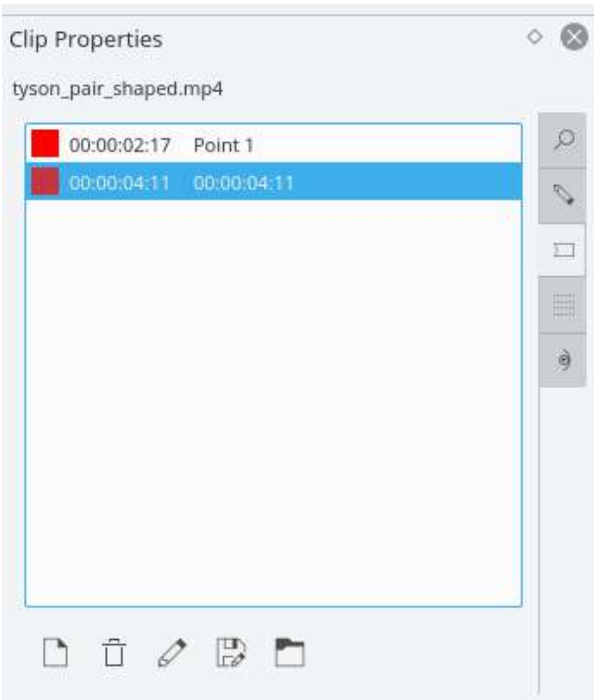
For each channel you can adjust:

1. Choose which audio channel should be enabled or disabled. Rename with double click.
2. Normalize the channel
3. Swap the channels
4. Copy a channel on the other one
5. Adjust the volume

for all channels:

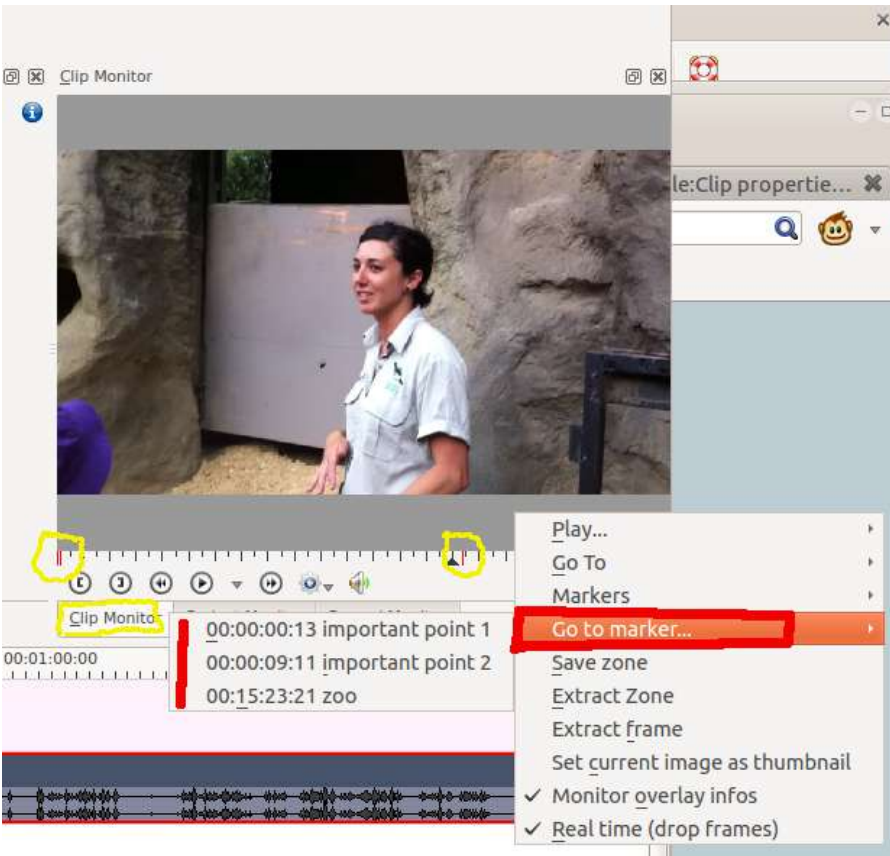
6. Adjust the synchronization time related to the video of the clip.

Markers



You can use the *Markers* tab to add markers for certain points in the source file that are important. However, it is probably easier to add markers to your clips via the [Monitors](#) because that allows you to preview the file at the location where you are adding the marker.

Once markers are put in your clip, you can access them in the [Monitors](#) by right-clicking and selecting *Go To Marker* (see picture.) Also note how the markers appear as red vertical lines in the **Clip Monitor** (see yellow highlighted regions in the picture.) You can turn on the display of the marker comments in the timeline too (see [Editing](#)).

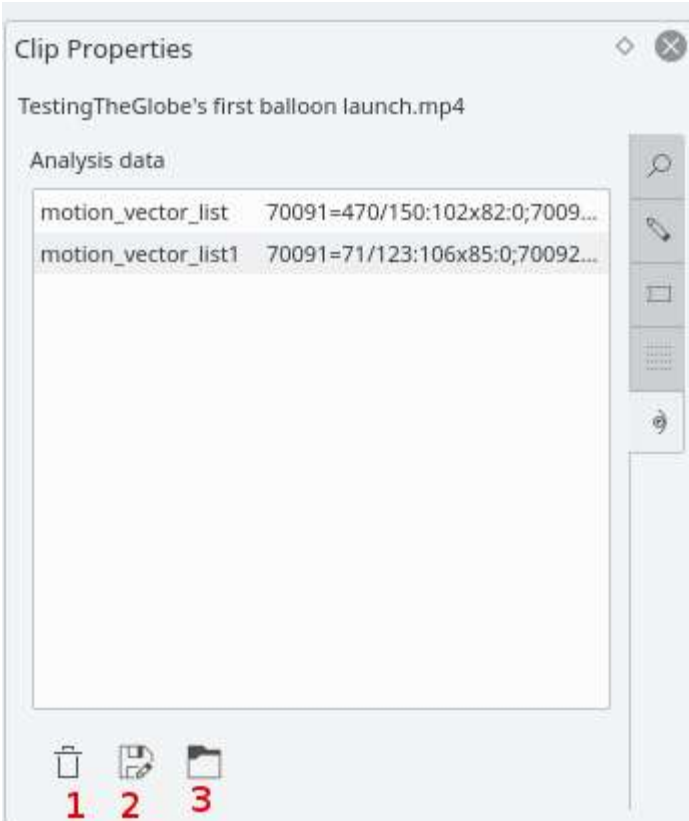


Markers can also be added to clips on the timeline. [Right-Click Menu](#) the clip and choose *Markers* ▶ *Add Marker*. Markers added this way also appear in the clip in the Project Bin.

[Metadata](#)

You expect this to show any meta data that is contained in the clip. Does not appear to work.

[Analysis](#)

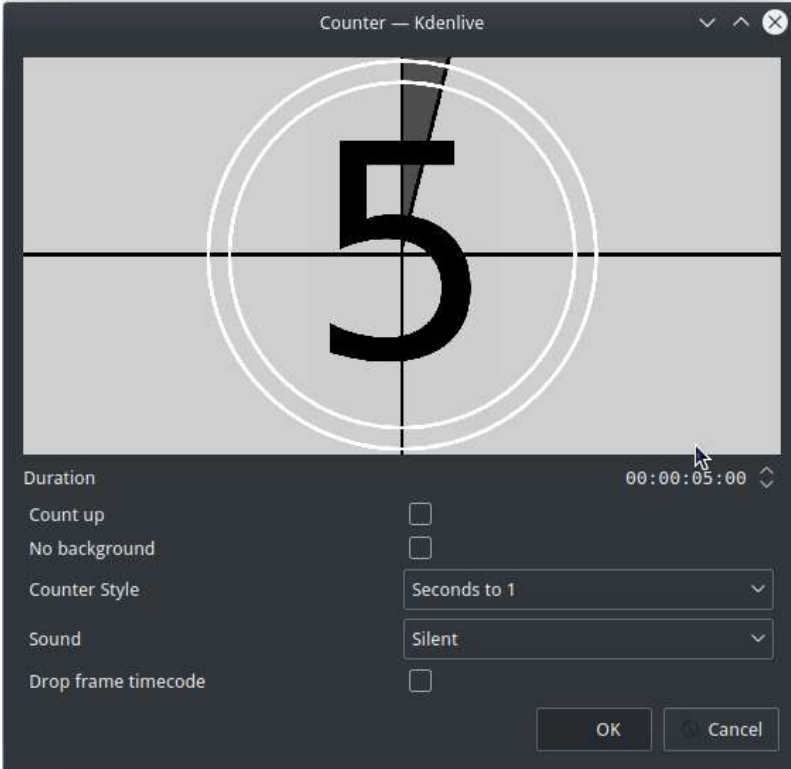


You can view and delete motion vector data that is associated with the clip from here. This is data created by [Auto Mask](#)

Button 1 Will delete the selected analysis data, Button 2 will allow you to export the data (semi colon delimited text file), Button 3 will allow you to import analysis data.

[Generators](#)

[Counter](#)



This generates a counter timer clip in various formats which you can put onto the timeline.

You can choose to have the clip count up by checking that option, otherwise it will count down by default. The *No Background* option will remove the background from the counter leaving only the grey background without the lines.

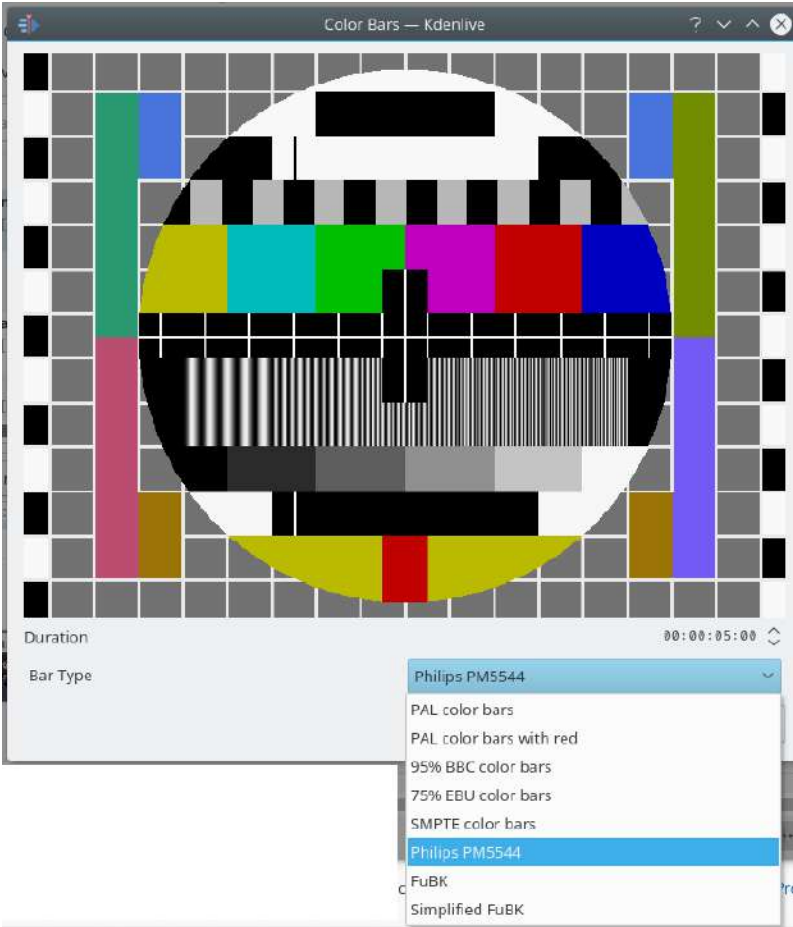
To change the size and position of the clip, you can add an effect to the clip on the timeline such as the [Position and Zoom](#) or the [Transform](#).

[White Noise](#)



This generates a video noise clip – like the “snow” on an out-of-tune analogue TV. In ver 17.04 it generates audio white noise as well as video snow.

[Color Bars](#)

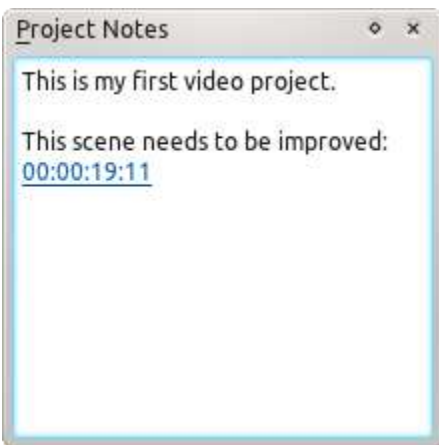


This generator came in to **Kdenlive** around ver 17.04. Generates a color test pattern of various types. Including PAL color bars, BBC color bars, EBU color bars, SMPTE color bars, Philips PM5544, FuBK

Annotating

Contents

- [Annotating](#)



Sometimes, you want to keep some notes about your project to remember ideas or things to do. For this task, **Kdenlive** provides a “Notes” widget that is available through *View* ▶ *Project Notes*.

It is basically a small text editor, but also has the ability to create links to some places in your project’s timeline. To add a timeline link as shown in the snapshot on the left, right click in the Notes widget and choose *Insert Current Timecode*. That will add a clickable link to the current project monitor timecode.

You can also provide annotations using [Guides](#) or [Clips](#)

Project File Details

Contents

- [Project File Details](#)

Kdenlive projects consist in a single `.kdenlive` file (in XML format), gathering :

- target video and audio properties
- references to all the source materials (and to their lighter *proxies* work copies)
- clips arrangement on the timeline, with effects applied, and everything to get the final result

Project files are associated with a working directory, in which **Kdenlive** will generate *proxies* and *thumbs*, so that an overview of your media always shows up quickly (if you move your project file, you should declare the directory change in the project properties).

New in version 20.08.0: A major refactoring of the project file fixes a long standing issue with the decimal separator (comma/point) conflict causing many crashes.

Warning

Projects created with 20.08 forward are not backwards compatible, that is, you won't be able to open your `.kdenlive` project files with older versions.

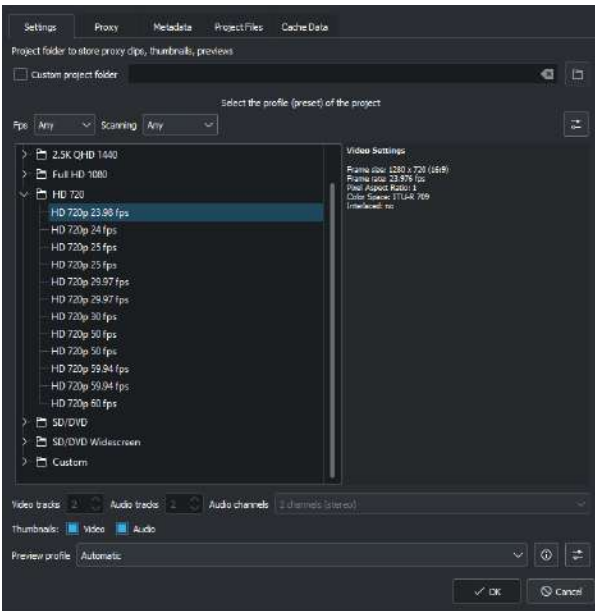
Project Settings Dialog

Contents

- [Project Settings Dialog](#)
 - [Project Settings Tab](#)
 - [Project Folder](#)
 - [Video Profile](#)
 - [Tracks](#)
 - [Thumbnails](#)
 - [Proxy Clips Tab](#)
 - [Metadata Tab](#)
 - [Project Files Tab](#)
 - [Cache Data Tab](#)

This is reached via *Project Settings* in the [Project Menu](#) menu. This dialog has 3 Tabs.

Project Settings Tab



The Project Settings dialog is shown when you start a new project (*File* ▶ *New*). This allows you to set all basic properties for your project. You can also edit the properties of your current [Project Menu](#) in *Project* ▶ *Project Settings*.

[Project Folder](#)

As recommended in the [Quick Start](#) section, you should create a new folder for your project. This folder will hold all temporary files that are used during the editing of your project (thumbnails, proxy clips, etc).

[Video Profile](#)

The video profile will define the format of your project. A list of predefined formats is available in **Kdenlive**, for example *DV / DVD PAL*, *HD 1080i 25 fps*, etc.

You can use the pull-down menus to filter the list of profiles by FPS (Frames per second) or Scanning (Interlaced or Progressive)

The profile defines the video resolution, as well as display aspect ratio, color space and a few other parameters.

You should carefully choose your project format and select the one which best fits your desired output. All video operations on the project (like compositing, scaling, etc) will then use this profile. Advanced users can create custom project profiles in [Manage Project Profiles](#).

For example, if your goal is to create a DVD, you should use a DVD profile with the correct frame rate (PAL / NTSC) and display ratio (widescreen or not).

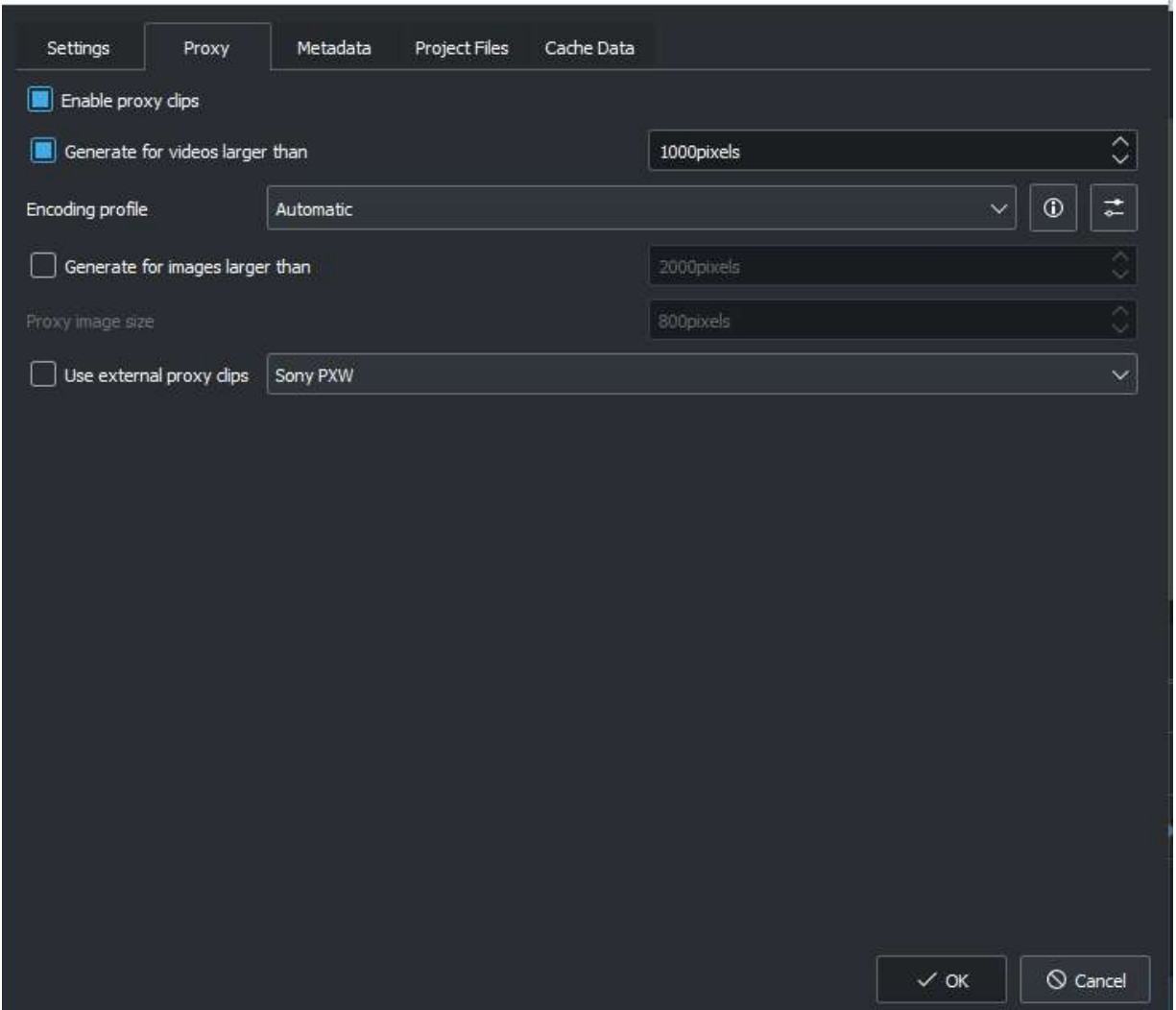
Tracks

You can select the default number of audio and video tracks that your project will have. You can always add or remove tracks in an existing project.

Thumbnails

The Audio and Video thumbnails are shown in the [Timeline](#). They can also be enabled/disabled through buttons in the [Status Bar](#).

Proxy Clips Tab



When the *Proxy Clip* feature is enabled, **Kdenlive** will automatically create reduced versions of your source clips, and use these versions for your editing. **Kdenlive** will replace the proxy clips with the originals for a full resolution when rendering.

The *Generate for videos larger than x pixels* option will automatically create proxy clips for all videos added to the project that have a frame width larger than x. This also applies to images.

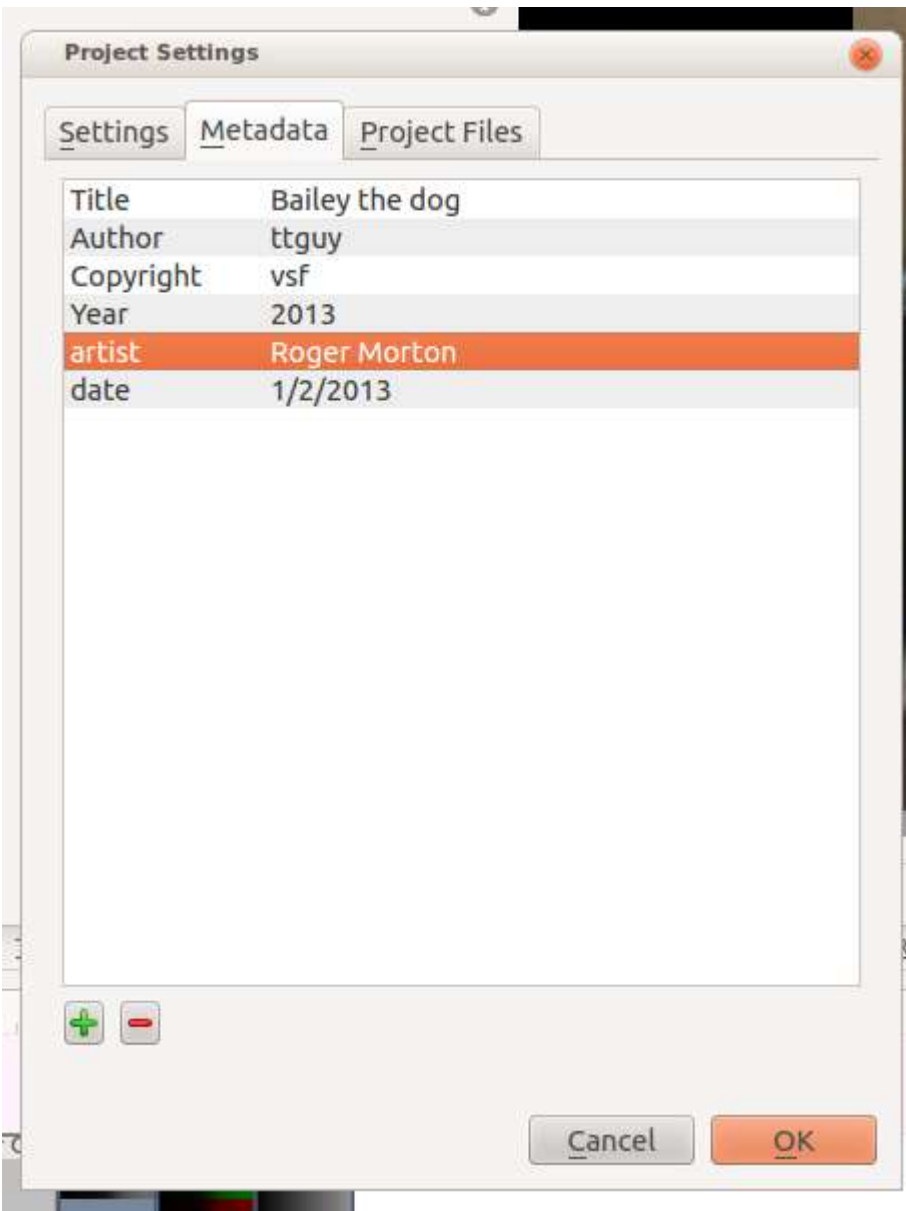
You also have the choice to manually enable / disable proxy clips for each clip in your project bin by right-clicking on the clip and choosing *Proxy Clip*.

You can choose an *Encoding profile* for the proxy clips, which will define the size, codecs and bitrate used when creating a proxy. The proxy profiles can be managed from the **Kdenlive** Settings dialog (*Settings* ▶ *Configure Kdenlive* ▶ *Project Defaults*).

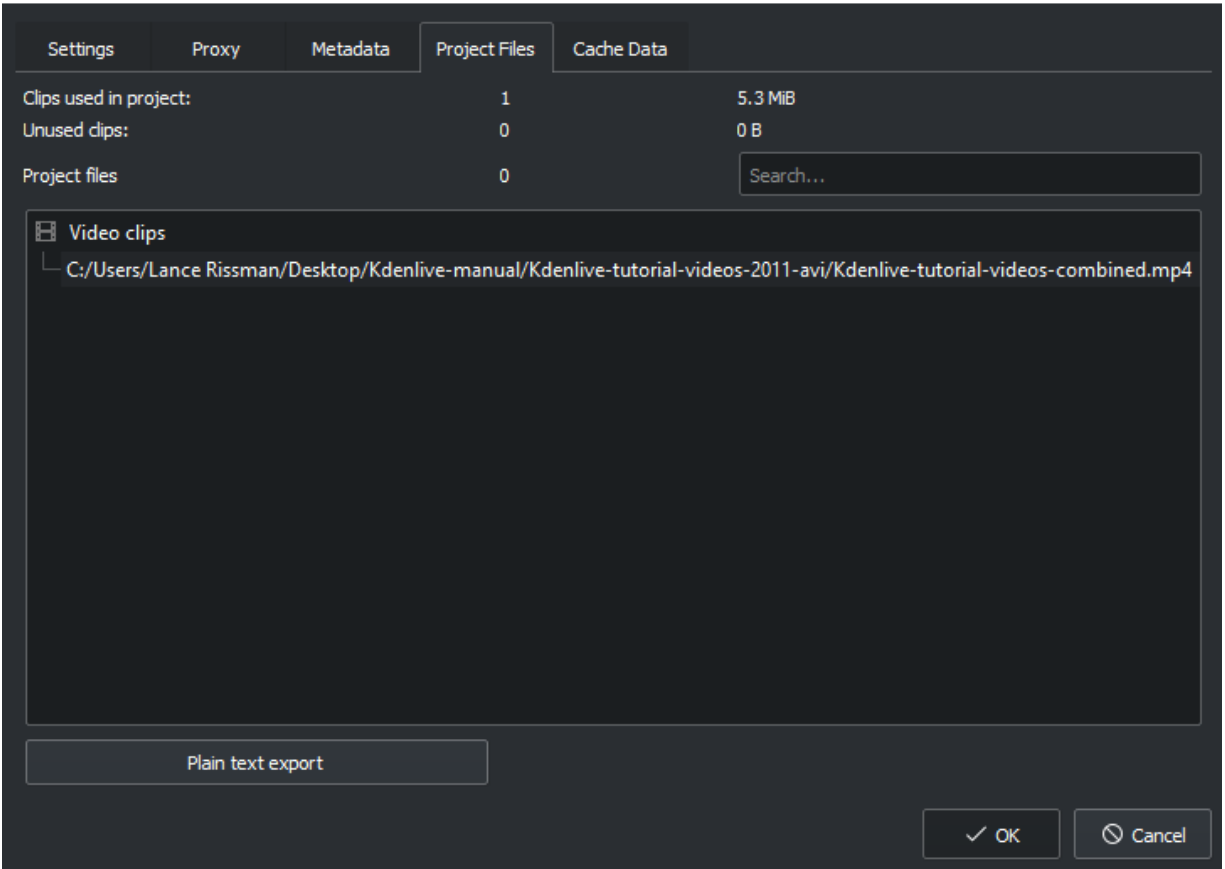
Metadata Tab

Screenshots below show the **Metadata** tab of **Kdenlive**.

Metadata set up here will be written to the files rendered from the project if [Rendering](#) is checked in File Rendering.



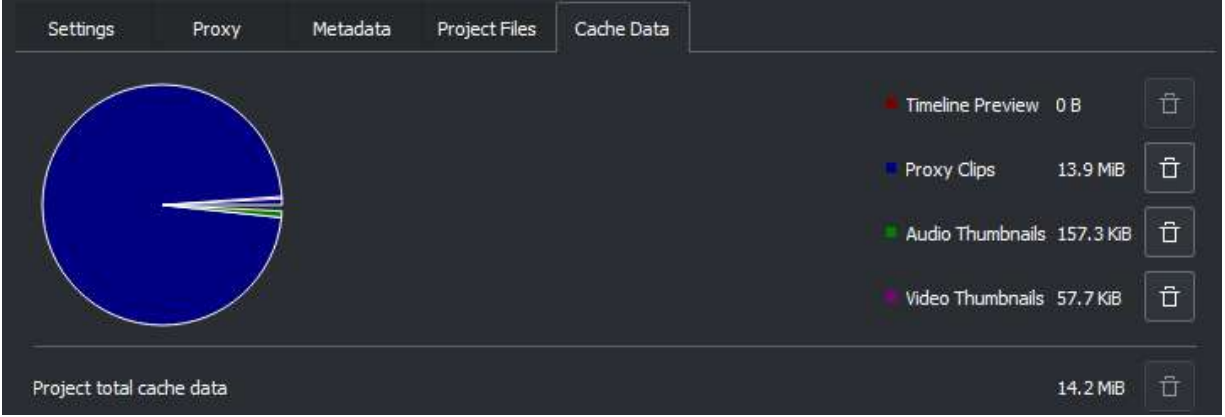
[Project Files Tab](#)



From here you can export the project files data.

If you want to remove unused files from your project use Project > [Clean Project](#).

[Cache Data Tab](#)



The Cache data tab shows the data used in the project including the timeline preview, proxy clips, audio thumbnails, and video thumbnails.

You can click on the trashcan icon to clear the cache data for that category.

Cutting and assembling

Contents:

- [Editing](#)
 - [Seeking through your project](#)
 - [Cutting a clip](#)
 - [Resizing a clip](#)
 - [Change speed of a clip](#)
 - [Removing Space Between Clips](#)
 - [Timeline Toolbar](#)
 - [Track Compositing](#)
 - [Timeline Edit Modes](#)
 - [Timeline Edit Tools](#)
 - [Status Bar](#)
 - [Cutting Footage from multiple aligned tracks - Ripple Delete](#)
 - [3 point editing](#)
- [Grouping](#)
 - [How to Group Clips](#)
 - [Cutting Grouped Clips](#)
 - [Removing Clip Grouping](#)
- [Guides](#)
 - [Export guides as chapter](#)
 - [Move Guides with Spacer Tool](#)
- [Right-Click Menus](#)
 - [Clip in Timeline](#)
 - [Empty Space in Timeline](#)

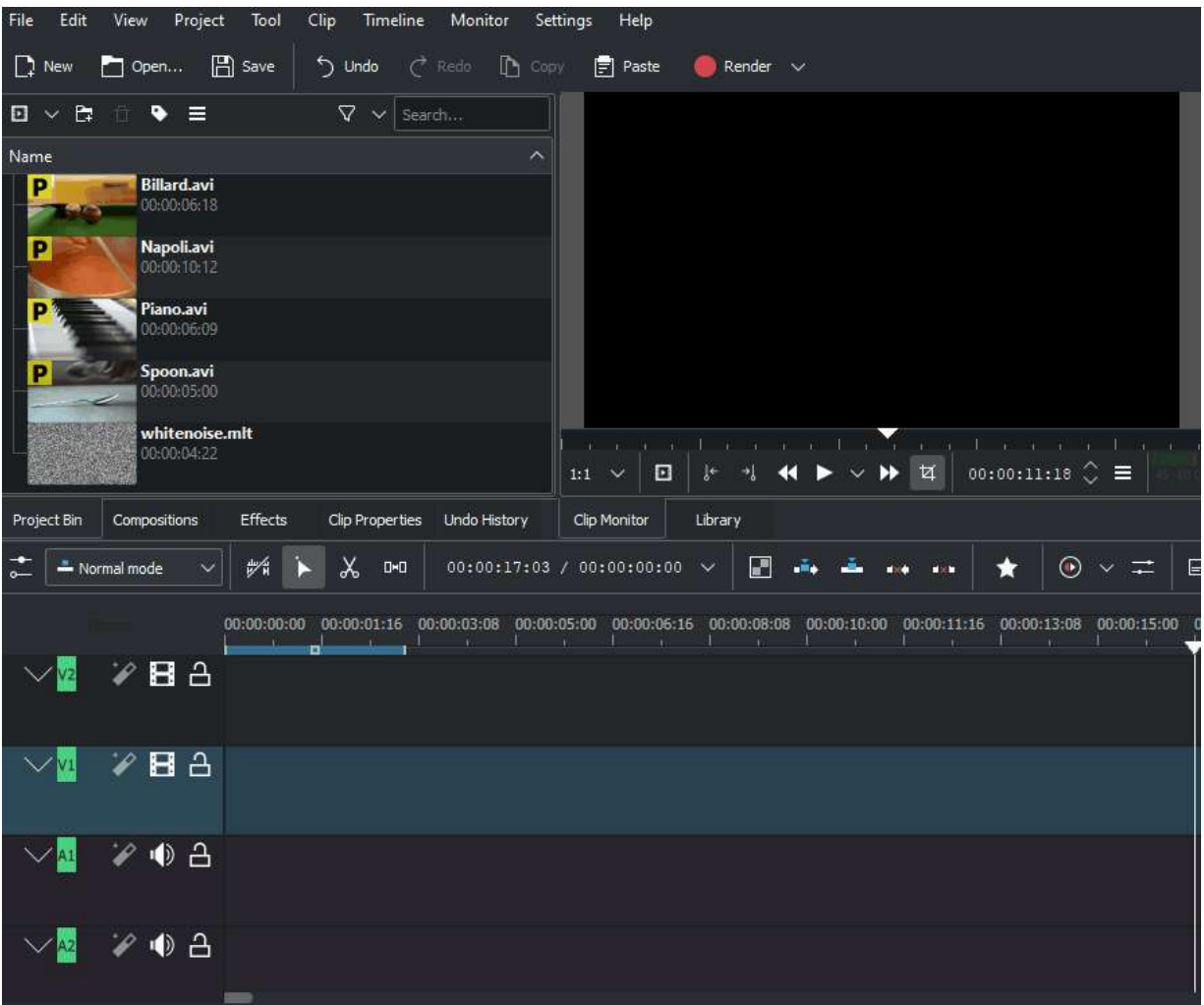
Editing

Contents

- [Editing](#)
 - [Seeking through your project](#)
 - [Cutting a clip](#)
 - [Resizing a clip](#)
 - [Change speed of a clip](#)
 - [Removing Space Between Clips](#)
 - [Timeline Toolbar](#)
 - [Track Compositing](#)
 - [High Quality](#)
 - [None](#)
 - [Preview](#)
 - [Timeline Edit Modes](#)
 - [Normal Mode](#)
 - [Overwrite Mode](#)
 - [Insert Mode](#)
 - [Timeline Edit Tools](#)
 - [Selection Tool](#)
 - [Razor Tool](#)
 - [Spacer Tool](#)
 - [Slip Tool](#)
 - [Ripple Tool](#)
 - [Multicam Tool](#)
 - [Status Bar](#)
 - [Split Audio and Video Automatically](#)
 - [Automatic Transitions](#)
 - [Show Video Thumbnails](#)
 - [Show Audio Thumbnails](#)
 - [Show marker comments](#)
 - [Snap](#)
 - [Fit Zoom to Project](#)

- [Zoom project](#)
- [Cutting Footage from multiple aligned tracks - Ripple Delete](#)
- [3 point editing](#)
 - [Source](#)
 - [Target](#)
 - [Examples of advanced edit](#)

Editing is done in the [Timeline](#). Add a clip by dragging it from the [The Project Bin](#) or the [Monitors](#). Once a clip is dropped on a track, it can be moved (drag and drop it) to another place on the same track or onto another track.



New in version 19.08.0: Editing with keyboard shortcuts was introduced

This will speed up the editing work and you can do editing steps that are not possible or not as quick and easy with the mouse. Working with keyboard shortcuts in 19.08 is different as in the former Kdenlive versions. Mouse operations have not changed and working as before. See [3 Point Editing](#)

[Seeking through your project](#)

The timeline cursor shows your current position in the project. The positions of the cursors on the timeline ruler and Project Monitor are always in sync. Position can be moved in the following ways:

- Keyboard shortcut: right / left arrows for one frame, Shift+ right / left for 1 second
- Clicking/dragging in the [Timeline](#) or in an empty area of the timeline.
- Clicking/dragging in the [Monitors](#) ruler.
- Rotating the mouse wheel while the pointer is over the [Timeline](#) or over the [Monitors](#)
- Editing the timecode in the [Monitors](#) timecode widget
- Clicking the up or down arrows on the [Monitors](#) timecode widget

[Cutting a clip](#)

To cut a clip, the easiest way is to place the timeline cursor where you want to cut the clip, then select the clip (left click in it) and use the menu *Timeline* ▶ *Current Clip* ▶ *Cut Clip* (default shortcut: Shift + R).

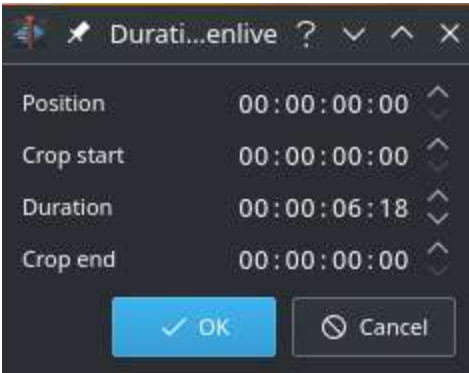
Or *Right Click* ▶ *Cut Clip*

Alternatively - use the [Spacer Tool](#).

[Resizing a clip](#)

A clip can be resized from its start or end by dragging its left or right edge. If you want a more precise resize, you can place the timeline cursor wherever you want the resize to end and use the menu *Timeline* ▶ *Resize Item Start* (default shortcut: (or *Timeline* ▶ *Resize Item End* (default shortcut:))

To even more precisely control the length of a clip, double click it in the timeline and adjust its duration using the **Clip duration** dialog. You can have frame-level accuracy with this method.

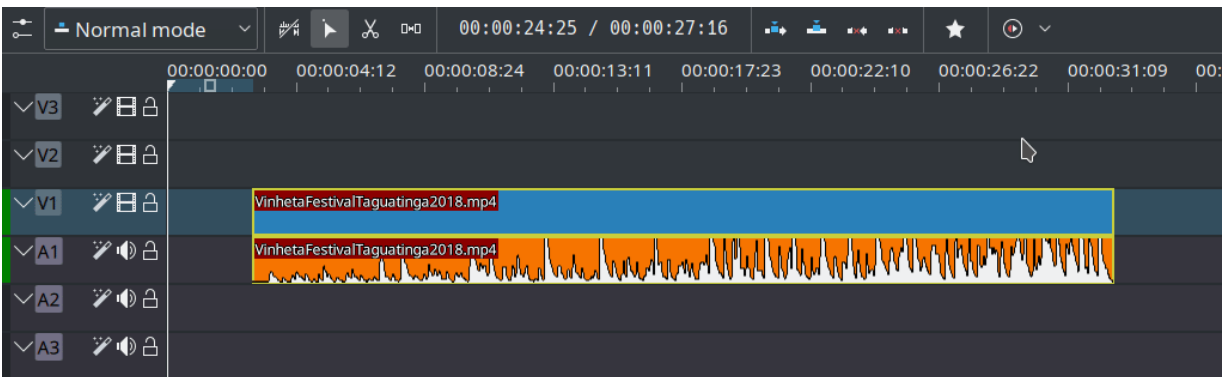


You can also resize a clip by cutting it with the [Razor Tool](#) and then deleting the bit you do not want.

New in version 19.08.

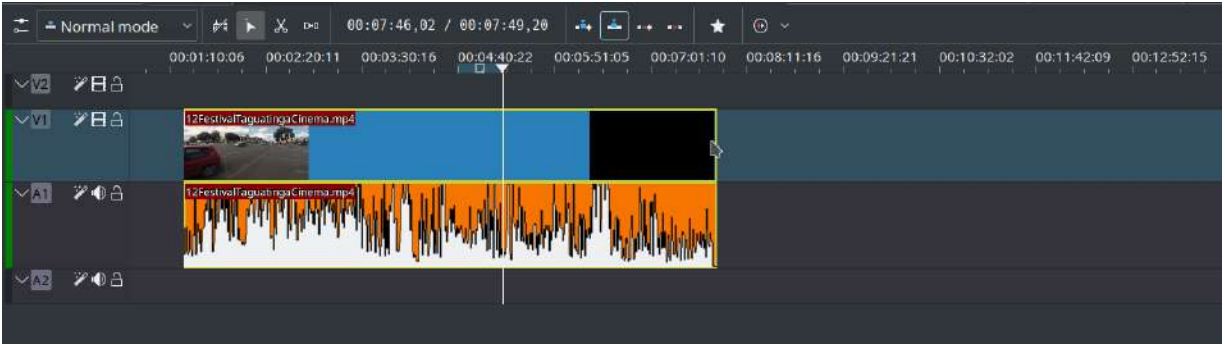
Adjust AV clips independently with `Shift + resize` to resize only audio or video part of a clip.

`alt + Move` in timeline allows to move the audio or video part to another track independently.



[Change speed of a clip](#)

New in version 19.08.

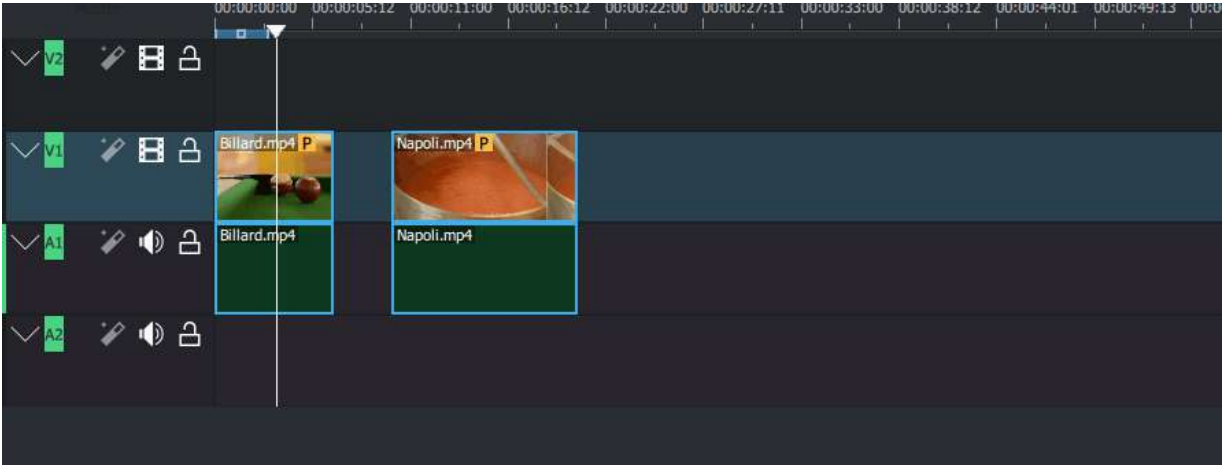


Adjust the speed of a clip by pressing CTRL + dragging a clip in the timeline.

Doing with right click on the clip see [Change speed](#).

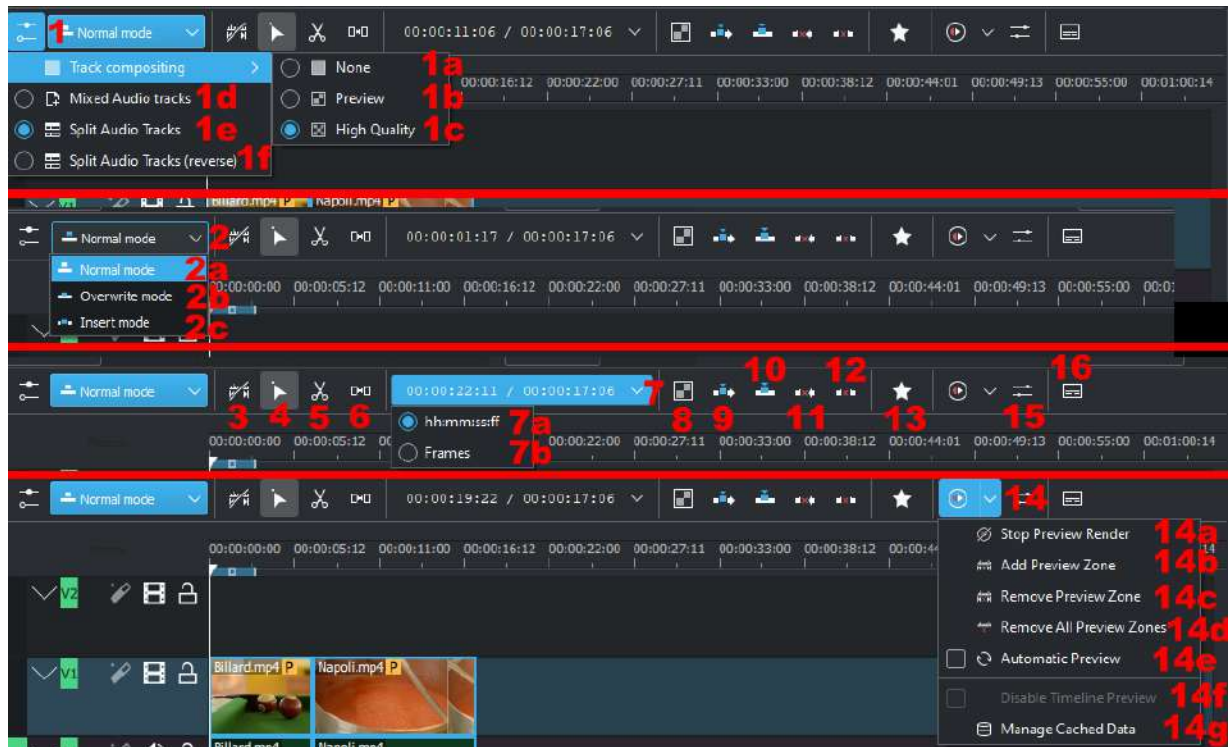
[Removing Space Between Clips](#)

Right click in the space between the clips and choose *Remove Space*. Be aware however that if you have clips on multiple tracks in the timeline and they are not grouped, then removing space may disturb the alignment of the clips between the different tracks – the space is only removed from the timeline where you clicked. Under this situation it may be safer to use the [Spacer Tool](#).



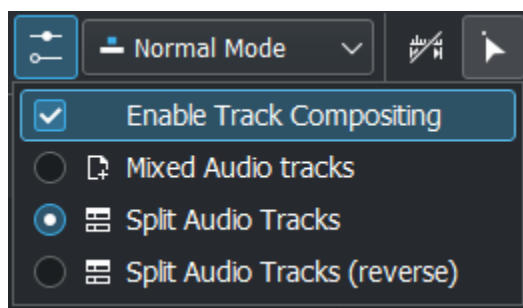
[Timeline Toolbar](#)

There is a toolbar between monitors and the timeline that controls various aspects of the editor.



1. [Track Compositing](#) drop down.

Changed in version 22.08.



Track compositing is now a simple checkbox instead of the deprecated none/high resolution choice.

When enabled Kdenlive is set to [High Quality](#)

When disabled Kdenlive is set to [None](#)

Deprecated since version 22.08.

1a, 1b and 1c cannot be selected anymore.

1a. [None](#)

1b. [Preview](#)

1c. [High Quality](#)

1d. **Mixed Audio tracks** changes the order in which tracks are displayed to mixed audio and video tracks. For example, from the bottom of the timeline to the top of the timeline: A1, V1, A2, V2, A3, V3

1e. **Split Audio tracks** changes the order in which tracks are displayed to separate audio and video tracks. For example, from the bottom of the timeline to the top of the timeline: A1, A2, A1, V1, V2, V3



1f. **Split Audio tracks (reverse)** changes the order in which tracks are displayed to separate audio and video tracks with the audio tracks in reverse order. For example, from the bottom of the timeline to the top of the timeline: A1, A2, A3, V1, V2, V3

2. **Timeline Edit Mode Drop Down.** These same settings can be found under the *Tool* menu.

2a. **Timeline Normal Mode**

2b. **Timeline Overwrite Mode**

2c. **Timeline Insert Mode**

3. Use timeline zone  / Do not use timeline zone  for insert (toggles).
See :[Insert and Overwrite: advanced timeline editing](#) for more details.

Tool Group (one of these 3 can be active)

Active buttons are grey.

4. [Selection Tool](#) - Also selected with the 'S' hotkey. Allows the selection and manipulation of clips on the timeline
5. [Razor Tool](#) - Also selected with the 'X' hotkey, or to cut at the point of the play head use "Shift-R". This allows a clip to be cut into two clips.
6. [Spacer Tool](#) - Also selected with the 'M' hotkey. This tool will select all clips at one point in the timeline and allow them to be shifted at once.
7. Position indicator - displays the time point or frame number of the location of the hovering mouse on the left side, and the total length of the project on the right side.

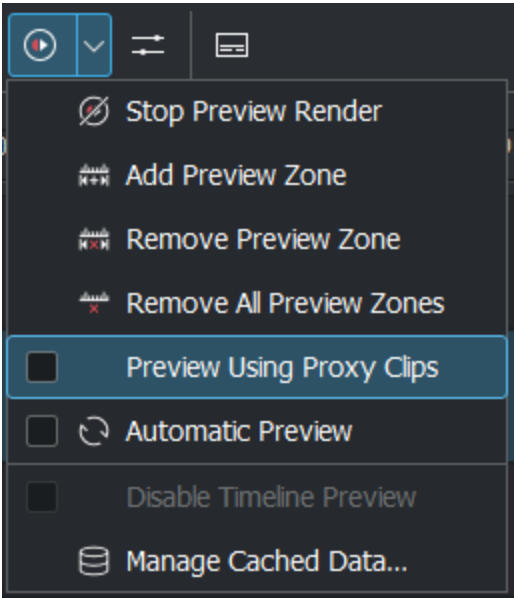
7a. **hh:mm:ss:ff**; Sets the position indicator to display time units

7b. **Frames** Sets the position indicator to display frames

8. **Mix Clips** - allows same-track transitions to be applied between two clips. See [Mixes](#) for a detailed explanation.
 9. Insert Clip Zone in Timeline. See [Insert and Overwrite: advanced timeline editing](#) for more details.
 10. Overwrite Clip Zone in Timeline. See [Insert and Overwrite: advanced timeline editing](#) for more details.
 11. Extract Timeline Zone
 12. Lift Timeline Zone
 13. Favourite Effects
 14. Start Preview Render
- 14a. Stop Preview Render
- 14b. Add Preview Zone
- 14c. Remove Preview Zone
- 14d. Remove All Preview Zones
- 14e. Automatic Preview
- 14f. Disable Timeline Preview

14g. Manage Cached Data

New in version 22.04:



14h. Preview Using Proxy Clips. Option to render preview using original clips, not proxies (disabled by default).

Items 14, 14a-14g are covered in detail by [Timeline preview rendering](#) article.

1. Show/Hide the [Audio Mixer](#) tool. The audio mixer tool allows audio to be managed in the project.
2. Show/Hide the [Subtitle](#) Tool. This will show or hide the subtitle track where subtitles can be created or edited in the project.

[Track Compositing](#)

The track compositing applies uniformly to all tracks in your timeline.

Tip

Under certain compositing conditions, if you see the outcome of a transition not to be what you would expect, try to switch track compositing off for a

quick check. If the oddity is gone, then this is an interference between the automatic timeline track compositing and your user transitions.

Changed in version 22.08.

Track compositing is now a simple checkbox instead of the none/high resolution choice.

High Quality

When track compositing is set to High-Quality tracks with alpha channel information will be automatically composited with the other tracks using an algorithm that is somewhat slower than the algorithm used with [Preview](#) but which retains higher fidelity color information.

None

When Track Compositing is set to None you will not get tracks with alpha channel information to composite with the other tracks unless an explicit composite or affine transition is added between the clips. This is basically kind of an expert mode when you need full control over any compositing in your timeline.

Preview

Deprecated since version 21.08.

Note

Final rendering always uses either **High Quality** or **None**. So Preview quality is, well, for preview only.

When track compositing is set to Preview tracks with alpha channel information will be automatically composited with the other tracks using an

algorithm that is somewhat faster than the algorithm used with [High Quality](#) but which slightly degrades the colors.

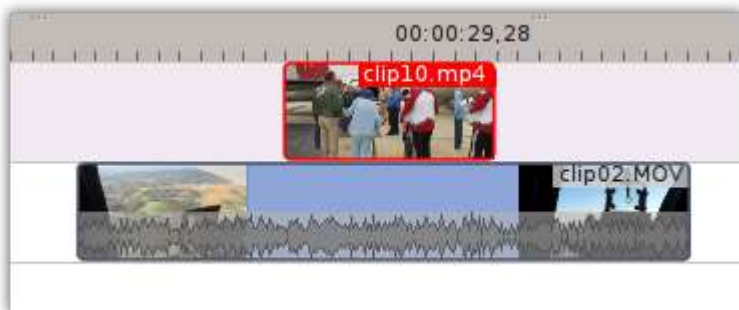
Timeline Edit Modes

Normal Mode

In this edit mode, you can not drag clips on top of other clips in the same track in the timeline. You can drag them to another track in the timeline but not into the same track at the same time point as an existing clip. Contrast this to overwrite mode.

Overwrite Mode

In this edit mode, you can drag a clip onto a track where there is an existing clip and the incoming clip will overwrite that portion of the existing clip (or clips) covered by the incoming clip.



Before

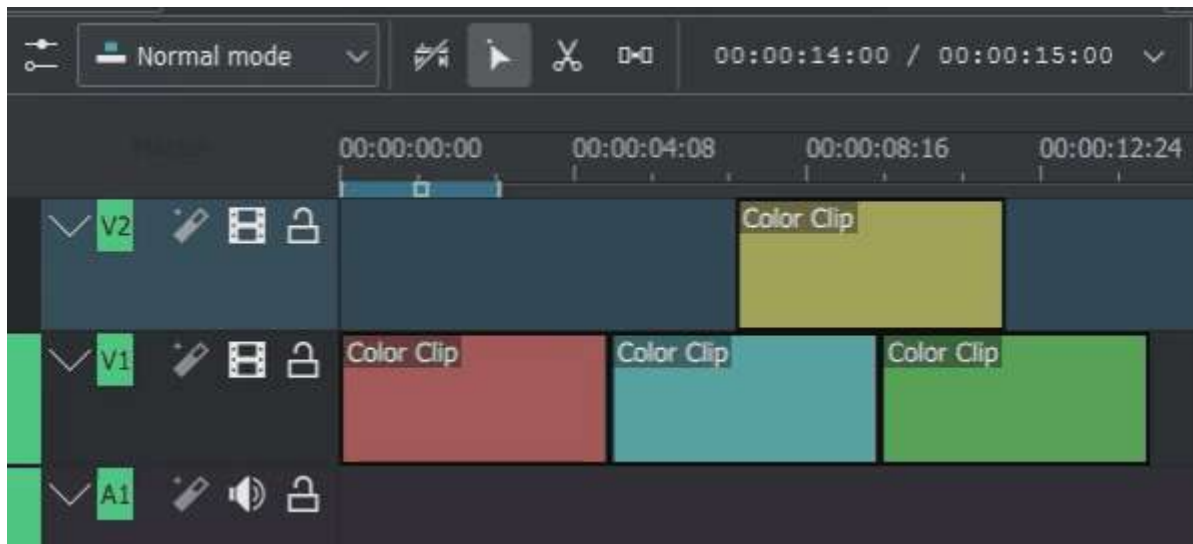


After

In the “After” screenshot above, you can see that the clip which was dragged from the upper track has replaced a portion of the clip on the lower track.

Rearrange clips in the timeline

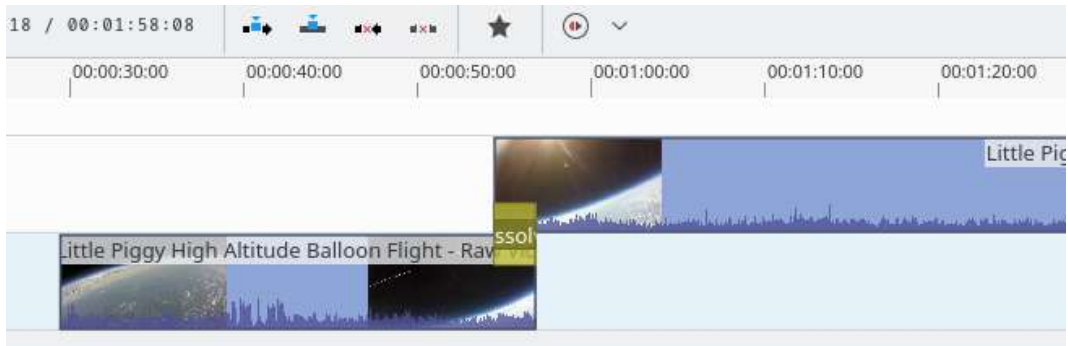
Performing a rearrange edit. This technique lets you quickly change the order of clips in the timeline.



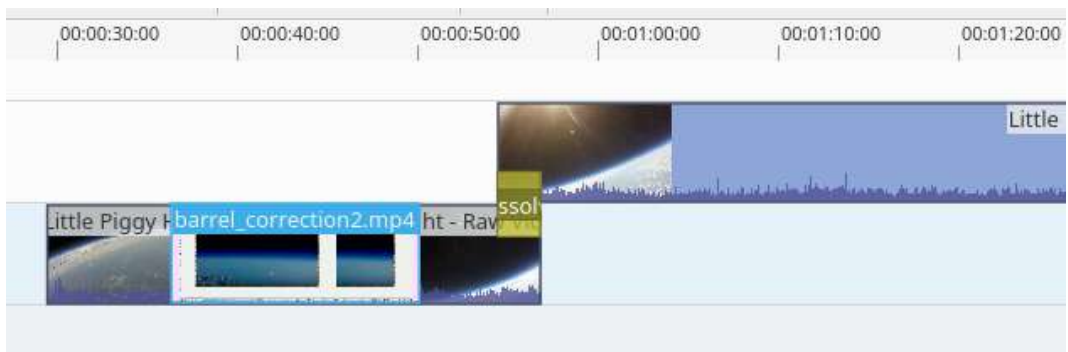
Drag a clip, as you drop it to a new location performs an overwrite edit that overwrites the existing clip.

Insert Mode

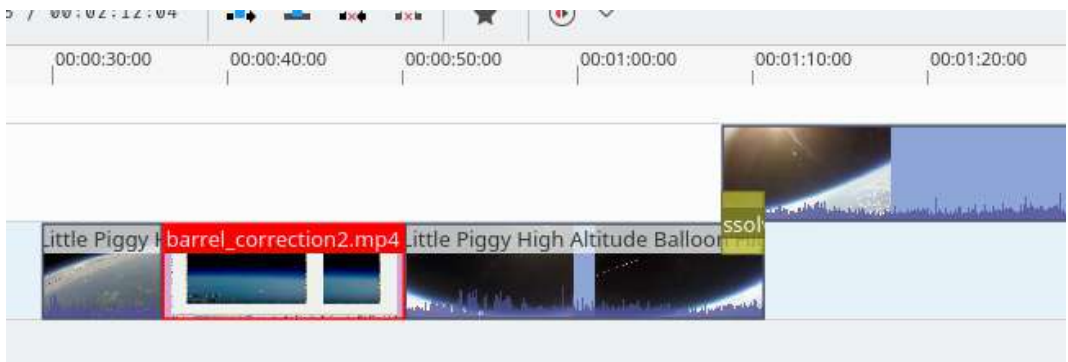
With this mode selected and you drop a selection into the timeline the selection will be inserted into the timeline at the point where the mouse is released. The clip that the selection is dropped on is cut and clips are moved to the right to accommodate the incoming clip.



Before



During



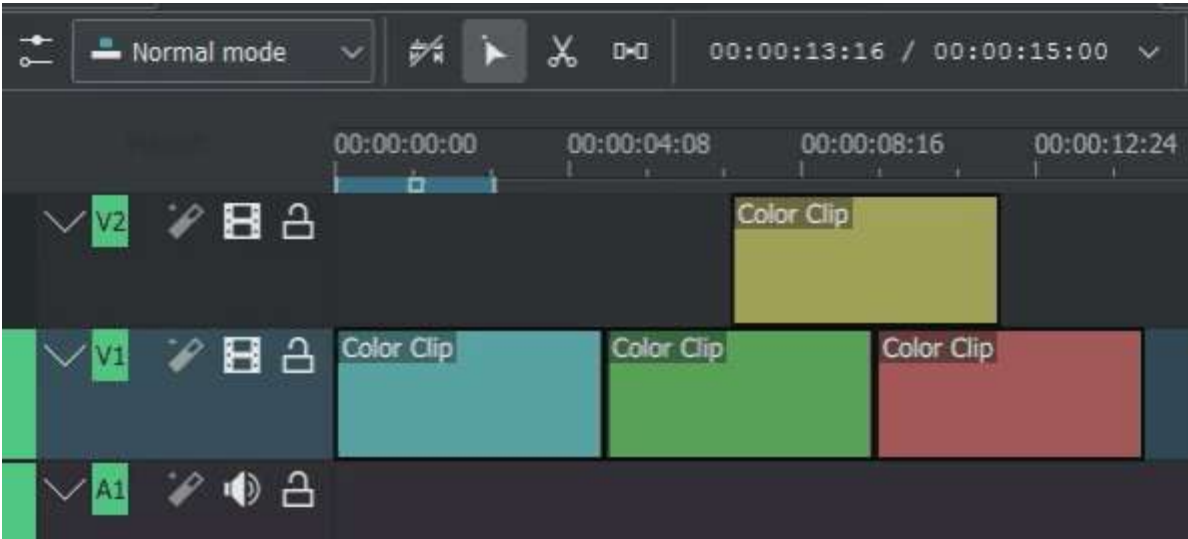
After. Incoming Clip inserted. Clips after the insert point are shifted Right

Rearrange edit in the timeline

Performing a rearrange edit. Only clips in the destination track are shifted; clips in other tracks are not affected. This technique lets you quickly change

the order of clips in the timeline.

It always closes all space in the track.



Drag a clip, as you drop it to a new location. Releasing the clip performs an insert edit that shifts clips in the destination track only.

[Timeline Edit Tools](#)

[Selection Tool](#)

Use this to select clips in the timeline. The cursor becomes a hand when this tool is active.

[Razor Tool](#)

Use this to cut clips in the timeline. The cursor becomes a pair of scissors when this tool is active.

ESC: Return from any tools back to Selection tool.

[Spacer Tool](#)

Use this tool (☐☐) to temporarily group separate clips and then drag them around the timeline to create or remove space between clips. Very useful. Experiment with this tool to see how it works.

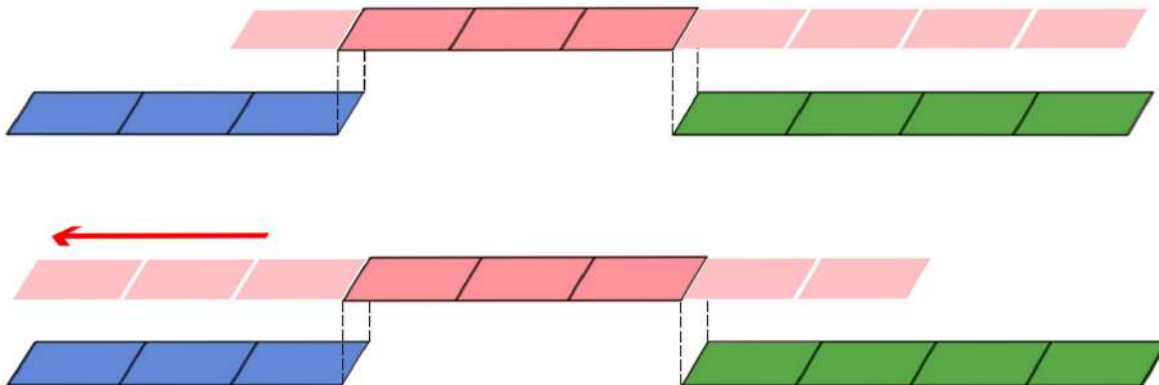


In the above example, these clips are not grouped. However, the spacer tool groups them temporarily for you so you can move them all as a group.

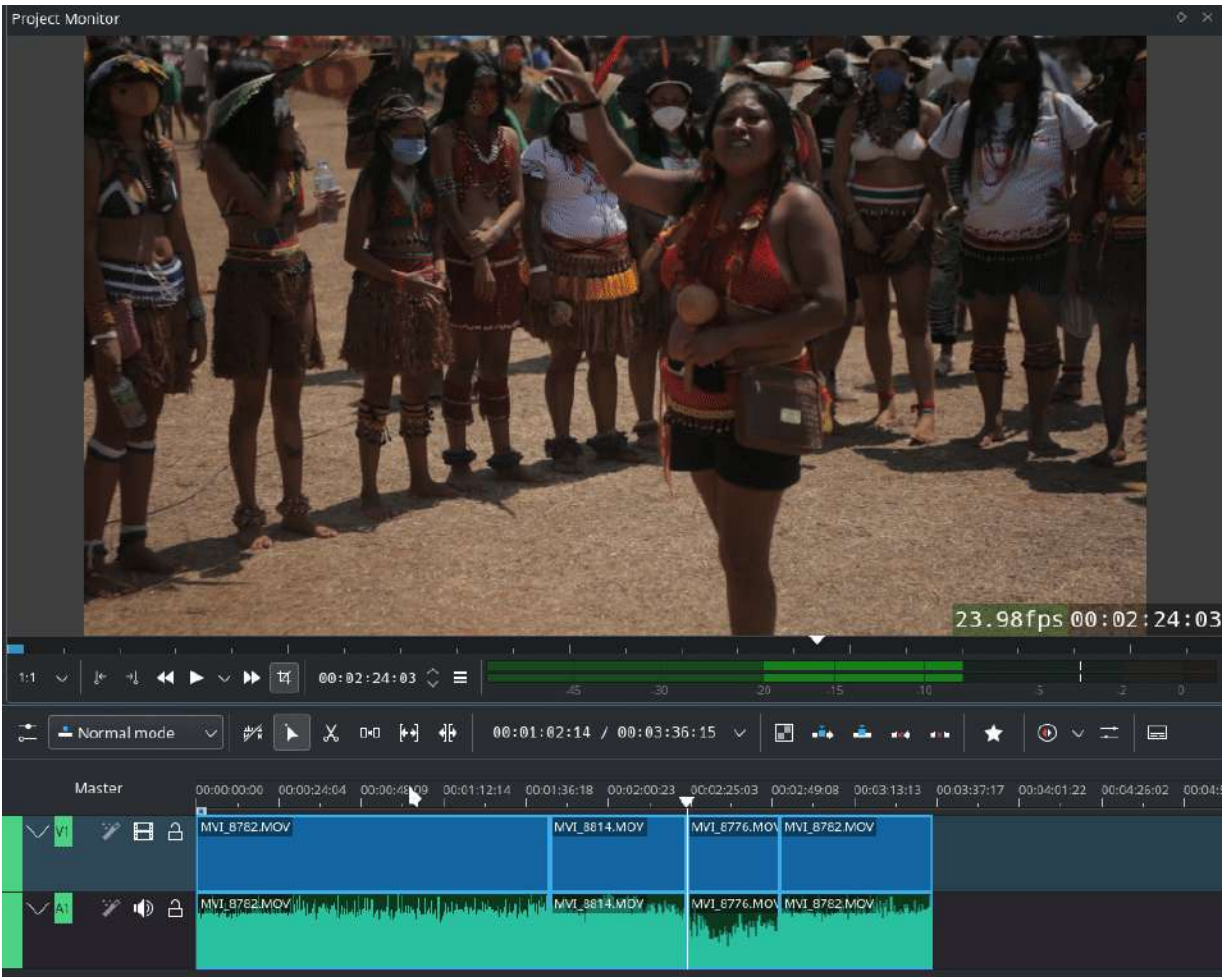
ESC: Return from any tools back to Selection tool.

New in version 21.12.

Slip Tool



Slip keeps the original duration of the clip. Like working with old film material: beneath the given “window” of the clip length it slips the film strip back and forth.



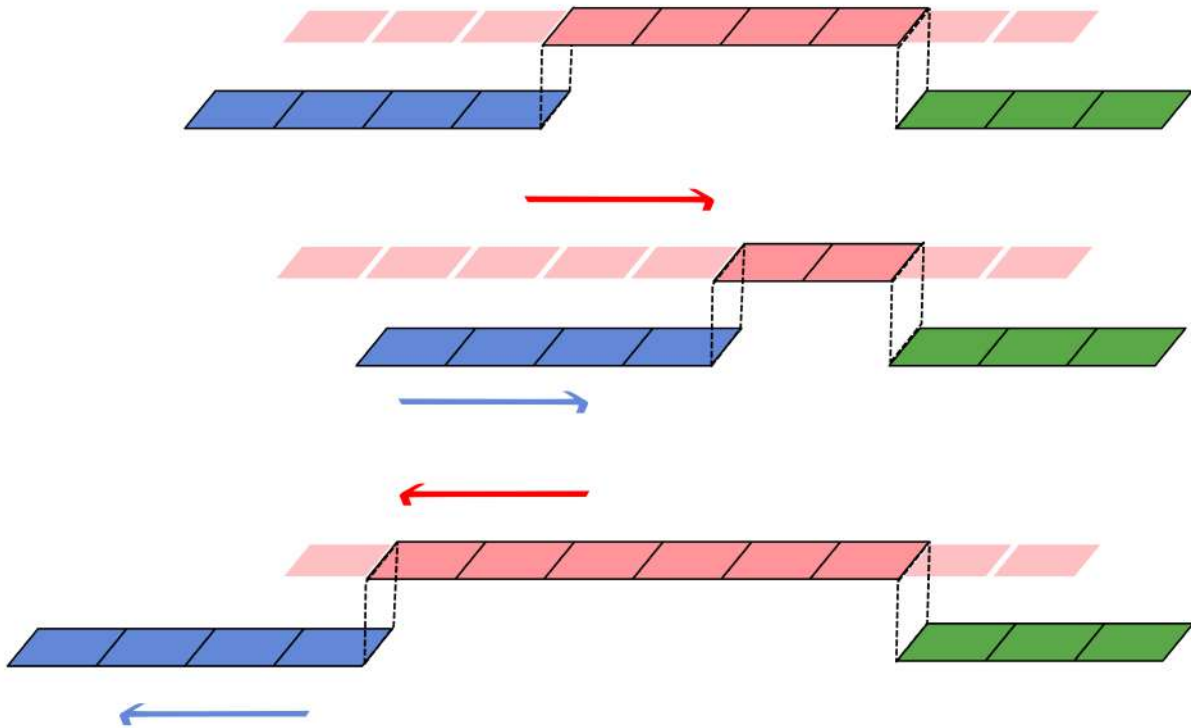
Use Slip ($\left[\leftarrow \rightarrow \right]$) to trim, in a single operation, the IN and OUT points of a clip forward or backward by the same number of frames, while keeping the original duration and without affecting adjacent clips.

You can slip multiple clips at once now: select all clips you want to slip with the selection tool using `Shift` then enable the slip tool and go ahead...


Slip can be done with the mouse, with the `arrow` keys and with the buttons on the monitor toolbar.

`ESC`: Return from any tools back to Selection tool.

[Ripple Tool](#)



Ripple changes the original duration of the clip. Like working with old film material: You lengthen or shorten the film strip and move the adjacent clips back and forth as you do that.

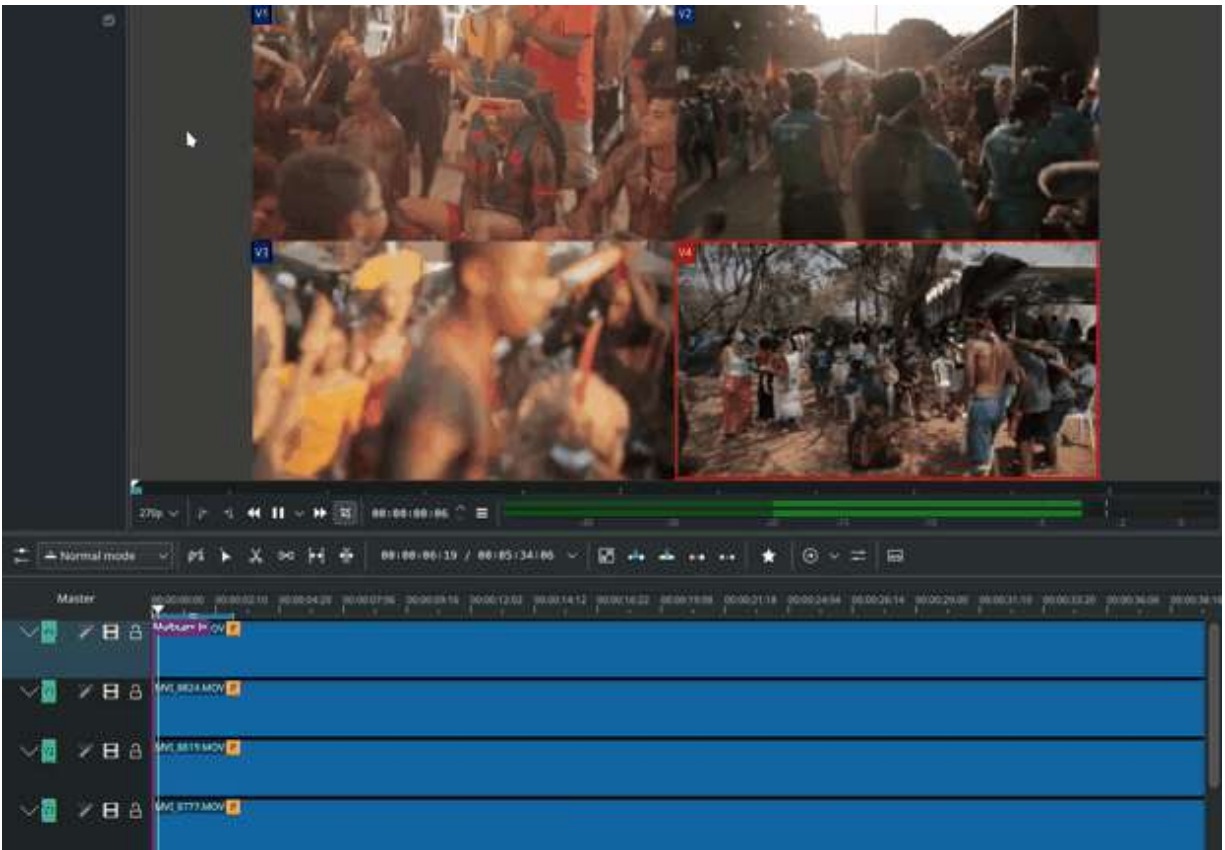
Use Ripple () to trim a clip and shift following clips in the track by the number of frames you trim. When you shorten a clip by this action all clips that follow the cut shift back in time, contrariwise, when you extend a clip the clips after the cut shift forward in time. If an empty space is on the track it behaves as a clip and it shifts in time as a standard clip would be.

You can Ripple only a single clip at once.

Ripple can be done with the mouse only.

ESC: Return from any tools back to Selection tool.

[Multicam Tool](#)



Add your clips in different tracks, but at the same position in the timeline and activate the multicam tool by going to menu *Tool -> Multicam tool*. You may trim the clips in the desired track while the timeline is playing by pressing their corresponding numbers (for track V1, press key 1; for track V2 press key 2, etc...) or simply select the desired track in the project monitor by clicking on it with the mouse.

Select multicam tool will switch on the multitrack view in the project monitor and set a marker at the current timeline position. You can then seek/play to the wanted position, click on a track view in the project monitor and it will lift all tracks except for the previously active track. You can then repeat seek and click in another track to continue lifting tracks.

It doesn't stop playing when you perform the operation to avoid to lose the rhythm and to work as you are working during a live broadcasting. If you need to correct the editing you can manually stop and trim the cut as you do when you video editing as normal.

The audio tracks is not involved in the process as you generally use only one audio track (the one which come from the main mixer to which the other ones are synced to)

ESC: Return from any tools back to Selection tool.

Status Bar



24. [Split Audio and Video Automatically](#)
25. [Automatic Transitions](#)
26. [Show Video Thumbnails](#)
27. [Show Audio Thumbnails](#)
28. [Show marker comments](#)
29. [Snap](#)
30. [Fit Zoom to Project](#)
31. Zoom Out
32. [Zoom Project](#)
33. Zoom In

Split Audio and Video Automatically

When this is on and you drag a clip to the timeline, the audio in the clip will end up on an audio track and the video on a video track. You can achieve the same result if you select the clip, [Right-Click Menus](#), *Split Audio*. When this is off and you drag a clip onto the timeline, both the audio and video tracks are combined into one video track.

Automatic Transitions

When active any transitions added to the timeline will have the automatic transition option checked by default. See [Transitions](#)

Show Video Thumbnails

When on, the video clips in the timeline will contain thumbnails as well as a filename. Otherwise, they just have the clip filename.

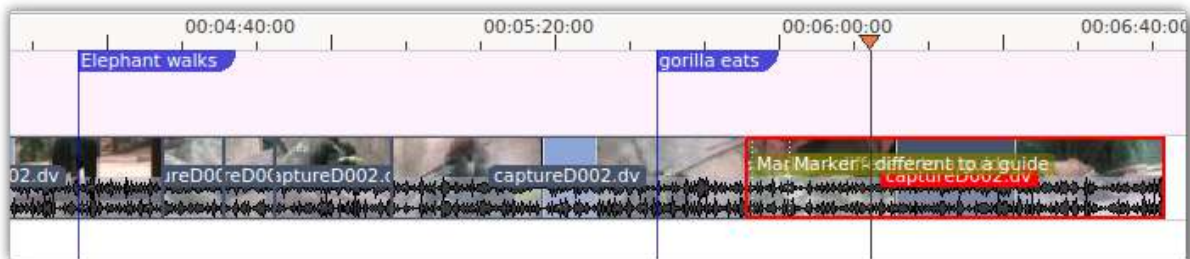
When the timeline is zoomed in to the maximum, the video track will show a thumbnail for every frame in the clip. When the timeline is not on maximum zoom, the video track will show a thumbnail for the first and last frame in the clip.

Show Audio Thumbnails

When on, the audio clip will have a wave representation of the audio data as well as a filename. Otherwise, they just have the clip filename.

Show marker comments

This toggles on and off the display of the comments saved within [Clips](#) (the text with the gold background in the example below) and within [Guides](#) (the text with the purple background).



Snap

When this feature is on, dragging the beginning of one clip near to the end of another will result at the end of the first clip snapping into place to be perfectly aligned with the beginning of the second clip. As you move the two ends near to each other, as soon as they get within a certain small distance, they snap together so there is no space and no overlap. Note that this occurs even if the clips are on different tracks in the timeline.

Clips will also snap to the cursor position, markers and [Guides](#).

[Fit Zoom to Project](#)

This will zoom the project out so that it all fits in the timeline window. This is the same function that is triggered by [Timeline Menu](#) Menu item, *Fit Zoom to Project*.

[Zoom project](#)

The magnifying glasses zoom in or out on the timeline. The slider adjusts the zoom by large increments. These same settings are controlled by the *Timeline* menu items, *Zoom In* and *Zoom Out*.

[Cutting Footage from multiple aligned tracks - Ripple Delete](#)

This is available on the *Timeline* menu under *All clips* ▸ *Ripple Delete* [\[1\]](#) .

Seems missing in Kdenlive 17.04 & 18.04

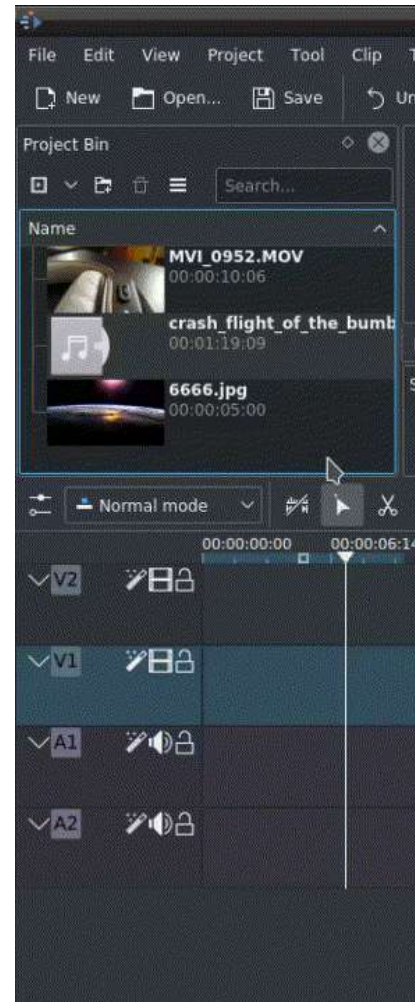
Mark In and Out points in the Project Monitor, then choose *Timeline* ▸ *All clips* ▸ *Ripple Delete* (or `Ctrl + X`). Kdenlive deletes all footage between the In and Out points in unlocked tracks, slides everything else back to fill the gap, and puts the playhead on the In point.

[3 point editing](#)

New in version 19.08.0.

3 important points to understand the 3 point editing concept (with keyboard shortcuts):

[Source](#)



On the left of the track head the green vertical lines (V1 or A2). The green line is connected to the source clip in the project bin. Only when a clip is selected in the project bin, the green line shows up depending on the type of the clip (A/V clip, picture/title/color clip, audio clip).

Target



In the track head the target V1 or A1 is active when it's yellow. An active target track reacts to edit operations like insert a clip even if the source is not active.

The concept is like thinking of connectors

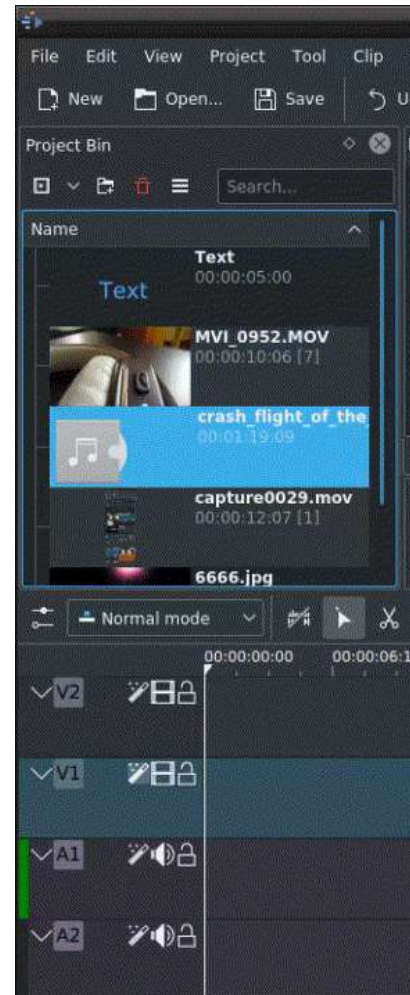
Connect the source (the clip in the project bin) to a target (a track in the timeline). Only when both connectors on the **same** track are switched on the clip “flow” from the project bin to the timeline.

Important

Active target tracks without connected source react on edit operations.

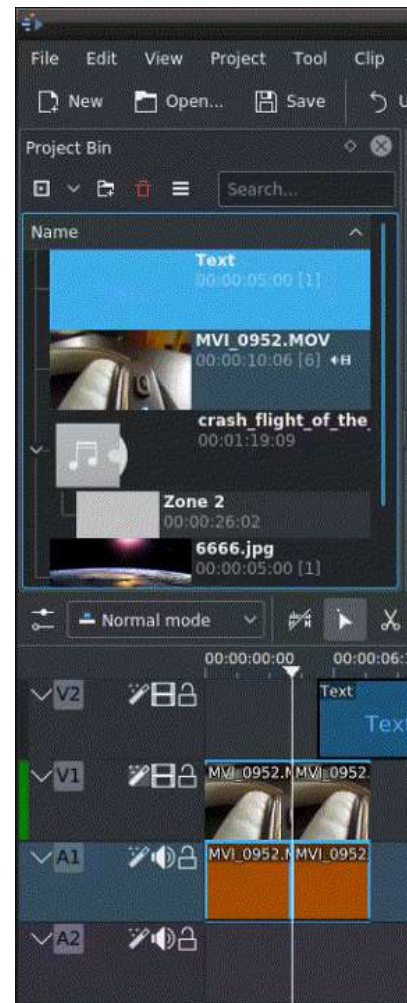
Examples of advanced edit

Here is a brief introduction to the 3 point editing system.



1. Select a clip in the project bin with an up/down arrow
2. Navigate the clip by the JKL keys or by the left/right arrows and set the IN and the OUT point by the I and O keys.
3. Hit T to change to the timeline
4. Select a video or audio track in the timeline (up/down arrow key) and set it as source with Shift + T.
5. Activate the track as a target with shortcut A (this connects the track to the source)
6. Hit V (insert) or B (overwrite) to add the clip at the play-head position or to fill the selected area in the timeline if it is active. If you need to

activate it use the G key.



In the following example, we want only to insert the audio part of a clip in A2 and we want to create a gap in all the other video and audio tracks:

1. Activate all the target tracks which contain clips (yellow buttons).
2. Activate just the audio source on A2
3. Press v (insert).

[1] available on bleeding edge version > 0.9.10 (Jan2015)

Grouping

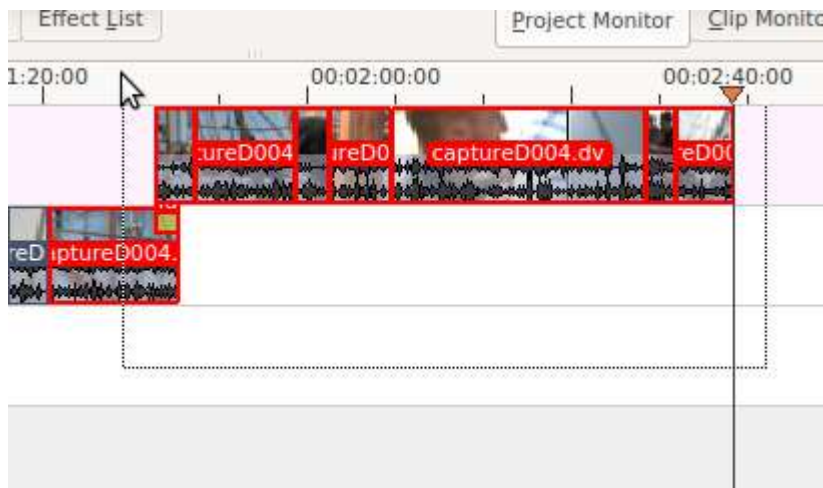
Contents

- [Grouping](#)
 - [How to Group Clips](#)
 - [Cutting Grouped Clips](#)
 - [Removing Clip Grouping](#)
 - [FAQ](#)

Grouping clips allows you to lock clips together so that you can move them as a group and still retain their positions relative to each element in the group.

How to Group Clips

You can select multiple clips in preparation for grouping them by holding shift and clicking the mouse and dragging in the timeline.

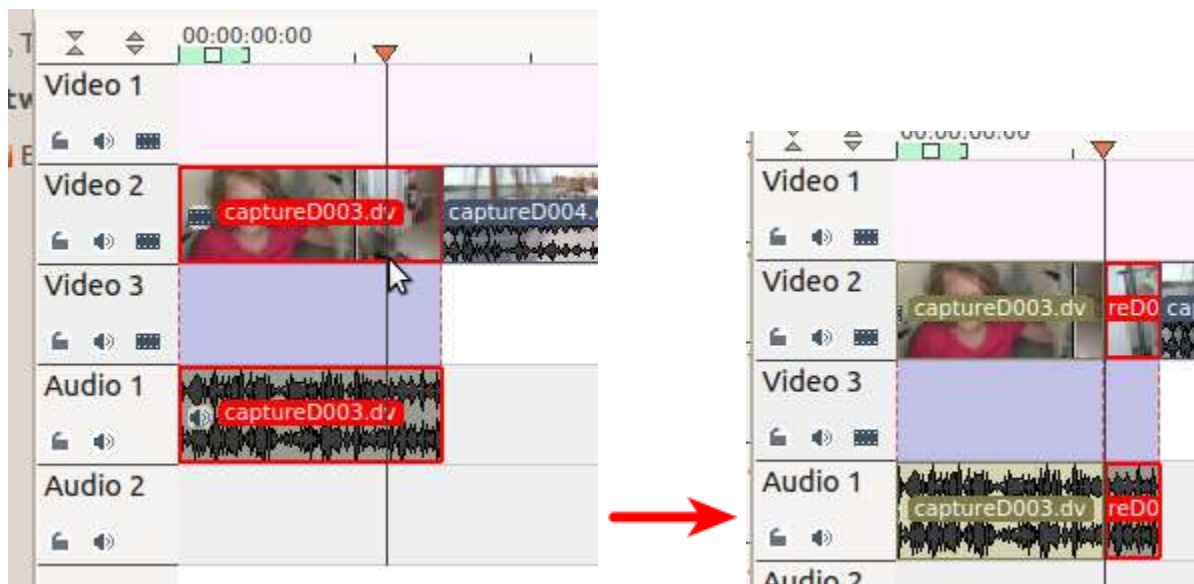


To group the selected clips select *Timeline* ▶ *Group Clips* or right-click the selected clips and choose *Group Clips*.

Cutting Grouped Clips

Grouping is also useful if you have separate audio and video tracks and need to cut and splice both tracks at exactly the same point (e.g. for audio sync reasons).

If you cut the video clip using the [Editing](#) when there is an audio clip grouped to it, then **Kdenlive** cuts the audio clip at the same point automatically.



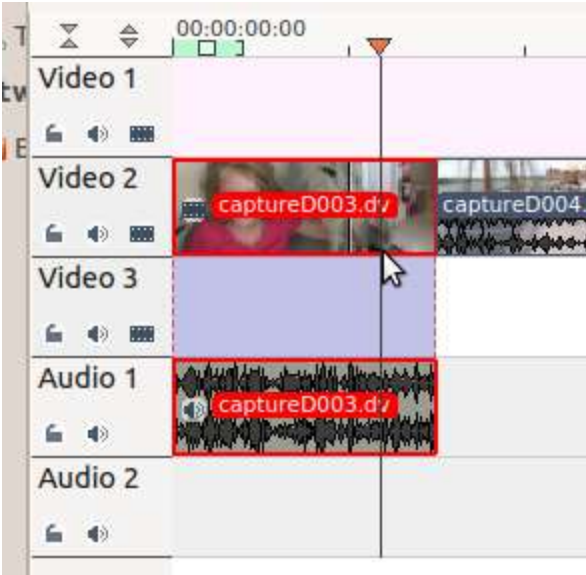
Removing Clip Grouping

To remove the grouping on clips, select the group of clips and choose *Timeline* ▶ *Ungroup Clips*.

FAQ

Q: How to delete sound track only?

A: Right-click on the clip and choose *Split Audio*. The audio will move to an audio track but be grouped with the video track.



Right-click again and choose *Ungroup Clips*.

Then you can delete just the audio track.

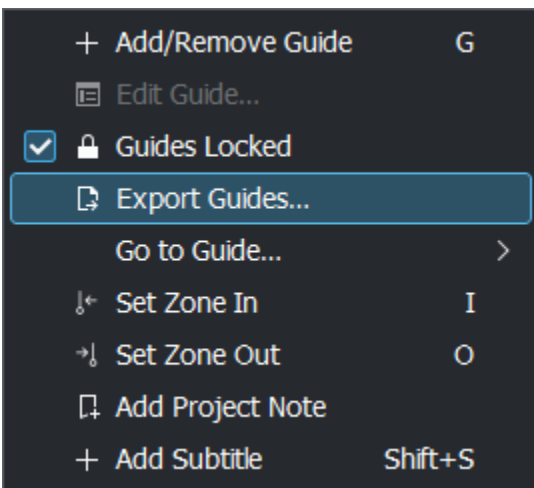
Alternatively you can keep the audio in the clip and use the *Audio Correction* ► *Mute* effect to just mute the soundtrack on the clip.

Yet another method is to select *Video only* from the [Clip Menu](#).

Guides

Contents

- [Guides](#)
 - [Export guides as chapter](#)
 - [Move Guides with Spacer Tool](#)



Guides are labels on the timeline that can be added by right-clicking at a spot on the timeline ruler and choosing *Add/Remove Guide* or press **G**. You can put a comment in the guide and make the comment display by choosing [Editing](#) in the *Timeline* menu or by clicking on the [Editing](#) button.

New in version 21.08.

Guides Locked: See [Move Guides with Spacer Tool](#)

New in version 22.04.

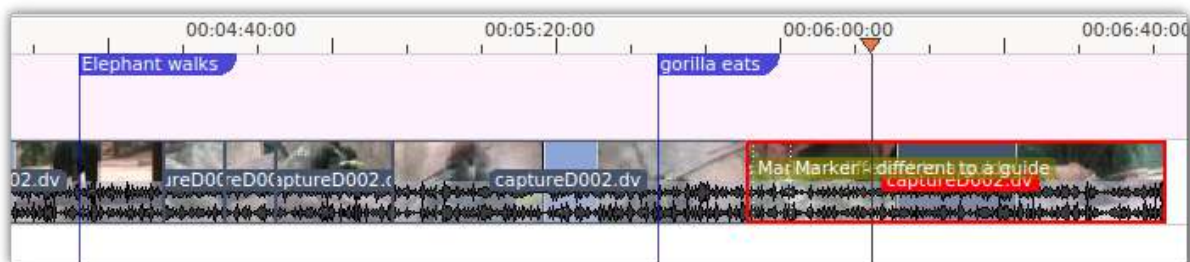
Set Zone In/Out. See [Timeline preview rendering](#)

Add Project Notes: See [Annotating](#)

New in version 20.12.

Add Subtitle: See [Subtitle](#)

Guides in the picture below are the purple flags. Not to be confused with [Clips](#) (gold in the picture below). Guides are static on the timeline and are stationary when clips are moved around. Markers are inside the clips and move with the clips.



Guides can be used to define regions for rendering. See [Rendering Using Guides and Rendering Scripts](#).

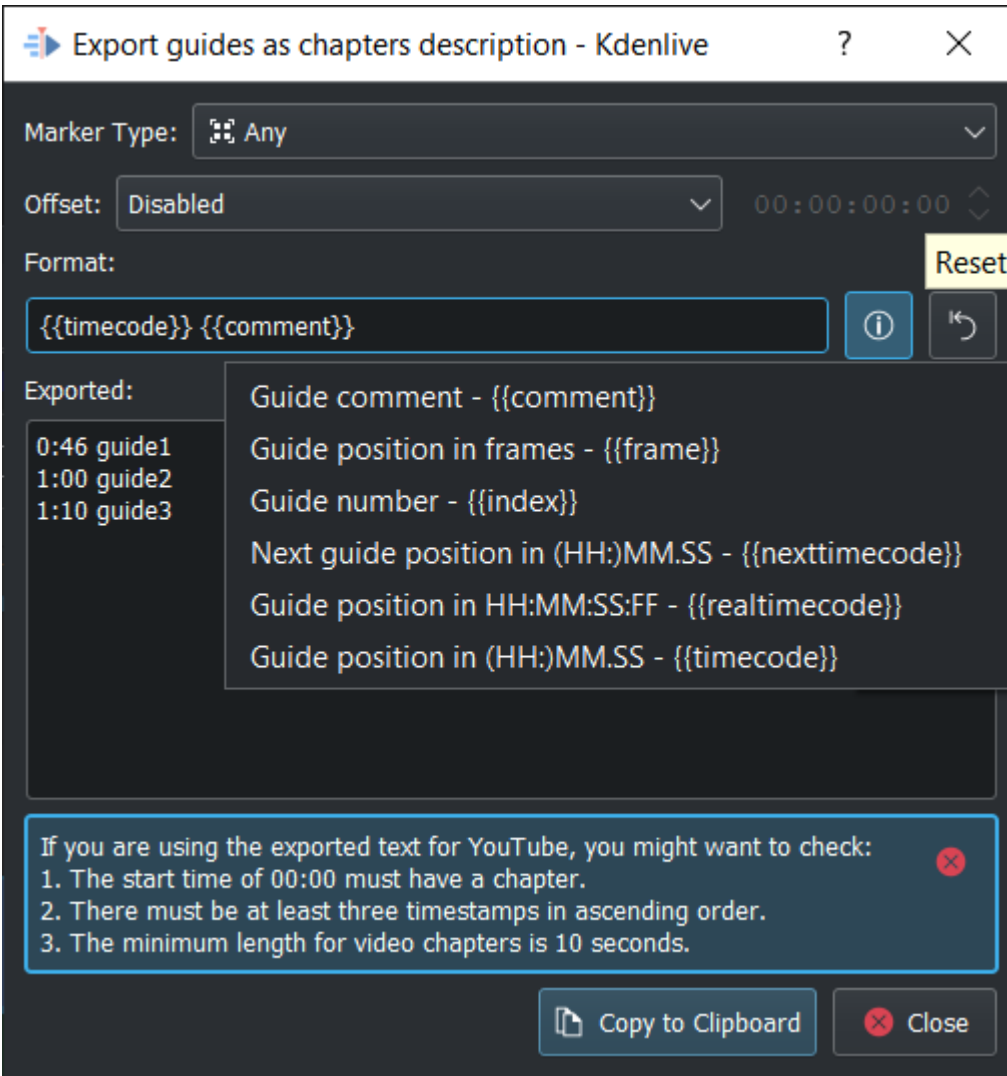
Guides can also be used as chapters for DVD videos. See [Rendering Using Guides and Rendering Scripts](#).

New in version 22.08.

[Export guides as chapter](#)

Guides can mark chapters or different sections of a video while editing. Uploading edited videos to platforms like YouTube, the guides can be exported as chapter marks that are supported by YouTube. This can be done by *Copy to Clipboard* and paste then into YouTube.

Right click in the timeline ruler and choose *Export Guides* or *Timeline -> Guides -> Export Guides*. Then the window *Export guides as chapters description* appears.



Marker Type: Choose one of the guide types to mark chapters and use other types to do other things.

Offset: This adds the ability to set a general offset (hh:mm:ss:ff) to each guide.

Format: This defines how the chapter marks are exported. When using the 2 default format strings (as shown on the picture), Kdenlive check if the chapter marker matches YouTube's guideline, and display a notice if it doesn't match.

i: Shows all possible export strings. Select the string you want and Kdenlive adds it to the *Format* for export. Add spaces between the strings as needed.

{{timecode}} adds guide position in HH:MM.SS (default)

{{comment}} adds the guide text (default)

{{frame}} adds the frame number of each guide

{{index}} adds guide number

{{nexttimecode}} adds next guide position in HH:MM.SS

{{realtimecode}} adds guide position in HH:MM:SS:FF

Reset: Resets the settings to the default: {{timecode}} {{comment}}

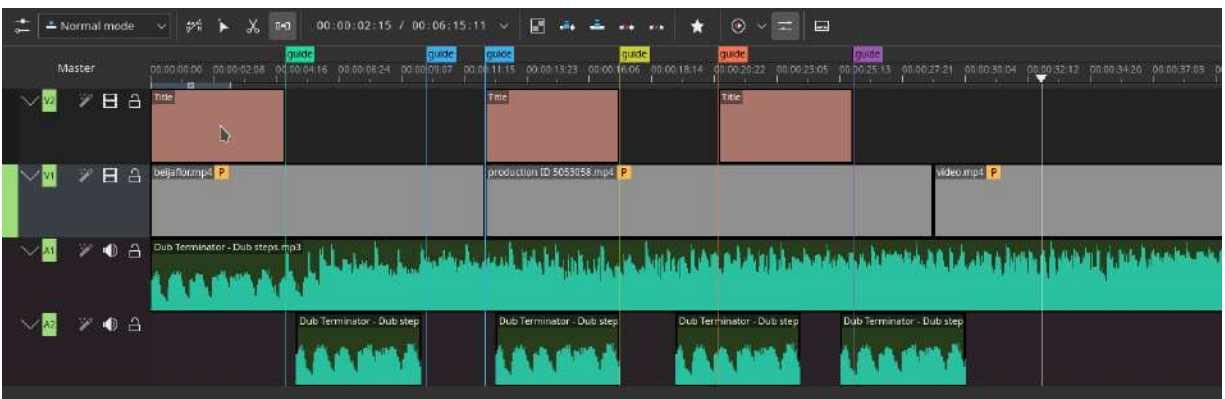
Exported: Shows what get exported. To change the guide text you have to edit the guide in the timeline.

Copy to Clipboard: Copy the data viewed in *Exported* into the clipboard to use it in other applications (Youtube).

[Move Guides with Spacer Tool](#)

New in version 21.08.0.

Easily moves Guides along with clips using the Spacer Tool by using the new *Guides Locked* option.



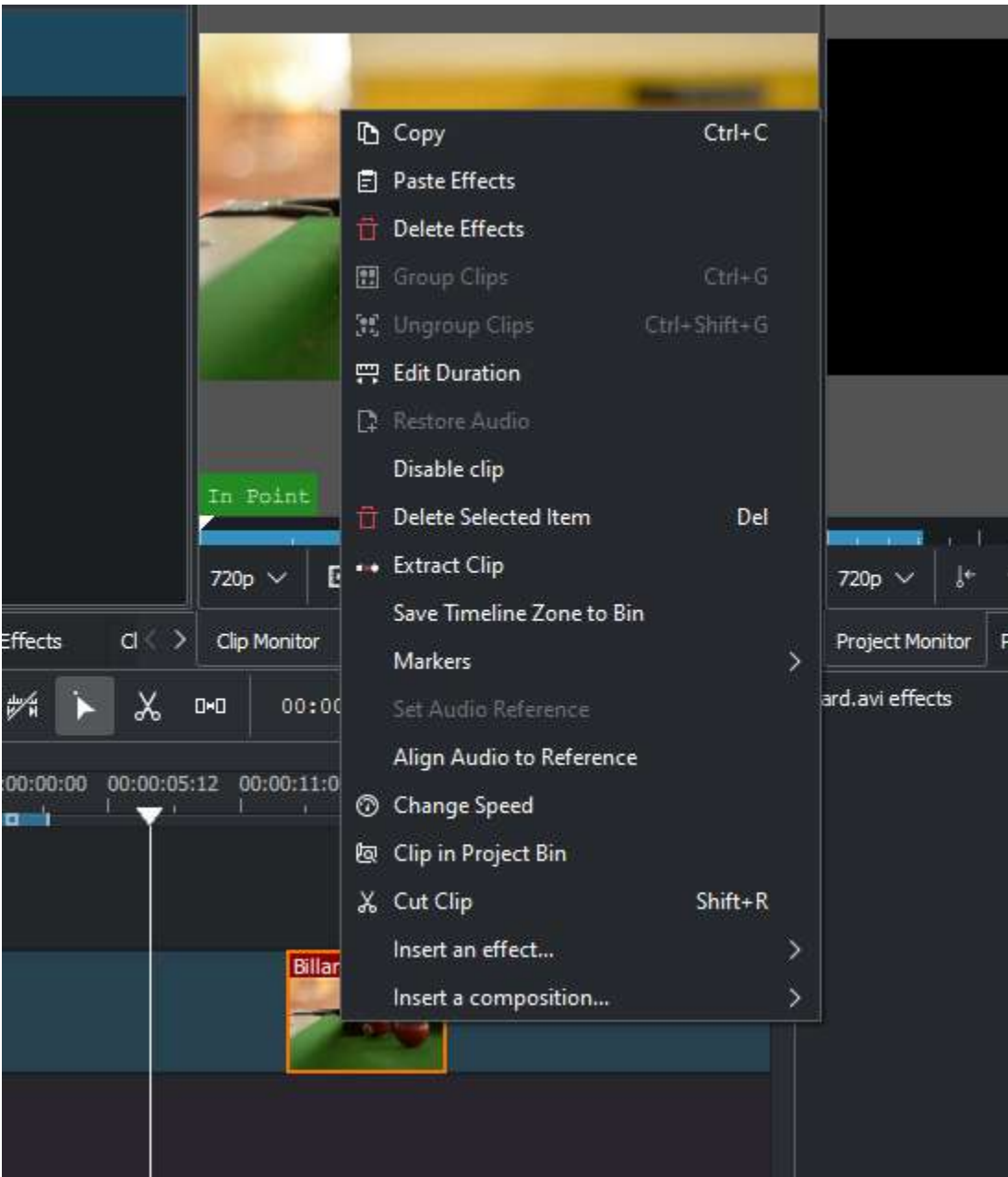
Right-Click Menus

Contents

- [Right-Click Menus](#)
 - [Clip in Timeline](#)
 - [Change speed](#)
 - [Empty Space in Timeline](#)

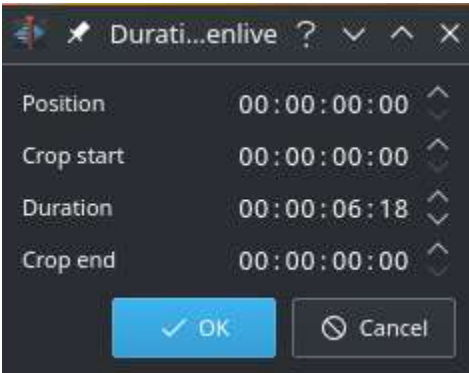
Clip in Timeline

This is the context menu that appears when you right-click on a clip in the timeline. A different menu appears if you click in empty space in the timeline.

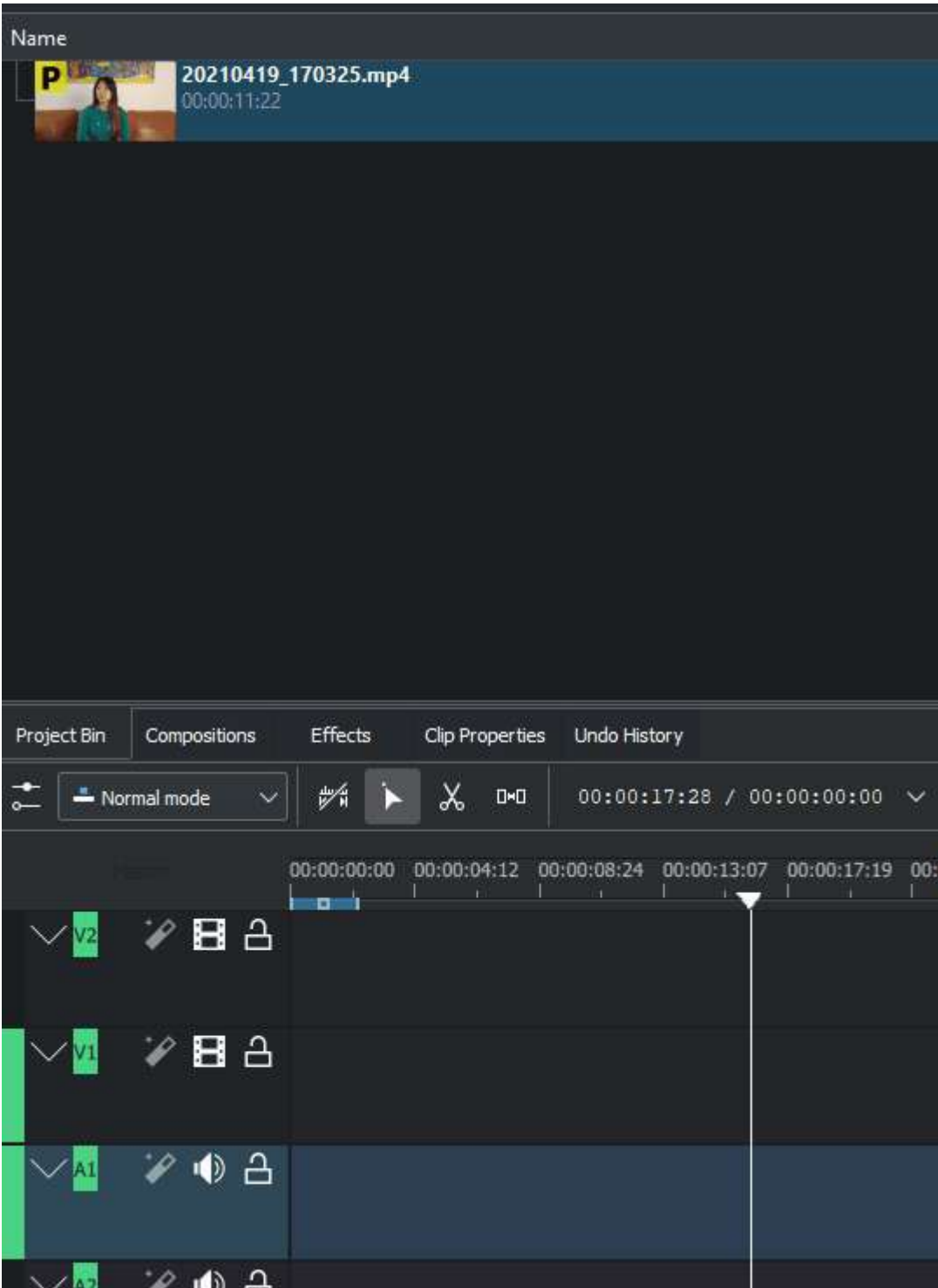


- *Copy* will copy the clip and selected clips to the clipboard.
- *Paste Effects* will paste only the effects of the last copied clip to the selected clip. See [Paste Effects](#).
- *Delete Effects* will remove all effects from the selected clip.
- *Group Clips* - see [Grouping](#)
- *Ungroup Clips* - see [Grouping](#)
- *Edit Duration* - will open the Duration Dialog and will allow you to adjust the position of the clip in the timeline, what time point of the

source clip to start on the timeline, the duration of the clip, and what time point of the source clip to end on the timeline. Note that Kdenlive will automatically adjust co-related values.

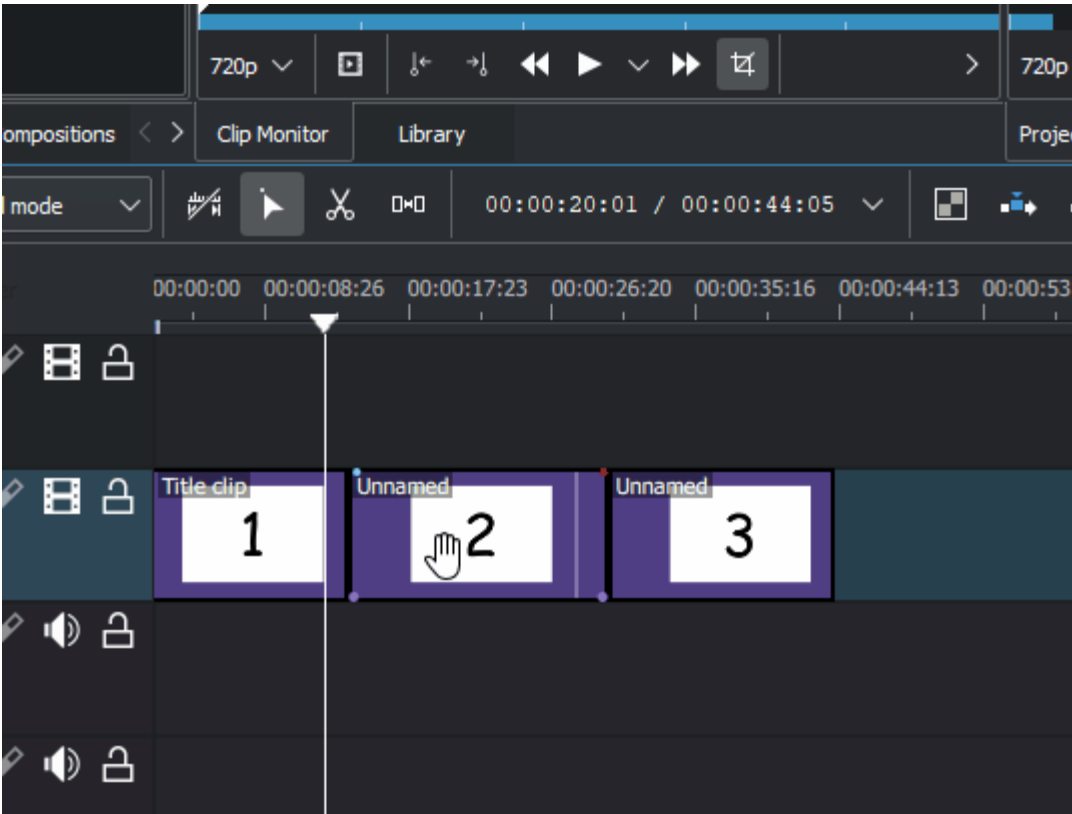


- *Restore audio* will add any audio track that is part of the original clip to the timeline

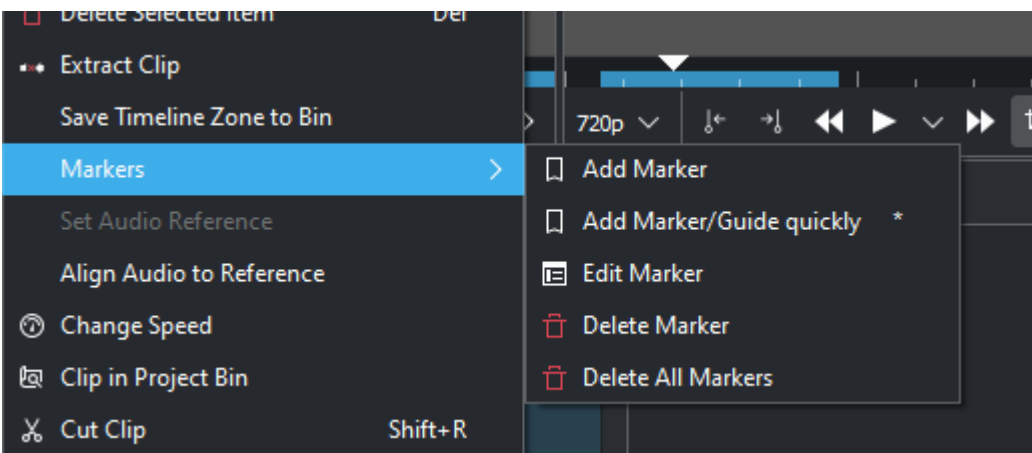


- *Disable clip* will disable the clip so it will not render in the project monitor or in a final video render. To disable the video or audio part of an A/V clip you have to un-group the A/V clip, disable the video or audio part and group the A/V clip again.

- *Extract clip* will remove the clip from the timeline and the space it occupied.



- *Save timeline zone to bin* will take the selected timeline zone and add markers to your clips in the project bin.



- The markers sub-menu allows you to add, edit and remove markers from your clips that are displayed on the timeline. These markers will

move with the clips. See [Clip Menu - Markers](#).

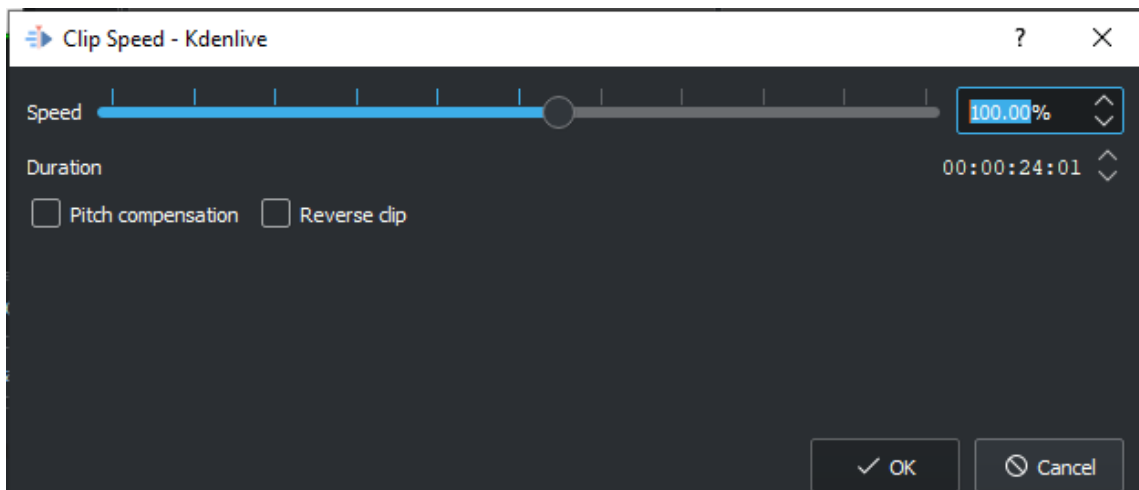
- *Set Audio Reference* and *Align Audio to Reference* are used to align two clips on different tracks in the timeline base on the audio in the tracks. This is useful if two cameras recorded the same scene simultaneously. **Kdenlive** can use the almost identical audio track to align the two clips.

To use this feature:

- Select the clip that you would like to align *to*.
- Right click, select *Set Audio Reference*.
- Select all the clips that you would like to get aligned.
- Right-click and select *Align Audio to Reference*.

[Change speed](#)

- *Change speed* will open the change speed dialog that will allow you to increase or decrease the playback speed of a clip, allow you to play the clip in reverse, and will enable / disable pitch compensation for the audio on a speed-adjusted clip.



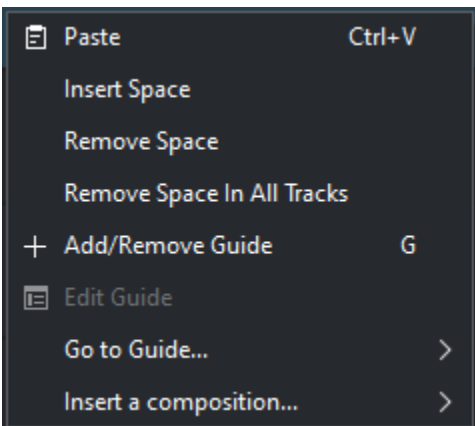
Doing speed change of a clip with the mouse see: [Change speed of a clip](#)

- *Clip in project bin* will highlight the selected clip in the project bin.

- *Cut Clip* Selecting this will cause the selected clip to be cut at the location of the [Timeline](#). See also [Editing](#).
- *Insert Effect* will open a sub-menu to allow you to quickly add the [Transform](#) or the [Lift/Gamma/Gain](#) effects.
- *Insert composition* will open a sub-menu to allow you to quickly add the [Compositing with Transparency](#), or the [Composition - Wipe](#) composition

Empty Space in Timeline

A different menu appears if you click in empty space in the timeline.



- *Paste* will paste a clip from the clipboard into the timeline
- *Insert Space* will open the Insert Space dialog and will allow you to insert blank space in the timeline in a single track.
- *Remove Space* will remove all space between clips on the track.
- *Remove Space in All Tracks* will remove space between clips on all the tracks.
- *Add/Remove Guide* will add a guide to the timeline.
- *Edit Guide* will allow you to edit the guide label.
- *Go to Guide* will pop-up a sub-menu with a list of your guides and will move the timeline position marker to that guide.
- *Insert composition* will open a sub-menu to allow you to quickly add the [Compositing with Transparency](#), or the [Composition - Wipe](#) composition

Effects and compositions

Contents:

- [Audio](#)
 - [Audio Mixer](#)
 - [Multiple audio streams](#)
 - [Audio recording](#)
- [Effects](#)
 - [Effects Tab](#)
 - [The Properties Tab and its Menu](#)
 - [Keyframes in effects](#)
 - [Master effect](#)
 - [Effect Zones](#)
 - [Time Remapping.\(Speed Ramps\).](#)
 - [Masking Effects](#)
 - [Seek To Active Frame](#)
 - [Effects Demos](#)
 - [Effects Categories](#)
 - [FAQ](#)
- [Alphabetical List of Effects and Compositions](#)
- [Speech to text](#)
 - [Install Python](#)
 - [Install a language](#)
 - [Speech recognition](#)
 - [Silence detection](#)
- [Subtitle](#)
- [Titles](#)
 - [Create and Edit Title](#)
 - [Typewriter](#)
 - [Scroll Title Vertically](#)
 - [Scroll Title Horizontally](#)
 - [Save a Title](#)
 - [Load a Title](#)
 - [Title Template](#)

- [Template Titles - User-Defined](#)
- [How to fade titles in and/or out](#)
- [How to fade in more than one title sequentially](#)
- [FAQ](#)
- [Transitions](#)
 - [Mixes](#)
 - [Compositions](#)
 - [Available Transitions](#)

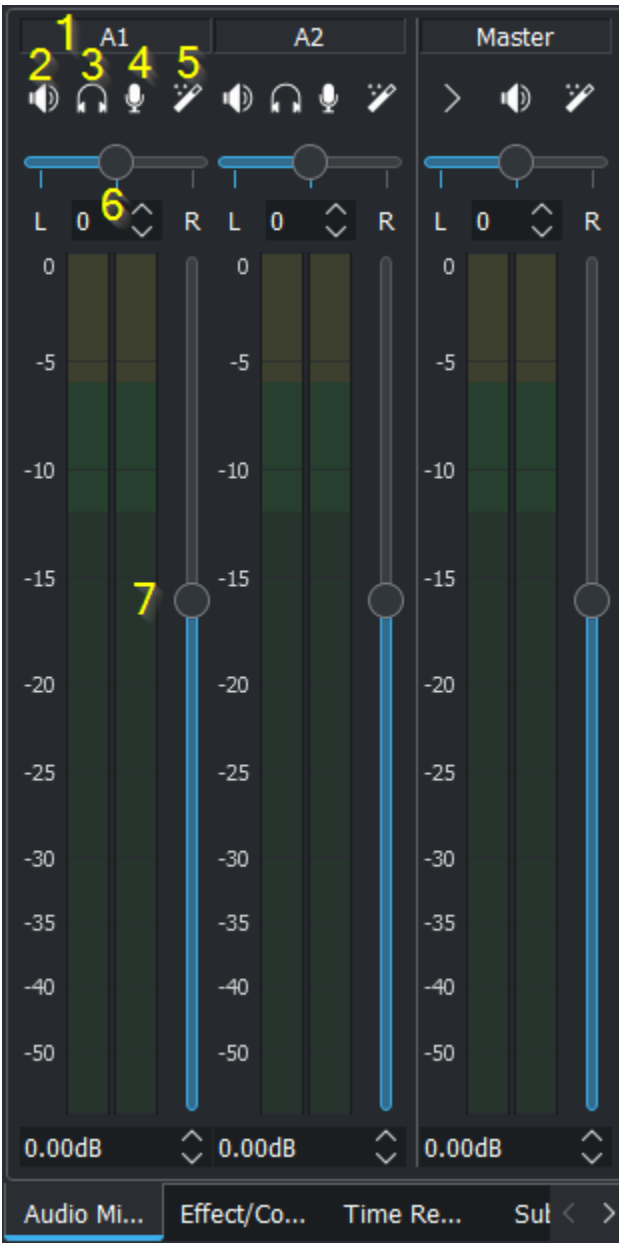
Audio

Kdenlive has some tools for handling audio. Beside the audio spectrum viewer and some audio effects, you have following possibilities:

Audio Mixer

New in version 19.12.0.

Changed in version 22.08.



The audio mixer has following functions for each channel:

1. Channel number (audio track number) or Master channel
2. Mute an audio channel
3. Solo an audio channel
4. [Record audio](#) direct on the track of the related audio channel
5. Opens the effect stack of the related audio channel
6. Balance the audio channel. Either with the slider or with values
7. Adjustment of the volume

Multiple audio streams

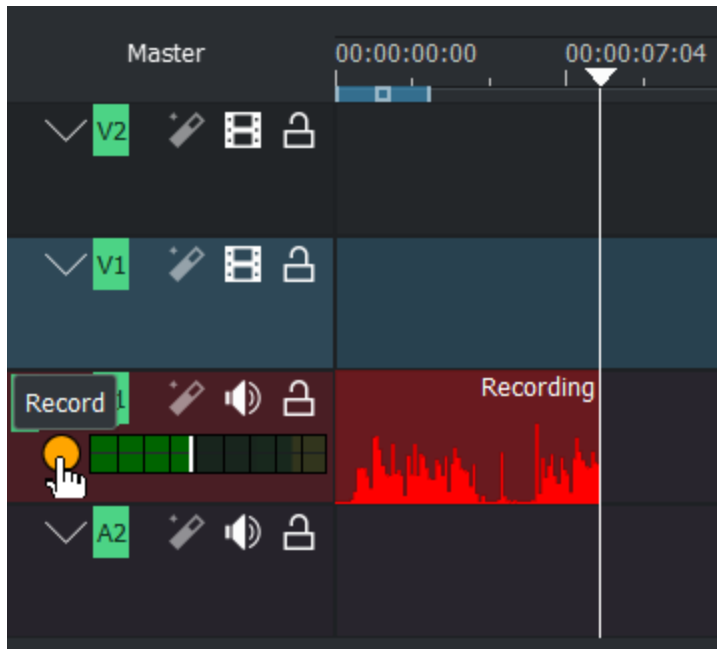
New in version 20.08.0.

Multiple audio streams of a video clip. In clip properties on the tab audio you can adjust and manipulate each audio stream. More details see here [Audio properties](#)

Audio recording

Changed in version 22.08.

There is now a *mic* button in the mixers (number 4 in above picture) instead of the *record* button. Pressing the *mic* button will enter in audio monitoring mode (levels show mic input and volume slider selects the mic level). While recording you see a live waveform appearing on timeline.



Enabling *mic* displays the track head record control and it get colorized.



Start record: press `spacebar` or click the *record* button on the track head. A countdown start in project monitor.

Pause: press `spacebar`

To resume: press `spacebar` again

Stop record: press `esc` or click the *record* button in the track head. The audio clip get added in the timeline and project bin.

Effects

Contents

- [Effects](#)
 - [Effects Tab](#)
 - [The Properties Tab and its Menu](#)
 - [The Properties Tab](#)
 - [Reset Effect](#)
 - [Save Effect](#)
 - [Create Group](#)
 - [Create Region](#)
 - [Keyframes in effects](#)
 - [Working with keyframes in the effect stack](#)
 - [Exchange keyframes across effects](#)
 - [Master effect](#)
 - [Effect Zones](#)
 - [Time Remapping.\(Speed Ramps\)](#)
 - [Masking Effects](#)
 - [Seek To Active Frame](#)
 - [Effects Demos](#)
 - [Effects Categories](#)
 - [FAQ](#)

Effects in **Kdenlive** can be used to modify the audio and video properties of the source material.

You add effects to clips by choosing them from the **Effects Tab** and dragging them onto a clip in the timeline. Or by selecting a clip in the timeline and choosing the *Timeline* ▸ *Add Effect* menu item or *Add Effect* from Clip in Timeline [Right-Click Menus](#) menu . For more detail see [Quick Start](#).

The effects that are in play on a given clip can be viewed and edited via the Properties Tab that displays when the clip in question is selected in the timeline.

You can also apply effects to an entire track. This is achieved by dragging an effect from the **Effect Tab** to the **Track Header**. Or you can click on the track header and choose the *Timeline* ▸ *Add Effect* menu item. Tracks which have effects added in this fashion will have a gold star icon in the track header.

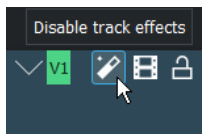


Figure 1a. Track header showing effect icon enabled indicating an effect has been added to this track.

Effects Tab

Make the Effects Tab visible use the *View* ▸ *Effects* menu item.

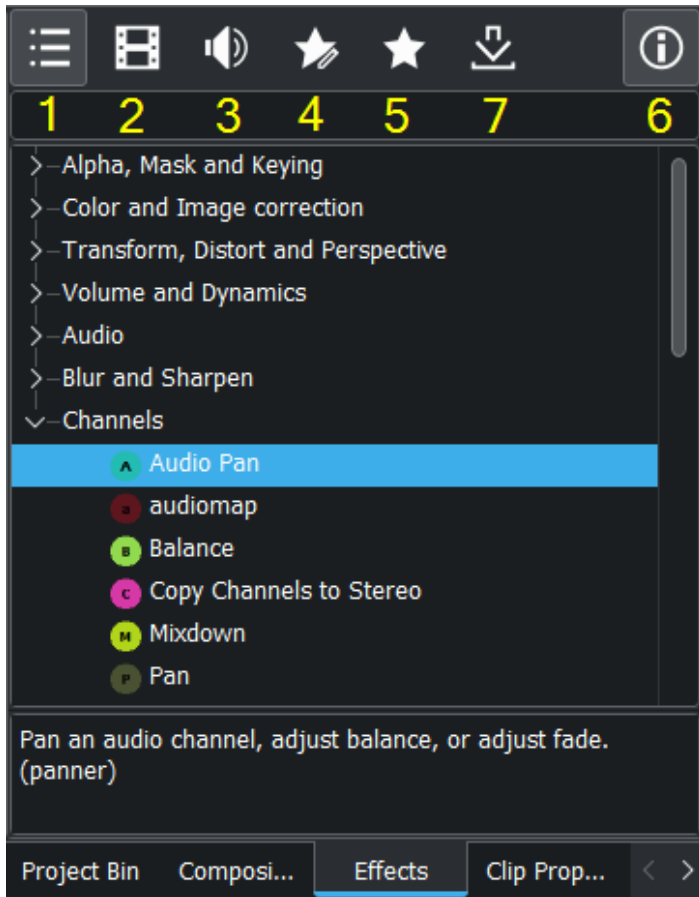


Figure 1b - effects tab. The Information icon (6) has been toggled so that the tab displays a brief description of the selected effect at the bottom

The effects tab has 5 different icons that cause the application to show and hide different categories of effects.

Changed in version 22.08: Main tab now displays all video and audio effects.

By default the effects tab displays the “Main Effects” (Icon 1 selected) which show all video and audio effects.

Icon 2 makes it display all the video effects categories (This option hides the Audio Correction category that is in the “Main Effects” and adds the Misc and Motion categories).

Icon 3 makes it display all the Audio effects categories

Icon 4 is Custom effects

Icon 5 is Favorite Effects. This is the same list that appears in the “Insert an Effect ...” context sensitive menu obtained on a clip in the timeline. An effect gets in this list by choosing *Add to Favorites* from the context sensitive menu on each of the effects.

Icon 6 toggles the information display which - when on - shows a description of what the effect does.

Icon 7 let you download effects users had created and uploaded to the KDE Kdenlive store.

To add an effect to a clip, simply drag it from the **Effects Tab** to the clip on the [Timeline](#).

[The Properties Tab and its Menu](#)

[The Properties Tab](#)

The Properties Tab displays the settings for the effects on the currently selected clip (Figure 3) or the settings for the currently selected transition (Figure 4) depending on whether it is a clip or a transition that is currently selected.

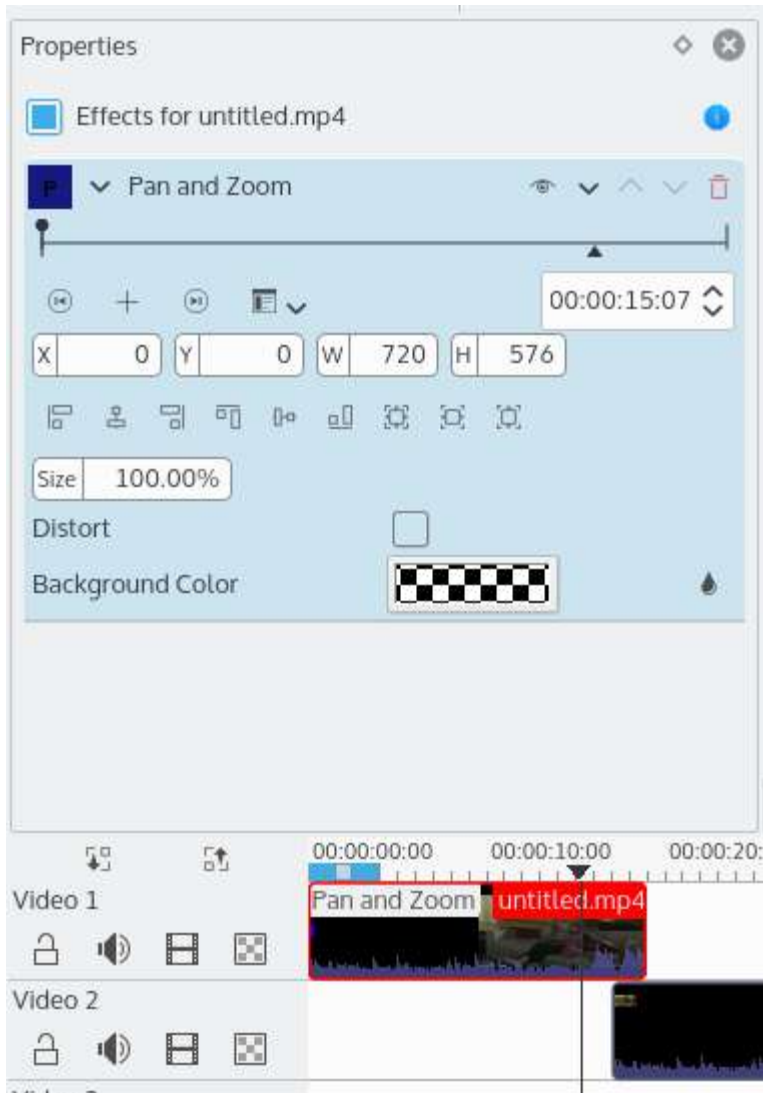
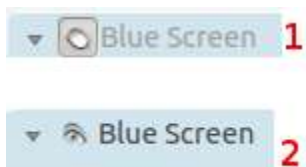


Figure 3 - Properties when a clip with effects is selected



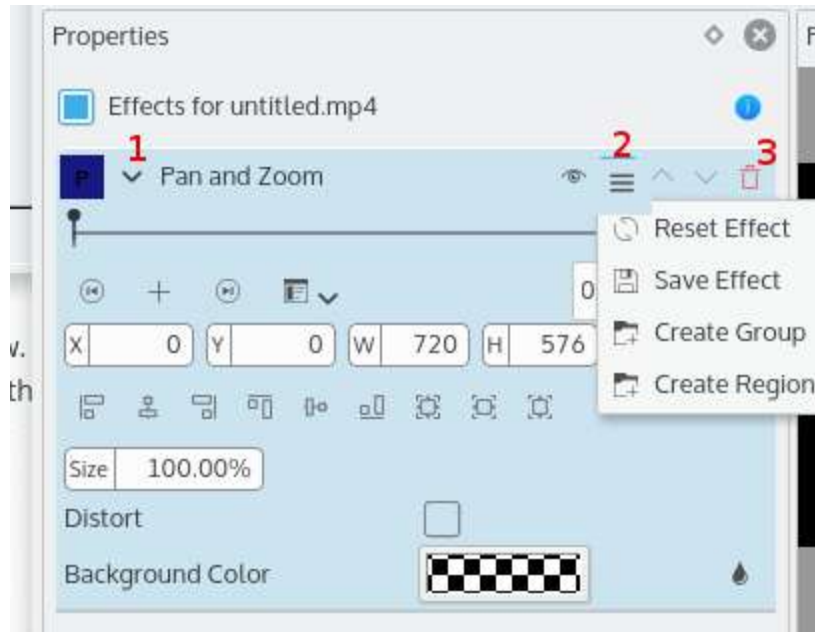
Figure 4 - Properties when a transition is selected

Click the eye icon shown at 2 to temporarily disable the effect and toggle the button to the state shown at 1. Click the empty eye icon shown at 1 to re-enable a disabled effect and toggle the button to the state shown at 2.



Toggle effect on and off

To remove an effect from a clip, click the trash can icon labelled 3 in the image below. The arrow labelled 1 minimizes the effect in the Properties Window. And the icon labelled 2 brings up the Properties Tab menu shown.



[Reset Effect](#)

This reverts all the settings in the effect back to their default values.

[Save Effect](#)

This allows you to save the current effect and all its settings. The saved effect will appear in the Effect List in the Custom category.

[Create Group](#)

This creates an Effect Group. An Effect Group is a place holder for multiple effects. You can then save the group of effects – they will appear in the Effect List, in the Custom Section. You can then later apply the whole group of effects to other parts of the timeline.

To add effects to the group, first add the effect in question to a clip. Then drag that effect and drop it onto the Effect Group in the Properties Tab.

Create Region

New in version 0.9.3.

The “Create Region” feature enables a user to apply an effect to a part of a clip only. It is a really powerful feature but currently the UI is not fully ready to get its full potential.

Basically, you add an effect to a clip – for example “Sepia” – then you go in the effect’s menu and select “Create Region”. This will now open a file dialog.

In that dialog, you need to point to an MLT clip with alpha transparency. This is where Kdenlive is not 100% ready because there are many ways we could create such clips, using for example a threshold filter or rotoscoping. But as a start, let’s say you can open any image with alpha transparency, or a title clip created with Kdenlive. Then, the “sepia” effect will only be applied on the non-transparent areas of this “region” clip.

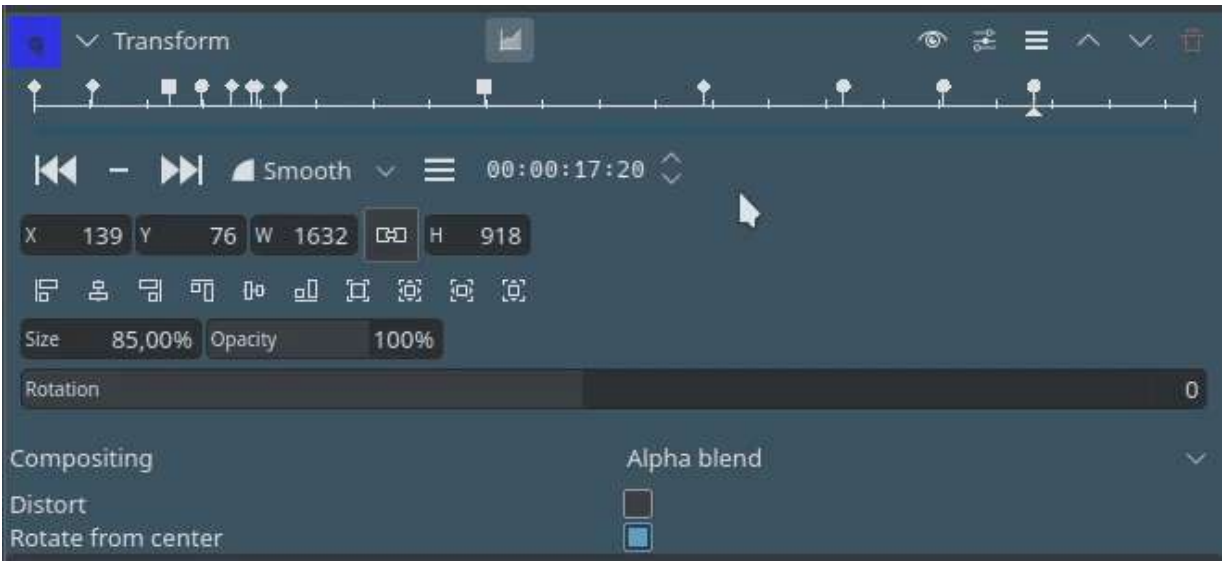
Keyframes in effects

Many effects use the concept of “Keyframes”. Keyframes are user-defined points in your clip where you want an effect to start, stop or change. You can set the parameters for your effects to different values at different keyframes and **Kdenlive** will then gradually change the parameters between the two keyframes so that by the time the video has arrived at the next keyframe it will have adjusted the parameter to match that key frame. It interpolates between keyframes.

See [Quick Start](#) for an example on keyframing the RGB adjustment effect.

New in version 20.08.0.

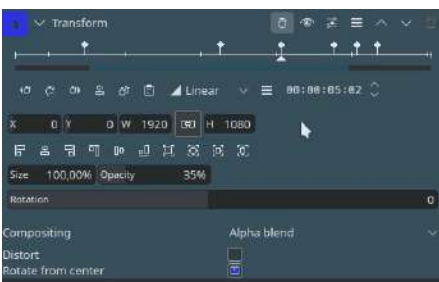
Effect panels get zoom bars. Adjusting keyframes just get easier.



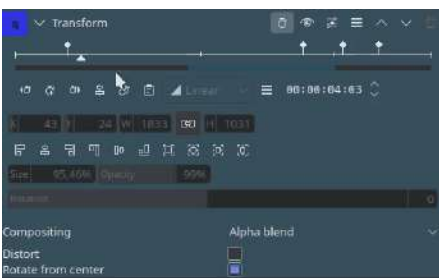
Working with keyframes in the effect stack

New in version 21.04.0.

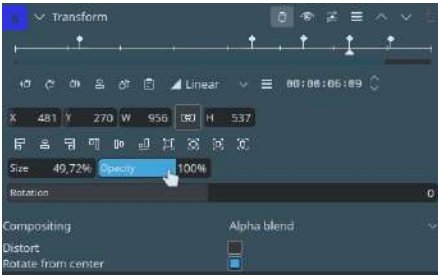
The effect's keyframe panel has new icons, improved keyframe grabbing and new functions like:



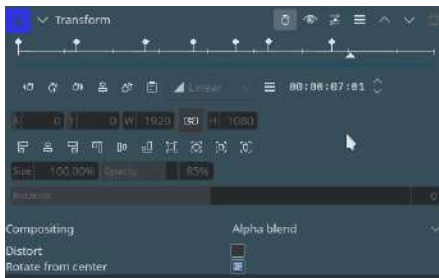
1. Select the keyframe you want to move
2. Move the cursor to the position where you want to move the keyframe to
3. Click on *Move selected keyframe to cursor position*



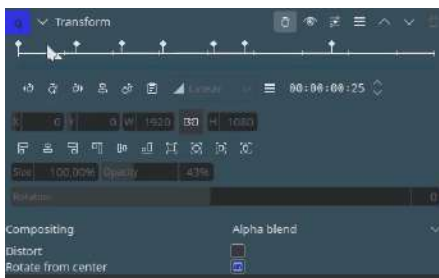
1. Select the keyframe you want to duplicate
2. Move the cursor to the position where you want to insert the new keyframe
3. Click on *Duplicate selected keyframe*



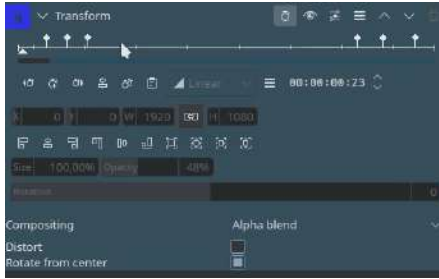
1. Select all keyframes you want to apply the value on
2. Go to one of the selected keyframes and change the value(s) as you want
3. Click on *Apply values to selected keyframes*
4. Select the parameters you want to apply and click on *OK*



Select keyframes with `Ctrl + click`




Rubber select select keyframes with `Shift + click`

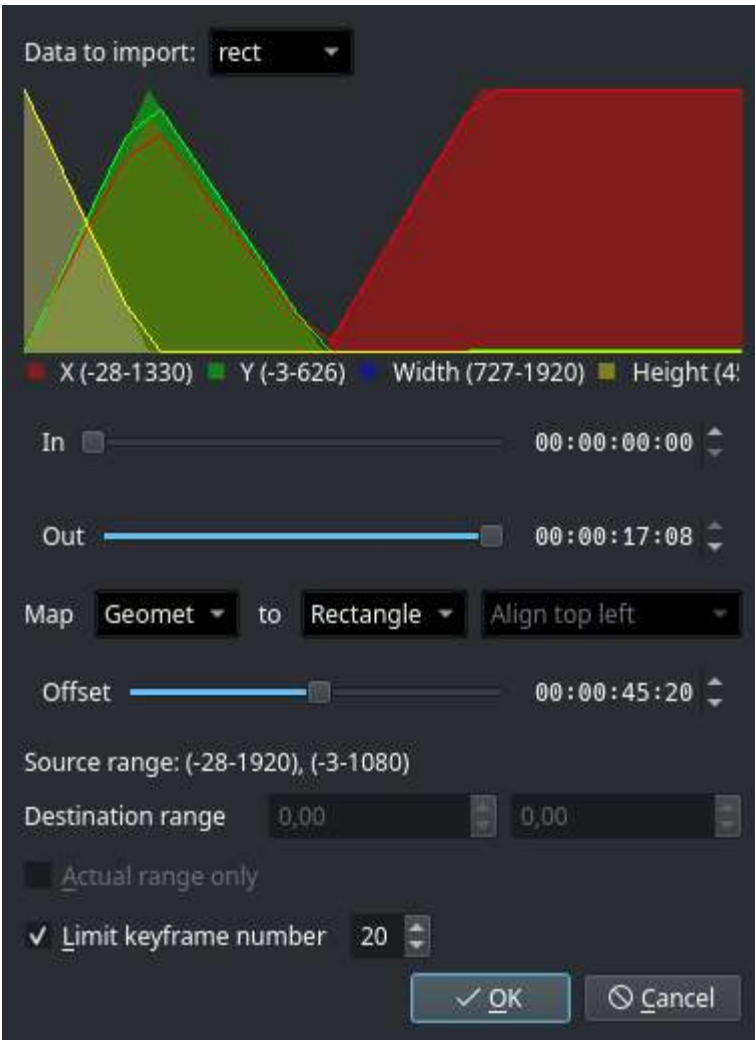



Move multiple keyframes at once

[Exchange keyframes across effects](#)

You can import and export keyframes from/to the clipboard. This feature is not only useful to copy keyframes from one clip to another, it can e.g. also be used to copy the results of the motion tracker to a transform effect.

To export the keyframes the clipboard click on  inside the keyframe widget and choose *Copy keyframes to clipboard*.



To import keyframes from the clipboard click on  inside the keyframe widget and choose *Import keyframes from clipboard*. If you have valid data on your clipboard you should see a dialog similar to the screenshot where you can adjust the mapping of the data.

[Master effect](#)

New in version 19.12..0.

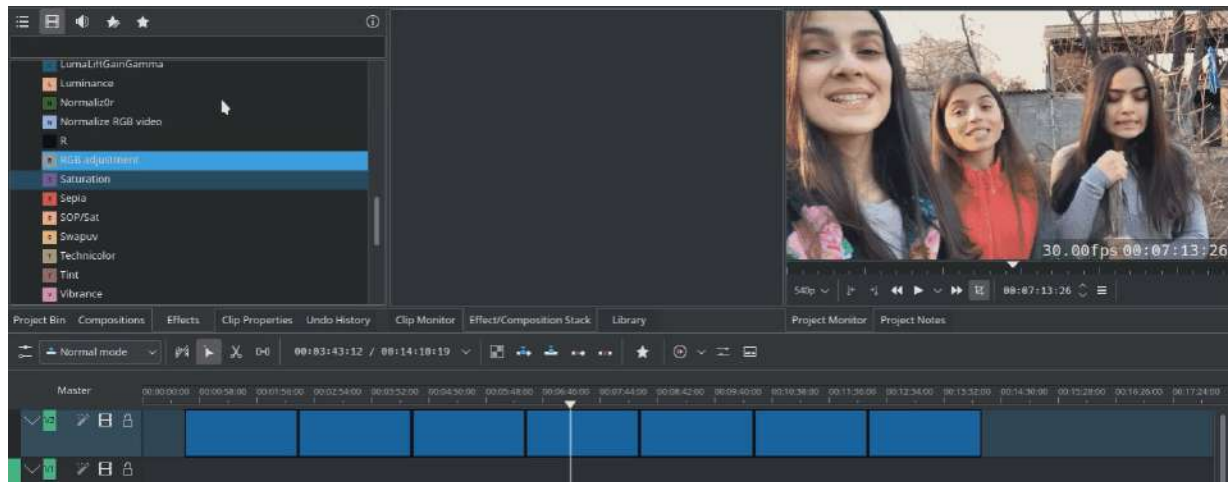
The ability to apply audio or video effects to all tracks. See [Master effects](#)

[Effect Zones](#)

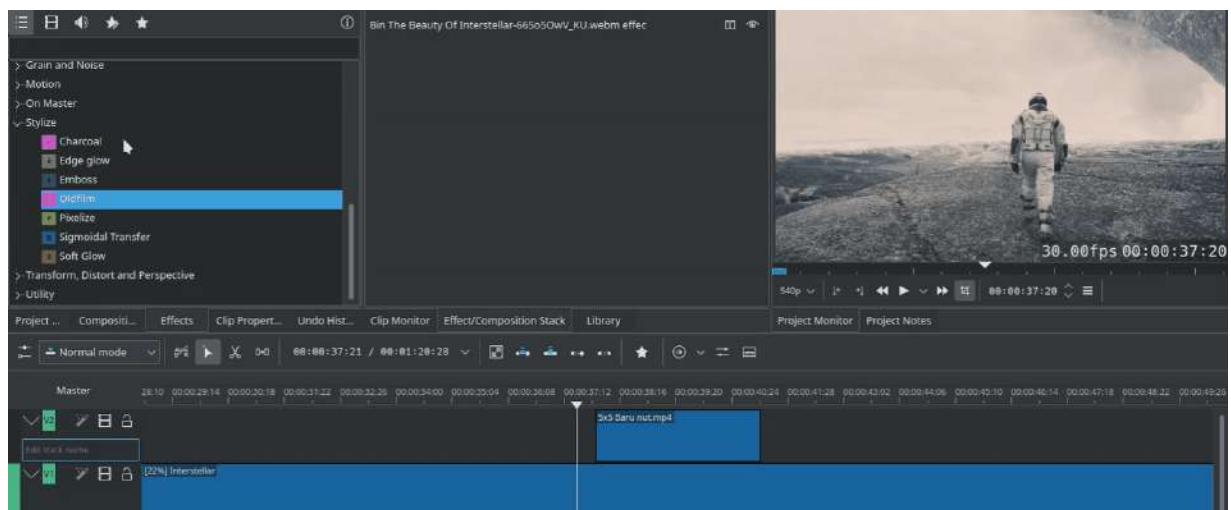
New in version 21.04.0.

The new Effect Zones allow you to apply effects to specific regions of tracks or the timeline. Zones can be set from the effect zone bar in the timeline or from the interface in the effect panel.

Track Effect Zone



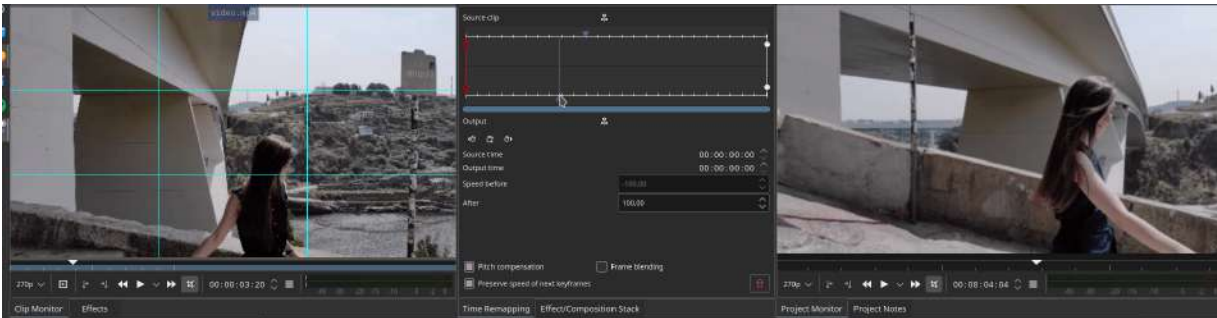
Master Effect Zone



[Time Remapping \(Speed Ramps\)](#)

New in version 21.08.0.

The new Time Remap feature allows to keyframe the speed of a clip.



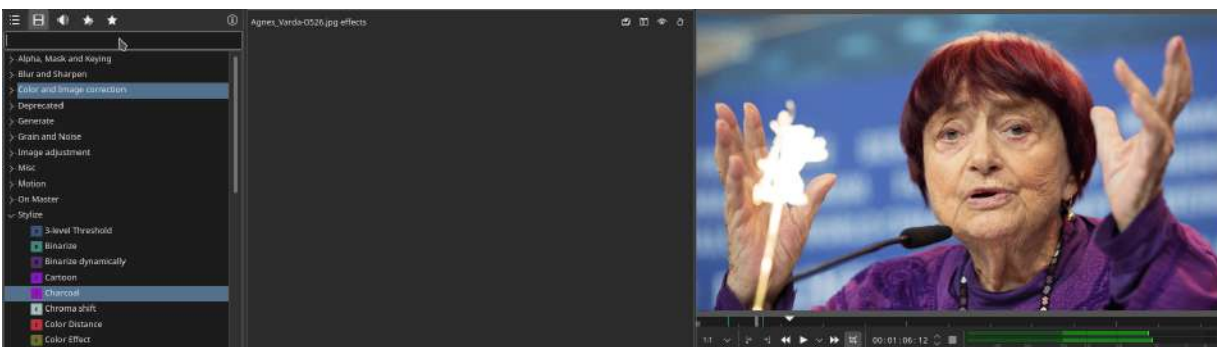
Masking Effects

New in version 21.08.0.

Masking Effects

You may now apply effects to only affect specific regions of a clip by using masks. Do note that this is only the initial implementation so expect an improved workflow in the coming releases. For now the process involves 3 steps:

1. Add one of the 3 available masks: Shape alpha (mask), Rotoscoping (mask) or Alpha shapes (mask).
2. Add an effect (or effects) to be applied to the masked region.
3. Add Mask Apply to activate the mask to the effects in step 2.



You may apply more than one mask per clip by following the same 3 step process.

Seek To Active Frame

Some keyframe controls have a *seek to active frame* button



(Labeled 1 in screenshot A below). When *seek to active frame* is toggled on and you click on one of the keyframes in the keyframe list, Kdenlive will scroll the preview window to that keyframe. In the example of the screenshot, we have selected the keyframe at 9:20 in A and the clip position caret (highlighted in red box) shows the location of this keyframe. Clicking the keyframe at 10:00 in B shows how the clip position has moved.



Effects Demos

The following three YouTube videos display the results of a number of the video effects available in **Kdenlive** (Spanish captioning).

<https://youtu.be/C6oeu2Yc64I>

https://youtu.be/jrC4F_G64jA

<https://youtu.be/XMoSgHHbA4k>

Another YouTube video (English Captions).

<https://youtu.be/capV7lUzbOw>

See also this YouTube play list from [Franz M.P.](http://www.youtube.com/playlist?list=PLc1VErdvjnSFE6w6sryFWIu4lfKavhmvz) [http://www.youtube.com/playlist?list=PLc1VErdvjnSFE6w6sryFWIu4lfKavhmvz]

Effects Categories

See also [Alphabetical List of Effects and Compositions](#) for an alphabetical list of effects and transitions.

The effects are divided into the following categories:

- [Alpha manipulation](#)
- [Analysis and Data](#)
- [Artistic Effects](#)
- [Audio channels](#)
- [Audio Correction](#)
- [Audio Effects](#)
- [Blur and Hide](#)
- [Color](#)
- [Color Correction](#)
- [Crop and Transform](#)
- [Custom Effects](#)
- [Distort](#)
- [Enhancement](#)
- [Fade](#)
- [Misc Effects](#)
- [Motion](#)

The available effects are defined by `.xml` files found in `.local/share/kdenlive/effects` (e.g. `/usr/share/kdenlive/effects`).

These `.xml` files contain the default values for the effects parameters. So if you don't like the default values for the effects in Kdenlive, you can modify the defaults by editing these `.xml` files.

FAQ

Q: How to duplicate an effect to use similar settings somewhere else?

A: Select your effect in the timeline. In the Properties Tab choose *Save* (from the [Effects](#)). You will now find this effect available in the **Effect List Custom** section.

A: Other solution: select a strip containing the effect, *Copy*, then, where you want to apply it again, right-click and select *Paste effect* instead of *Paste*.

Q: How to apply an effect on several clips (all) at the same time?

A: You can select multiple clips with `Shift + drag` (left mouse button) around them. Then right-click and group clips (or `Ctrl + G`).

[Alpha manipulation](#)

Contents

- [Alpha manipulation](#)
 - [General Information about Alpha Manipulation](#)
 - [Compositing Reference Material](#)

Effects in this category

- [Alpha gradient](#)
- [Alpha operations](#)
- [Alpha Shapes](#)
- [Chroma Key](#)
- [Color selection](#)
- [Key spill mop up](#)
- [Mask0mate](#)
- [Motion Tracker](#)
- [Rotoscoping](#)

[General Information about Alpha Manipulation](#)

Alpha Manipulation, more commonly known as Chroma Key compositing is an effect that changes the background of the picture to a different background the editor may want.

More information can be found on the pages for the effects themselves:

- [Chroma Key](#) (for simple chroma key effects)
- [Color selection](#) (for complex chroma key effects)

[Compositing Reference Material](#)

For some background, the Wikipedia article in [alpha compositing](https://en.wikipedia.org/wiki/Alpha_compositing) [https://en.wikipedia.org/wiki/Alpha_compositing] is useful. See also Porter, Thomas; Tom Duff (1984). “Compositing Digital Images”. *Computer Graphics* 18 (3): p253–259 1984 [pdf](https://keithp.com/~keithp/porterduff/p253-porter.pdf) [https://keithp.com/~keithp/porterduff/p253-porter.pdf]

Alpha gradient

Contents

- [Alpha gradient](#)

This is the [Frei0r alpha0ps](https://www.mltframework.org/plugins/FilterFrei0r-alpha0ps/) [https://www.mltframework.org/plugins/FilterFrei0r-alpha0ps/] MLT filter, see also [Frei0r-alpha0ps readme](https://github.com/dyne/frei0r/blob/master/src/filter/alpha0ps/readme) [https://github.com/dyne/frei0r/blob/master/src/filter/alpha0ps/readme] file.

Fills the alpha channel with a gradient.

Alpha operations

Contents

- [Alpha operations](#)
 - [Parameters](#)
 - [Display](#)
 - [Display input alpha](#)
 - [Operation](#)
 - [Threshold](#)
 - [Shrink/grow amount](#)
 - [Invert](#)
 - [Tutorial 1](#)

This is the [Frei0r alpha0ps](https://www.mltframework.org/plugins/FilterFrei0r-alpha0ps/) [https://www.mltframework.org/plugins/FilterFrei0r-alpha0ps/] MLT filter - Display and manipulation of the alpha channel.

Use this to shrink, grow, threshold and visualize the alpha channel.

This plugin can shrink, grow, threshold and invert the alpha channel. It is mainly intended to improve keying edges. It can also display the alpha channel in various ways, to enable quick assessment of the effect.

It is cascadable, so for example one can do a soft shrink first and then threshold, which gives a slightly different result than a hard shrink.

Parameters

Display

What to display. There are seven options: *Image*, *Alpha as gray*, *Gray + red*, *Selection on black*, *Selection on gray*, *Selection on white*, and *Selection on checkers*.

This effect lets the unchanged input image through - this plugin is intended to change only the alpha channel...

Display input alpha

Use input alpha for the display function above. (Check what alpha we are getting on the input).

Operation

Select the operation to be done on the alpha channel. Currently there are eight choices: *NO OP*, *Shave*, *Shrink hard*, *Shrink soft*, *Grow hard*, *Grow soft*, *Threshold*, and *Blur*.

Shave try to remove the “hairy” stuff, and also shrinks the selection a bit.

The *hard* operations introduce no new values to the alpha channel, so if you have a “hard” key (only 0 and 255) it will stay that way.

The *soft* operations will introduce interpolated values, making the edge softer.

Note

The shave, shrink and grow operations are quite slow, because they do many conditional operations on each pixel.

Threshold

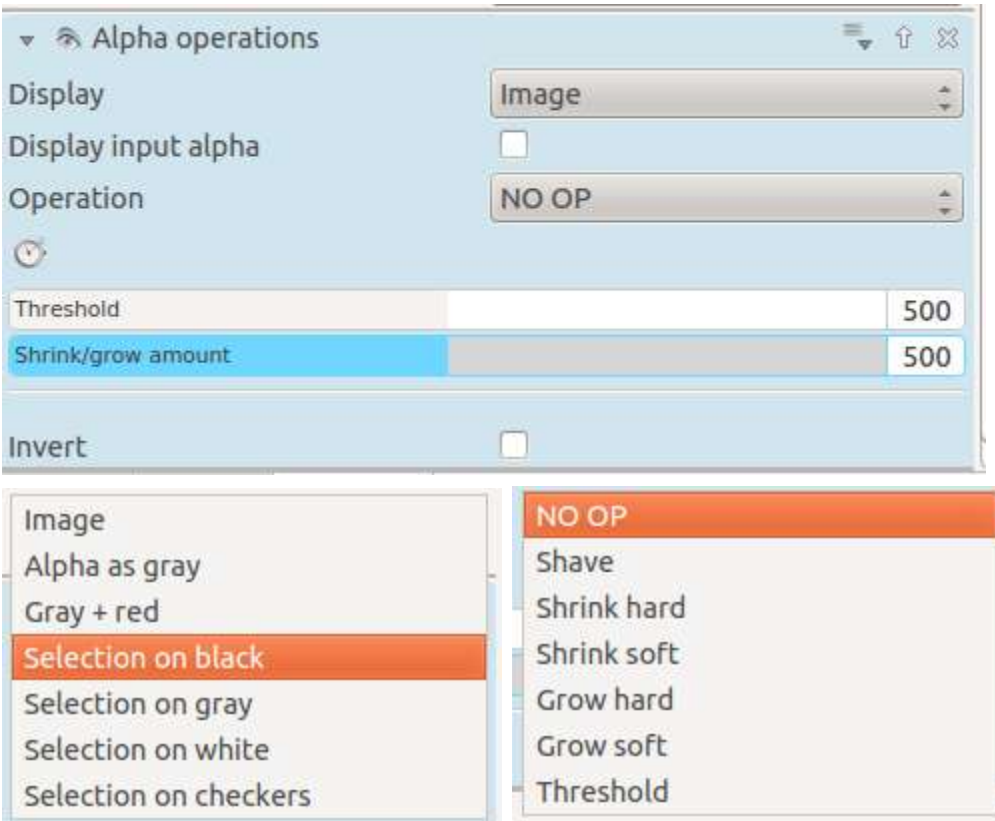
This is only used for the *Threshold* operation.

Shrink/grow amount

How far the shrinking/growing will extend.

Invert

Inverts the input alpha channel, transparent will become opaque and vice versa.



[Tutorial 1](#)

Shows usage of alpha operations - *Shrink hard* as well as the following effects: [Chroma Key](#), [Denoiser](#), and [Key Spill Mop Up](#).

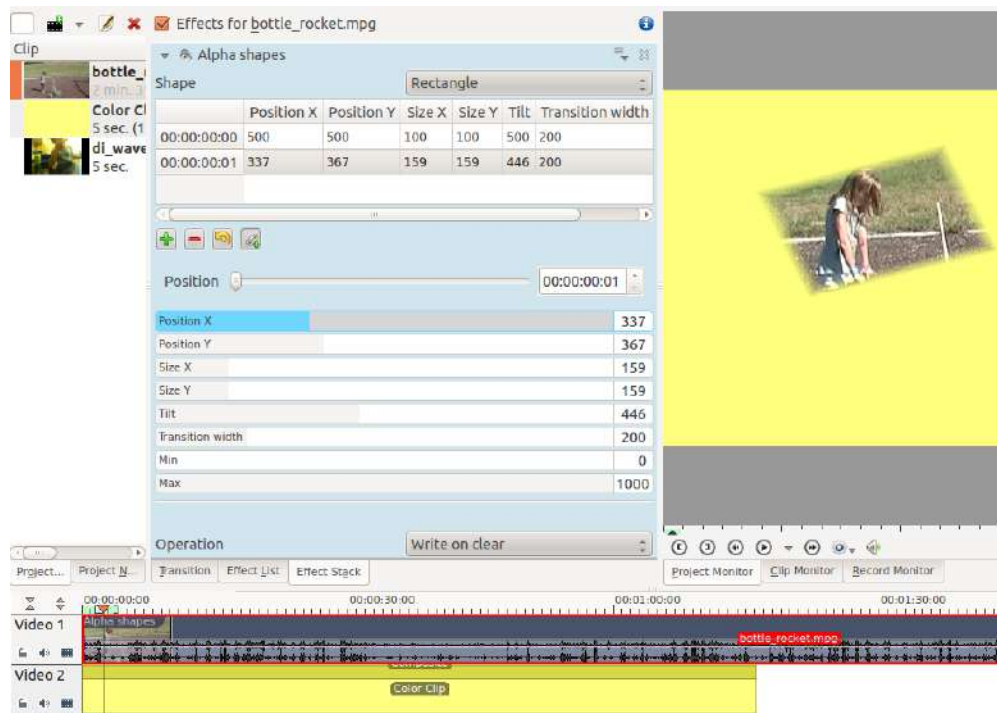
<https://youtu.be/143Hz7YEcYU>

Alpha Shapes

Contents

- [Alpha Shapes](#)
 - [Shape Options](#)
 - [Tilt](#)
 - [Position X and Y](#)
 - [Size X and Y](#)
 - [Transition Width](#)
 - [Operations](#)
 - [Min and Max Operations - Worked examples](#)

This is the [Frei0r alphapot](https://www.mltframework.org/plugins/FilterFrei0r-alphapot/) [https://www.mltframework.org/plugins/FilterFrei0r-alphapot/] MLT filter, see also [Frei0r-alphapot readme](#) [https://github.com/dyne/frei0r/blob/master/src/filter/alpha0ps/readme] file.



Use this in combination with a [Composite Transition](#) to place areas of transparency onto an overlaying clip such that the underlying clip shows through in places defined by geometric shapes. By default, the area of transparency is outside the shape that is drawn. Inside the shape is an area of opacity where the overlaying clip is visible.

Shape Options

This controls the shape of the area of opacity that the effect will create.

Shape options are *Rectangle*, *Ellipse*, *Triangle*, and *Diamond*.

Tilt

This controls the angle the shape appears on the screen. The units are in 1000ths of a full rotation. Eg, a factor of 250 is one-quarter of a circle turn and 500 is a 180 turn. I.e., 1000 tilt units = 360 degrees.

Position X and Y

This defines the position of the shape on the screen.

Size X and Y

Defines the size of the shape.

Transition Width

Defines the width of a border on the shape where the transparency grades from inside to outside the shape.

Operations

Operations define what is to happen when you have more than one Alpha effect on the clip.

Operations are *Write On Clear*, *Max*, *Min*, *Add*, and *Subtract*:

- Write On Clear = existing alpha mask is overwritten
- Max = maximum(existing alpha mask, mask generated by this filter)
- Min = minimum(existing alpha mask, mask generated by this filter)
- Add = existing alpha mask + mask generated by this filter
- Subtract = existing alpha mask - mask generated by this filter

See the worked examples below to understand what these operations do.

[Min and Max Operations - Worked examples](#)

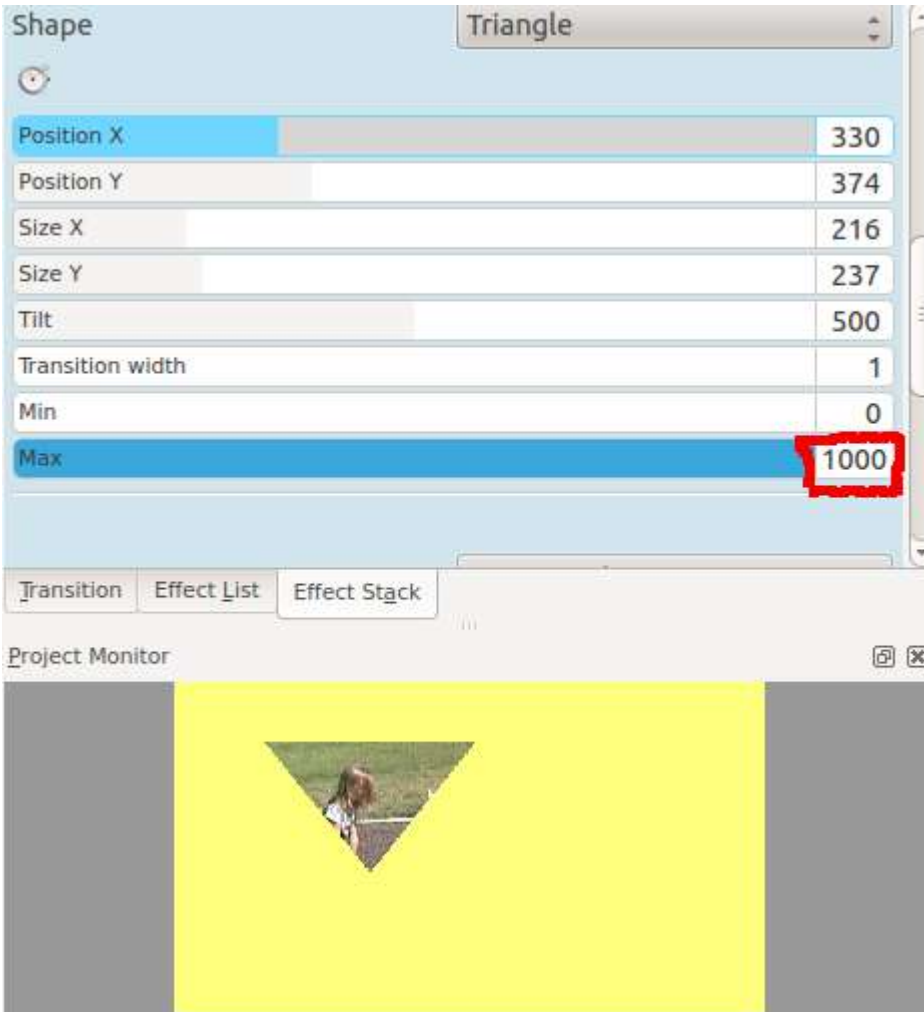


These examples are performed on a simple composite transition with a video file on Video track 1 and a color clip (yellow) on Video track 2.

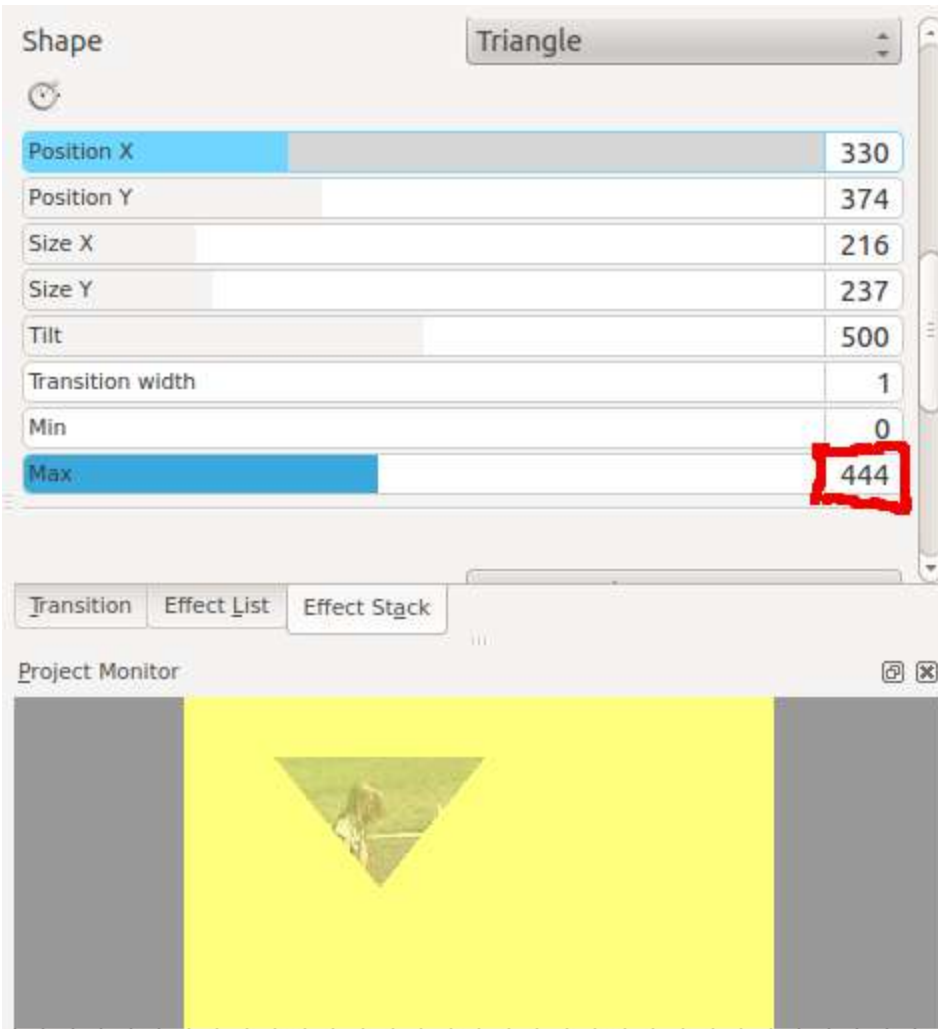
Alpha shapes effect draws areas of opacity onto the image. The addition of this filter (with the default settings of Min = 0 and Max =1000) makes the whole frame transparent except for an area of opaqueness where the top image can be seen.

The Max and Min controls adjust the opacity of the image inside and outside of the shape respectively. A setting of 1000 is 100% opaque. A setting of zero is 0% opaque (i.e., 100% transparent).

Max control



The Max control regulates how opaque it is inside the shape. At Max = 1000 it is completely opaque inside the shape and nothing of the background image shows through.

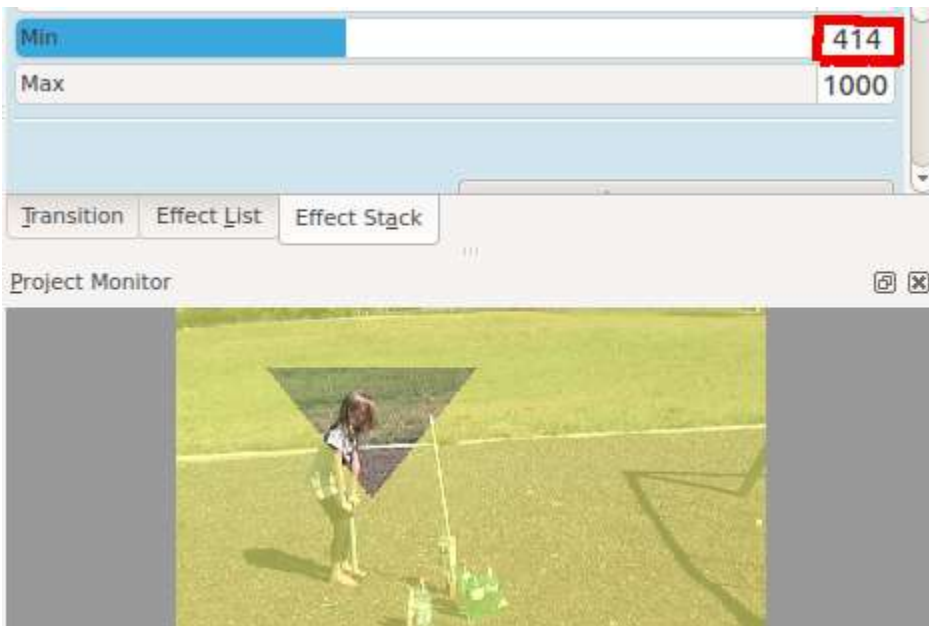


At Max = 500 it is semi-transparent inside the shape and you can see the background bleeding through.

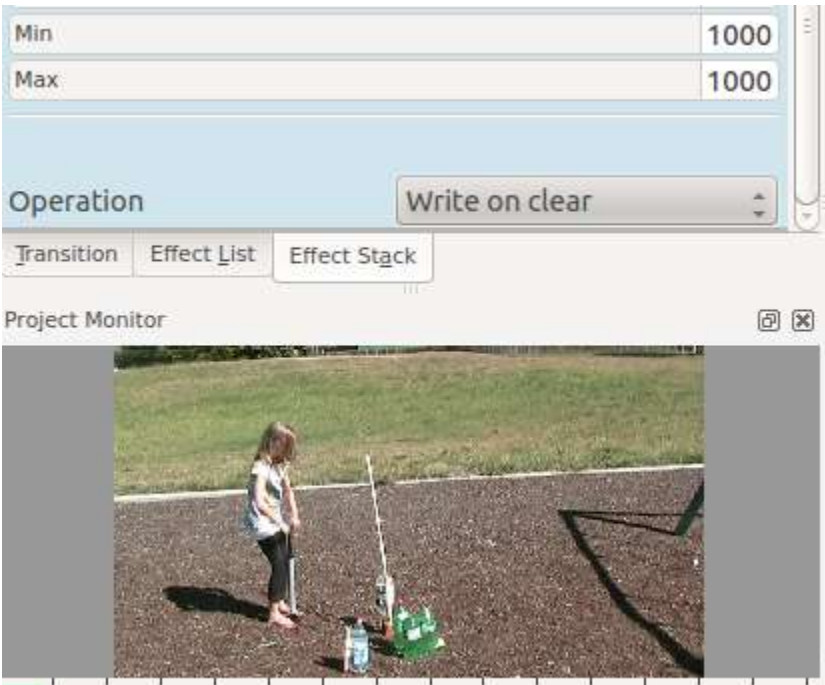


At Max = 0 inside the shape is completely transparent - the same as the rest of the foreground image - and you can see all background.

Min Control

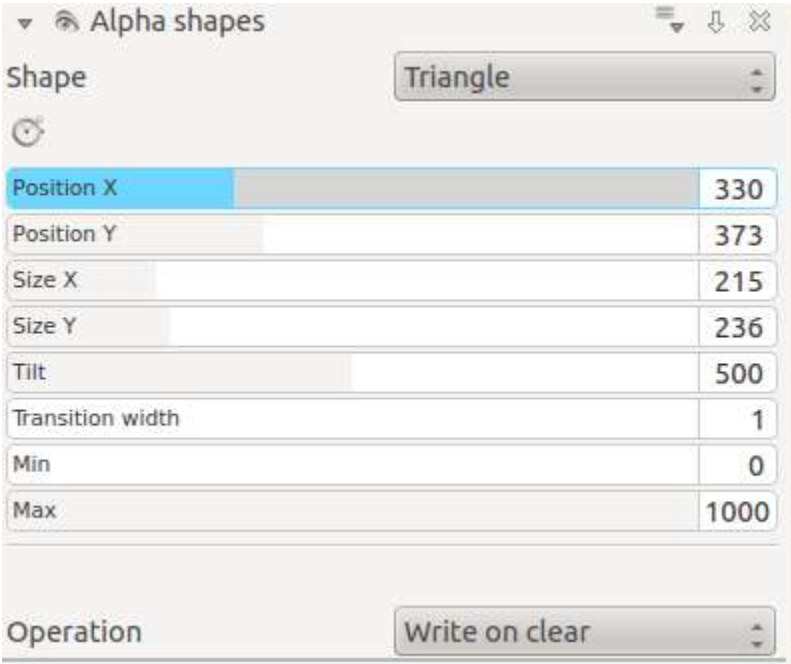


The Min control adjusts how opaque it is outside the shape. When Min = 0 outside the shape is completely transparent (opacity of zero) and at Min = 500 we see something of the foreground appears outside the shape.

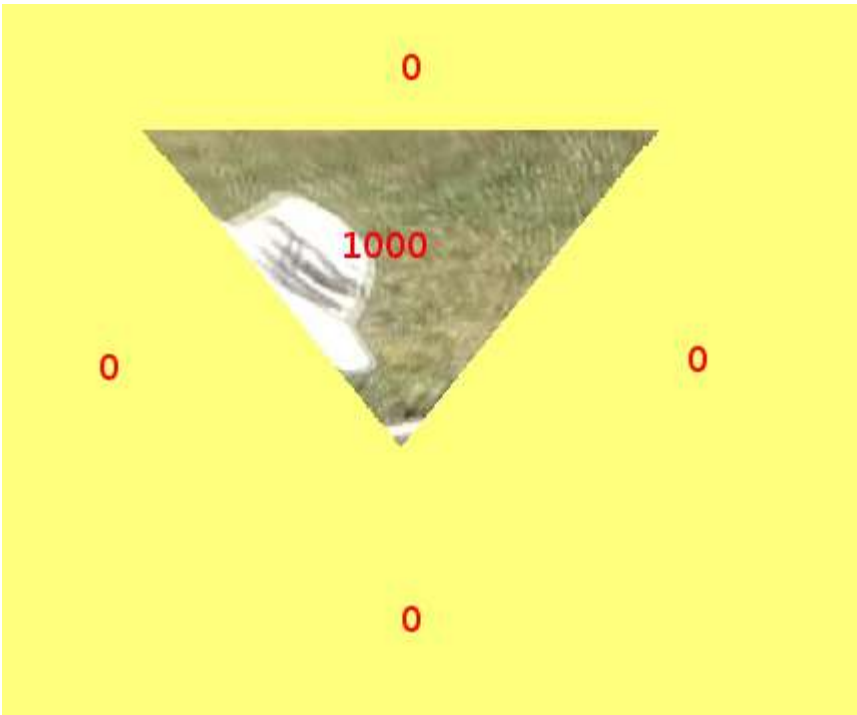


At Min = 1000 the opacity outside the shape is 100% and nothing of the background appears.

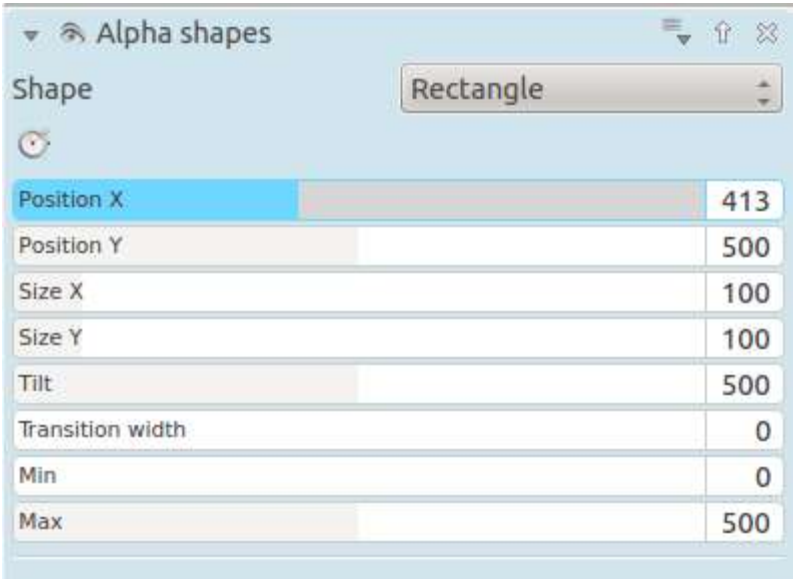
Combining Alpha Shapes - Operations



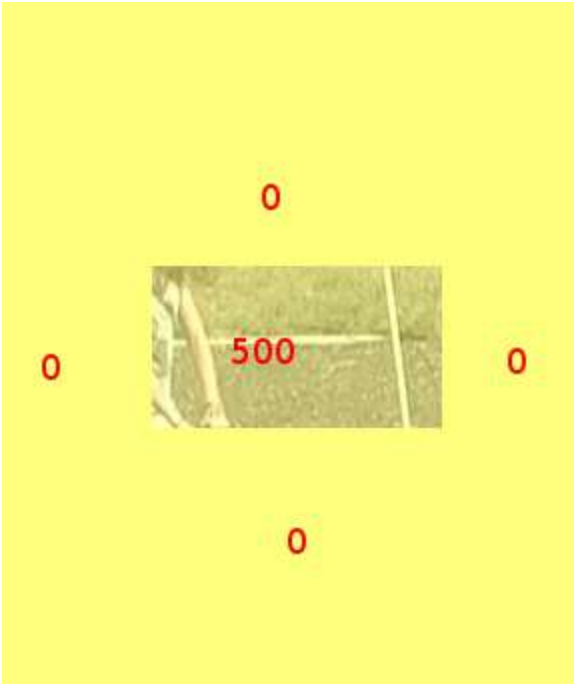
In this example, I have a Triangle alpha shape defined as shown and this is at the top of the effect stack with operation *Write on clear*.



Which appears like this on its own.



And I have Rectangle alpha shape as shown which is at the bottom of the effect stack. Note the Max = 500 - i.e., 50% opacity inside the rectangle.

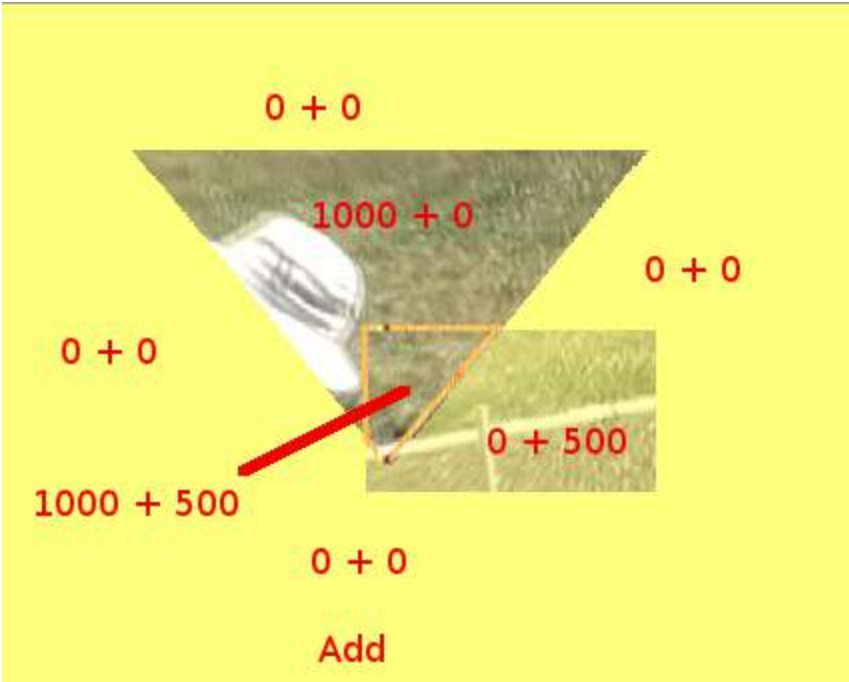


Which appears like this when on its own.

In the images below I demonstrate the effect of different alpha operations on the Rectangle alpha shape.

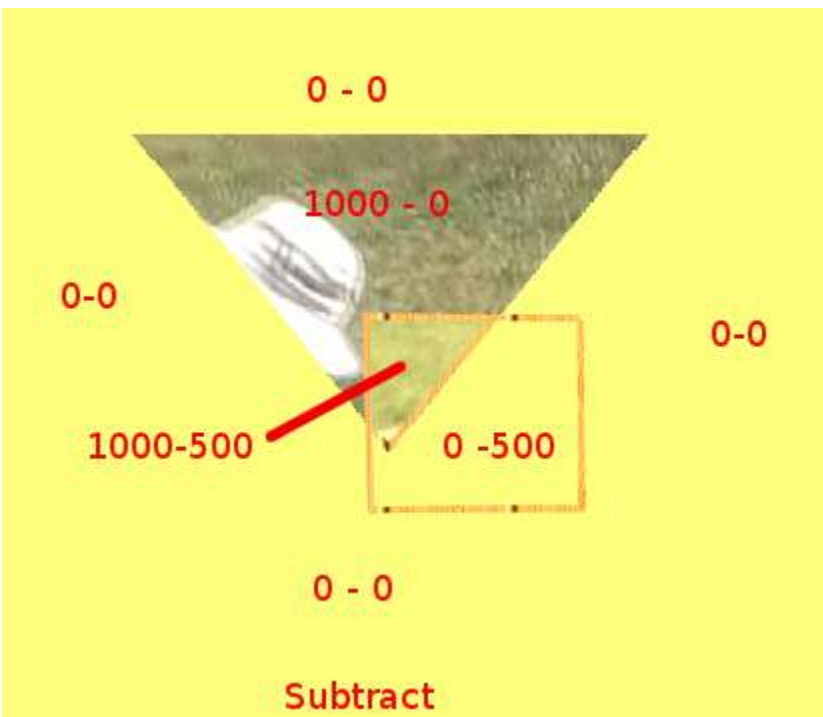


Write on Clear - the existing alpha mask is overwritten



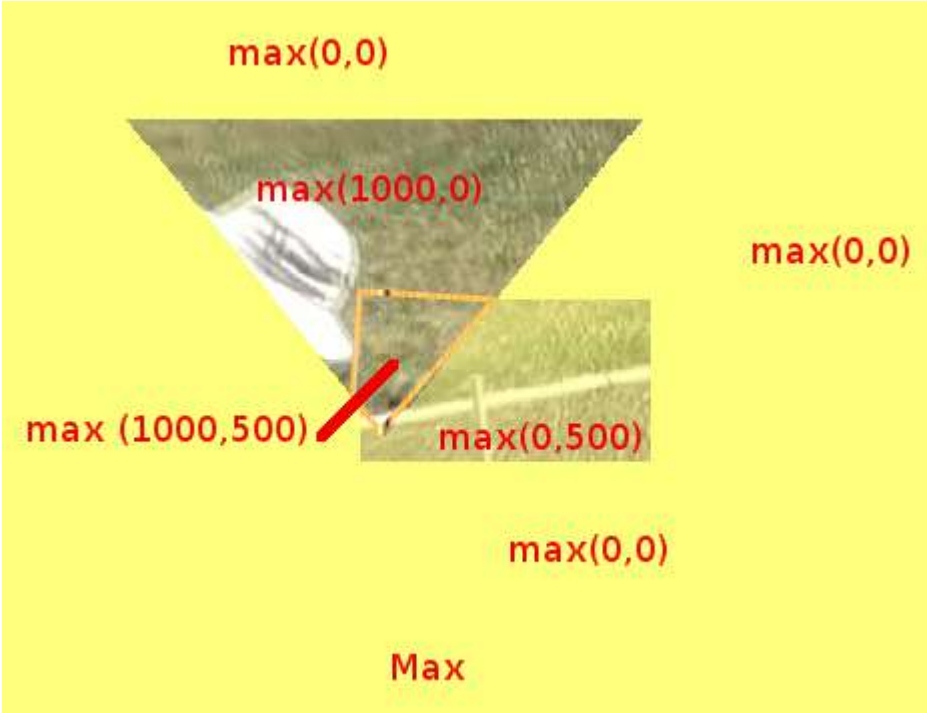
add = existing alpha mask + mask generated by this filter.

Note that areas with 1000 + 500 opacity would be 150% opaque. But you cant get 150% opaque so they look the same as the 100% opaque areas.

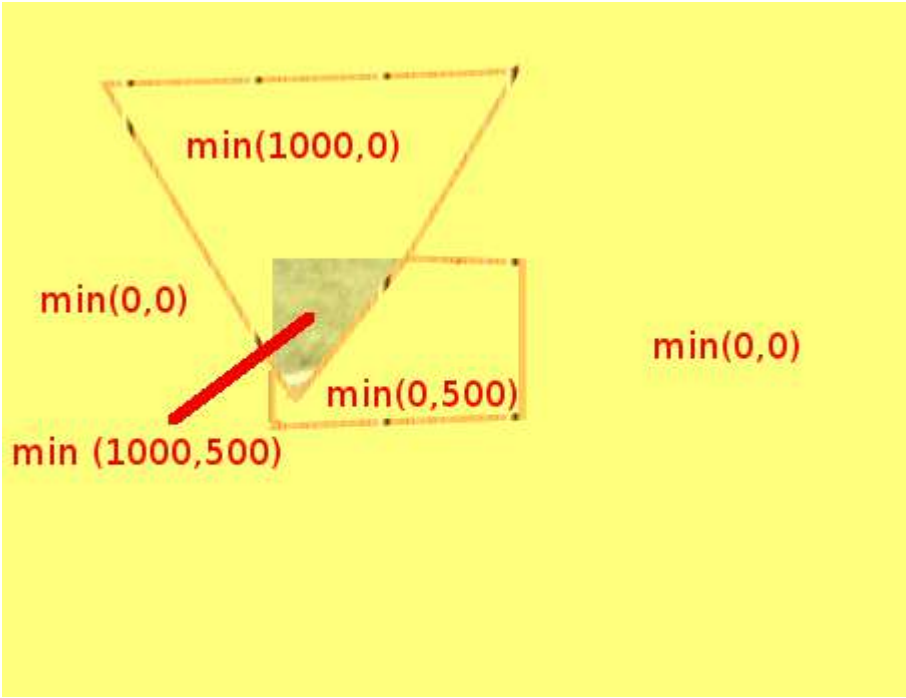


subtract = existing alpha mask - mask generated by this filter.

Note that areas with 0 - 500 opacity would be minus 50% opaque. But you cant get -50% opaque so they look the same as the 0% opaque areas.



max = maximum(<existing alpha mask> , <mask generated by this filter>)



$\min = \text{minimum}(\text{ <existing alpha mask> , <mask generated by this filter>)$

Chroma Key

Contents

- [Chroma Key](#)
 - [Basic Chroma Keying Tutorial](#)
 - [Video Tutorial](#)
 - [See also](#)

This effect allows you to do Chroma Keying (also known as Green Screen or Blue Screen) in **Kdenlive**. Chroma keying is where you remove backgrounds of a similar colour. This effect is a very basic. For a more complication alpha manipulation/background removal effect, use [Color selection](#).

For black backgrounds, the [Transitions - Screen](#) is slightly more effective.

Here are some video tutorials on how to use chroma key.

Basic Chroma Keying Tutorial

1. Select the clip you want to chroma key in the timeline.
2. Search for “chroma key” in the effects tab, and drag it onto the properties tab.
3. Press on the button that looks like a water droplet, and then click on the background of the video. This will chroma key out the background.
4. Use the variance slider to control the amount of background chroma keyed out. This will require adjustment if your chroma key didn't immediately turn out perfect.

Video Tutorial

<https://youtu.be/bMwbfYIS40>

See also

[Rotoscoping](#) effect. Rotoscoping is where you manual draw a region, and everything outside/inside that region will disappear. This is useful for backgrounds with multiple different colours.

[Key Spill Mop Up](#) effect in the Misc group. The Key Spill Mop Up effect can be used to improve the edges of the blue screen effect - when edge problems are caused by “keyspill”. Keyspill is when the color of the screen used for colorkeying spills onto the subject due to light reflection.

[Color selection](#) which also does color based alpha selection, but in a much more detailed fashion. Use it for less contrasting or more complex backgrounds.

Color selection

Chroma-Key

The **Chroma-Key** is a more advanced version of the [Chroma Key](#) effect. Chroma-Key allows for some basic feathering (by changing the **Edge Mode**) and much more fine-grained control over how much & in which way you remove the background.

This is better for backgrounds that have less contrast with the foreground, or more complex backgrounds. For simple backgrounds (such as green, blue, red or possibly black), use the [Chroma Key](#) effect.

Basic Technique

Contents

- [Color selection](#)
 - [Chroma-Key](#)
 - [Basic Technique](#)
 - [All Options](#)
 - [See Also](#)

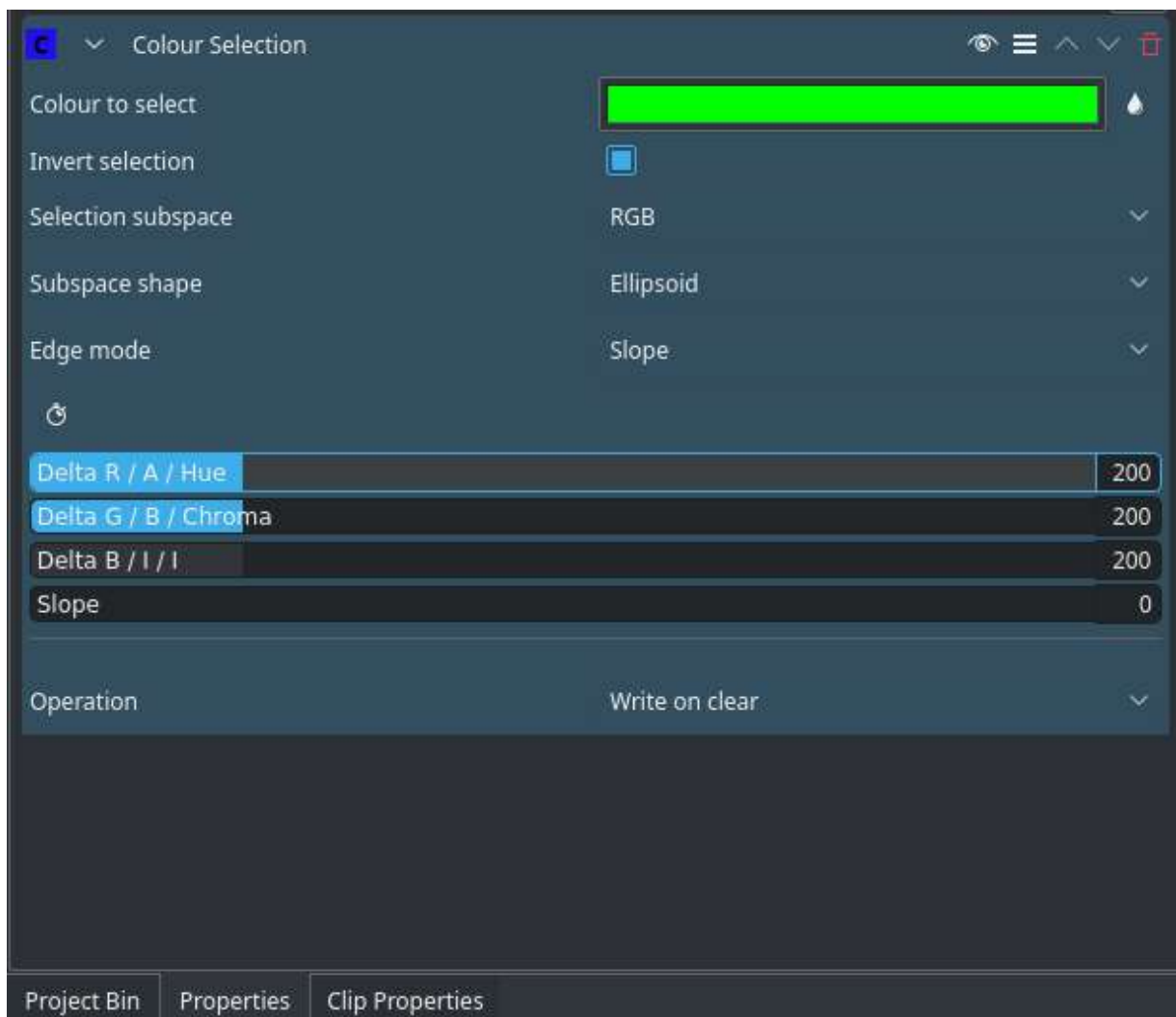
Find a clip with a background (preferably multiple, or slightly complex, because the “chroma key effect” can do easy backgrounds such as green or blue). Add the Chroma-Key effect to the clip.

After this, either choose the color using the little droplet button. Press the droplet button, and then click on the background part of the clip you want to remove. Adjust the Delta sliders until the background is removed correctly. This might need to experimenting. If you find it isn't removing the background well, try changing the “selection subspace” and experiment

again. If you experimented and cycled through all the “selection subspaces”, and the background isn’t still removed properly, then it is probably too complicated for **Kdenlive** to remove. At this point, you will need to use [Rotoscoping](#).

If the effect took lots of time to experiment, and you will need to use this effect again, then click on the three horizontal lines in the top right corner, and then click *Save effect*. Give the effect a name, and save. You can now search for this specific effect in your effects tab.

All Options



Here is an outline of all the options:

Color to select:

The color to select. This is the color that will be transparent/the only color that is opaque.

Invert selection:

When ON (default), the selected color will be transparent. When OFF the selected color will be opaque. Keeping the selected color opaque may be more effective if the foreground is simple and the background is complicated.

Selection subspace:

The options are: RGB (Red Green Blue), ABI and HCI (Hue Chromacity Intensity).

These different options yield different results. While RGB should yield the sharpest and best results, sometimes (as user *themickyrosen-left* have seen from experience) the other option, HCI & ABI, can yield much better results than RGB. So if RGB isn't producing good results then try on of the other options.

Note

Previews of video chroma keyed using HCI will be slow since it has to calculate values for every single pixel.

Edge Mode:

Options are: Hard, Fat, Normal, Skinny, Slope

If the Edge Mode is set to slope, you can use the "slope" slider. This slider determines the smoothness of the edges. The higher the value, the smoother the edges of your color selection will be.

"Hard" means there is no feathering (edges are not smooth at all). Any part of the image/video is either fully opaque and fully transparent. This means there will be no blue between the removed parts and the remaining

parts whatsoever, and this option is useful if your chroma key turned out to be perfect.

The remaining options (“Fat”, “Normal” and “Skinny”) create a gradual transition between transparent and opaque. The fatter the choice, the more the selected areas are filled towards the rim (AKA more feathering for fatter choices). This is useful if your color selection did not turn out that well.

Delta XXXX:

These three parameters determine the tolerance of the chroma keying. The higher the value, the more of the background is removed. The lower the value, less is removed. A bit of experimenting is required to find the correct values for each clip.

[See Also](#)

See also [Chroma Key](#) which does color based alpha selection but is a bit simpler.

This [page](https://www.worqx.com/color/index.htm) [https://www.worqx.com/color/index.htm] covers some Color Theory to help understand Hue, Chroma, Luminance, etc.

Key spill mop up

This effect is used when using chroma keying (otherwise known as greenscreen or [Chroma Key](#) effect). Its purpose is to compensate for the fact that sometimes the color from the green or blue screen reflects onto the subject and will make them a shade of blue or green - especially around the edges. This is known as “keyspill”. This effect can attempt to compensate for this issue.

Tutorial

Contents

- [Key spill mop up](#)
 - [Tutorial](#)
 - [Details](#)

This tutorial shows usage of the following effects: Key Spill Mop Up, blue screen, alpha operations - shrinkhard and denoiser.

Note: **This video is outdated.** In newer versions of Kdenlive have the [Key Spill Mop Up](#) effect installed by default, and it is no longer required to use a composite transition.

<https://youtu.be/l43Hz7YEcYU>

Details

The README file for the Key Spill Mop Up is this:

DESCRIPTION:

After some experimentation with chroma keying, it looked to me that there is no single method of key cleaning, that works in all situations, like keyspill on bright, keyspill on dark, etc. So I included several cleaning options, which can be used alone or in combination. In short, it offers three ways of pixel selection (masking), that can be combined with four types of color changing operations. The three selection / masking modes are based on:

- similarity to key color
- transparency
- closeness to the edge

and the four things that can be done to the selected pixels are:

- move away from the key color (De-Key)
- move towards an target color (Target)
- desaturate
- luma (brightness) adjust.

MASKS:

Color difference masks are based on the color of the image, and do not depend on the alpha from the preceding keying, except for ignoring the 100% transparent areas, to increase speed.

Transparency and Edge masks are based on the alpha channel from the preceding keying operation. Transparency masks will affect only the parts that are neither 100% opaque nor 100% transparent, based on the alpha values from the preceding keying operation. The effect will be proportional to the transparency.

Note

If a “hard key” was used in the preceding keying, there will be no areas that T operations could affect. Edge masks will affect only pixels close to the edge, with the effect diminishing away from the edge. The outer edge is the edge of the fully opaque part, where the alpha from the preceding keying is 1.0 (255).

Note

The edge masking algorithm is not yet what I would like it to be. I will have to look some more into this, and improve it, so consider it a “temporary solution” that will change in the future.

All masks can be further pruned with two parameters: an “hue gate”, which will limit the mask to hues close to the key hue, and an “saturation threshold”, which will limit the mask to areas with color saturation above a threshold.

CASCADING:

This plugin can be cascaded, but it is not possible to get the same color based mask in the second instance, because the colors will be changed by the first instance. To enable two operations with the same mask, each plugin instance can do two operations. With transparency and edge masks, cascading is a bit easier. If the hue gate and saturation threshold are not used, transparency and edge masks can be exactly the same in cascaded plugins.

PARAMETERS:

Key color: This should be the same or similar to the key color used for the preceding keying operation.

Target color: This is only used when “Target” operation is used with one of the masks. The colors in the affected areas will be moved towards this color, according to the “Amount” parameter.

Mask type: Selects the type of mask that will determine where the color altering operations will occur.

Tolerance: For the color difference mask, the range of colors around the key, that will be 100% affected. For the transparency mask, the “amplification”. For the edge mask, the width of the affected area.

Slope: For the color difference mask, the range of colors outside of “Tolerance”, that will be gradually less affected. No function for the transparency and edge masks.

Hue gate: Reduces the mask according to difference from key hue, to prevent change to pixels that are within the mask, but not polluted by key.

Saturation threshold: Reduces the mask according to color saturation, to avoid affecting the neutral areas.

Operation 1: Selects which of the four possible operations will be done on the mask-selected pixels. Apart from no operation, there are four possibilities: De-key, Target, De-saturate and Luma adjust.

Amount 1: The amount of the selected operation 1, how much the colors will change.

Operation 2, Amount 2: Enable a second operation to be performed with the same mask.

Show mask: This will show the selected mask as a greyscale image, to help with fine tuning of the masks. Should be OFF for the final render.

Mask to Alpha: Copies the active mask to the alpha channel. For all normal spill cleaning operations, this should be OFF. By setting it ON, the Key Spill Mop Up itself can be used as a keyer, or to generate some special effects.

Mask0mate

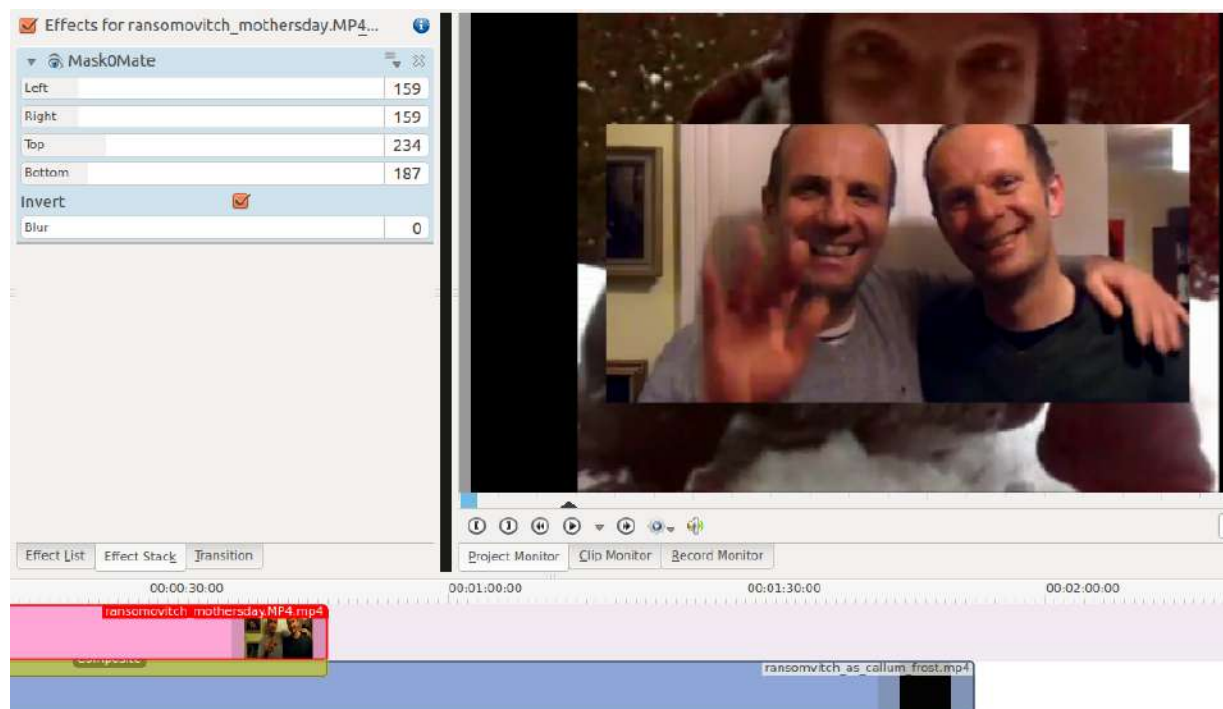
Rectangular Alpha Mask

Contents

- [Mask0mate](#)
 - [Rectangular Alpha Mask](#)

Previously known as Mask0Mate. This is the [Frei0r mask0mate](https://www.mltframework.org/plugins/FilterFrei0r-mask0mate/) [https://www.mltframework.org/plugins/FilterFrei0r-mask0mate/] MLT filter.

Creates an rectangular alpha-channel mask.



Motion Tracker

New in version 19.04.0.

Contents

- [Motion Tracker](#)
 - [What is Motion Tracking?](#)
 - [How to track a region of a video?](#)
 - [Tracking algorithms](#)
 - [KCF](#)
 - [CSRT](#)
 - [MOSSE](#)
 - [MIL](#)
 - [MedianFlow](#)
 - [DaSiam](#)
 - [Frame shape](#)
 - [Shape color](#)
 - [Blur type](#)

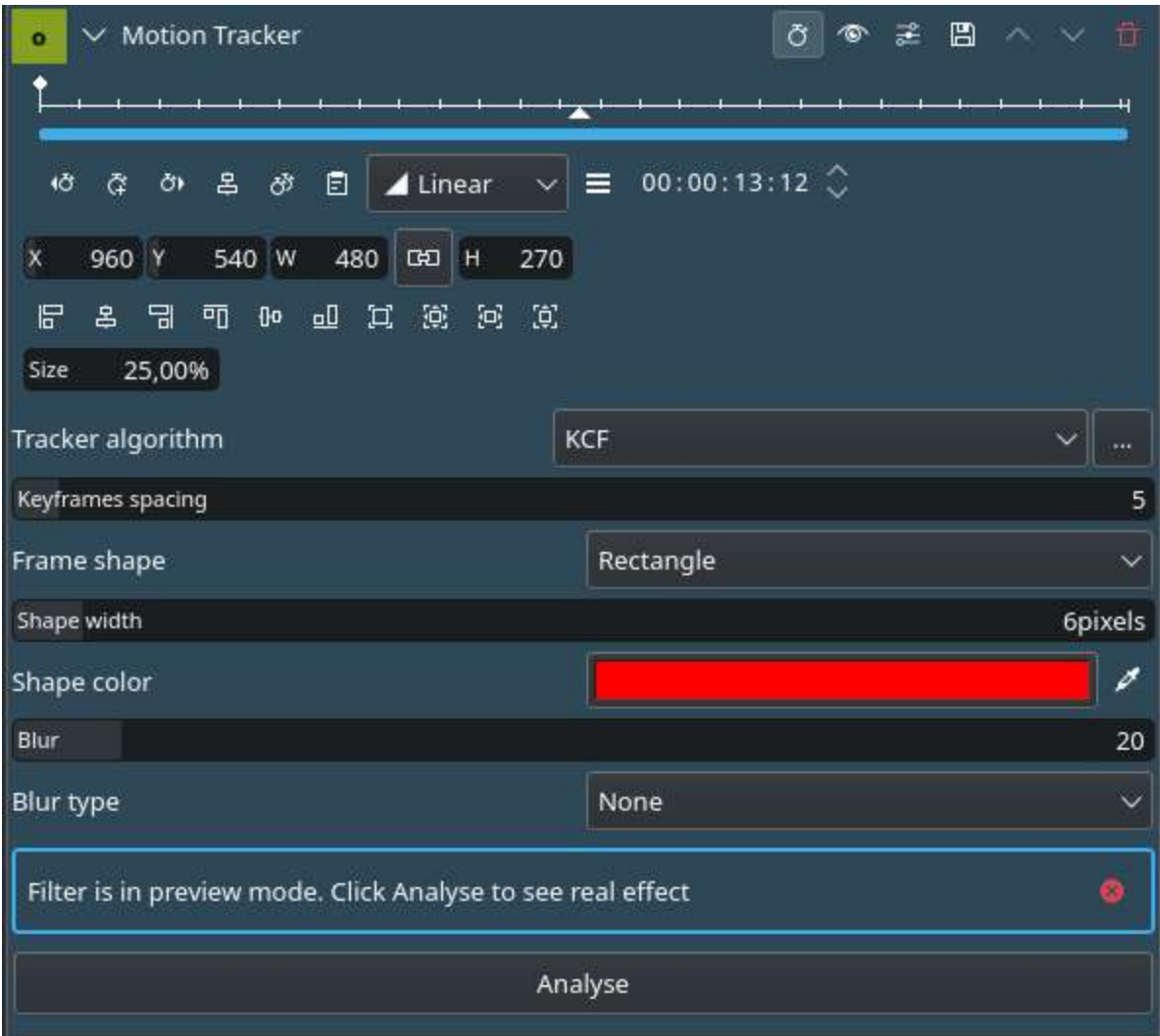
What is Motion Tracking?

Motion tracking is the process of locating a moving object across time.

Kdenlive uses [OpenCV \(Open Source Computer Vision Library\)](#).

[<https://opencv.org/about/>] for motion detection.

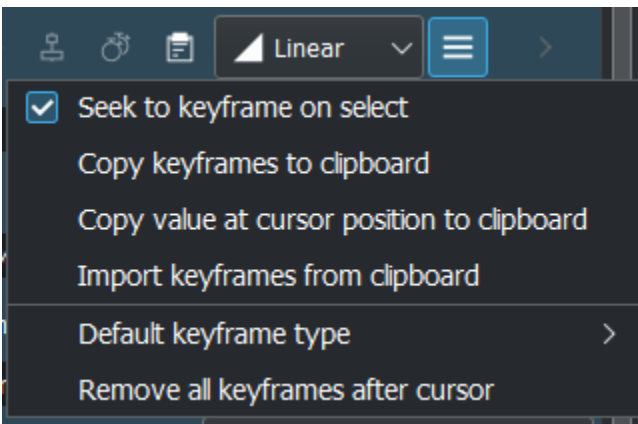
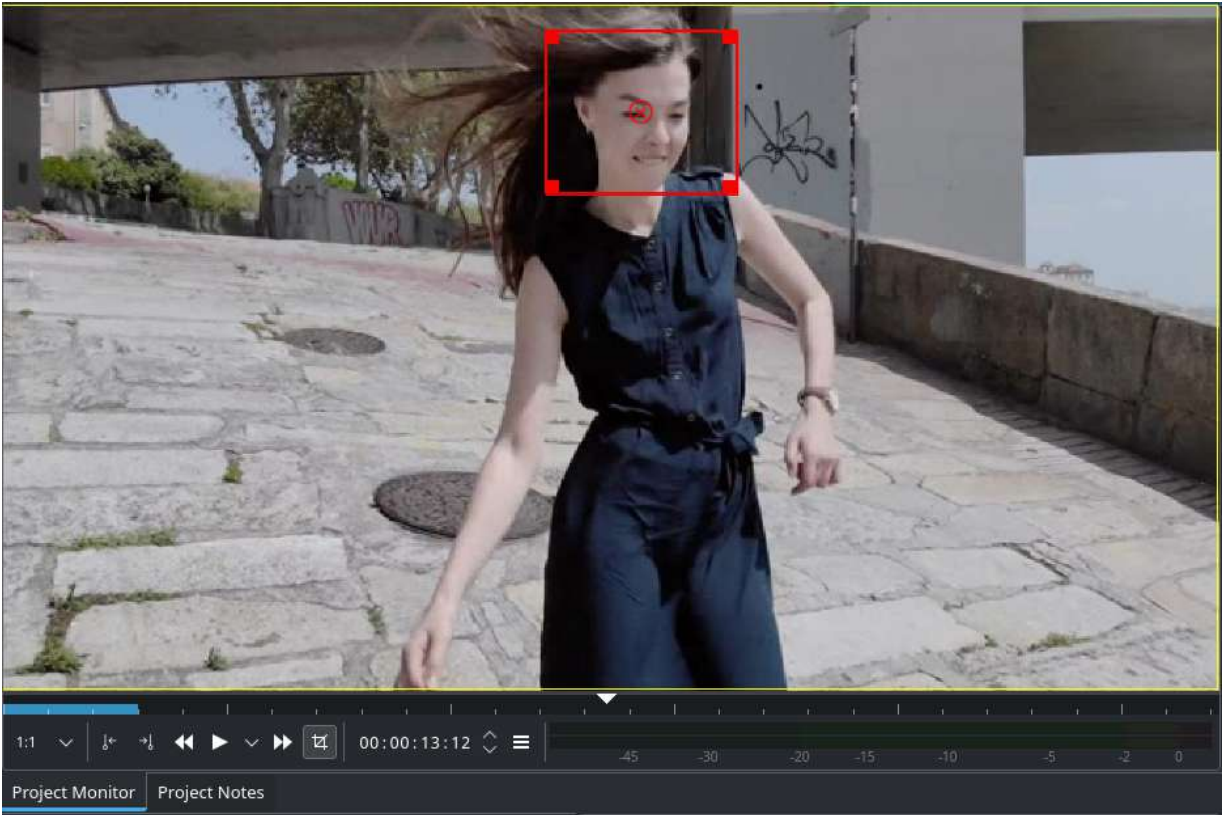
– [Wikipedia](#) [https://en.wikipedia.org/wiki/Video_tracking]




[How to track a region of a video?](#)

The basic workflow for tracking a region consists of:

- Select the desired region to track on the Project Monitor.
- Choose a tracking algorithm.
- Click on the Analyse button.



- When Analyse is done you can export the keyframes to the clipboard by click on  and choose *Copy keyframes to clipboard*. See: [Exchange keyframes across effects](#)

[Tracking algorithms](#)

[KCF](#)

Kernelized Correlation Filters

Pros: Accuracy and speed are both better than MIL and it reports tracking failure better than MIL.

Cons: Does not recover from full occlusion.

CSRT

In the Discriminative Correlation Filter with Channel and Spatial Reliability (DCF-CSR), we use the spatial reliability map for adjusting the filter support to the part of the selected region from the frame for tracking. This ensures enlarging and localization of the selected region and improved tracking of the non-rectangular regions or objects. It uses only 2 standard features (HoGs and Colornames). It also operates at a comparatively lower fps (25 fps) but gives higher accuracy for object tracking.

MOSSE

Minimum Output Sum of Squared Error

MOSSE uses an adaptive correlation for object tracking which produces stable correlation filters when initialized using a single frame. MOSSE tracker is robust to variations in lighting, scale, pose, and non-rigid deformations. It also detects occlusion based upon the peak-to-sidelobe ratio, which enables the tracker to pause and resume where it left off when the object reappears. MOSSE tracker also operates at a higher fps (450 fps and even more).

Pros: It is as accurate as other complex trackers and much faster.

Cons: On a performance scale, it lags behind the deep learning based trackers.

MIL

Pros: The performance is pretty good. It does a reasonable job under partial occlusion.

Cons: Tracking failure is not reported reliably. Does not recover from full occlusion.

MedianFlow

Pros: Excellent tracking failure reporting. Works very well when the motion is predictable and there is no occlusion.

Cons: Fails under large motion.

DaSiam [<https://arxiv.org/pdf/1808.06048.pdf>]

The DaSiamRPN visual tracking algorithm relies on deep-learning models to provide extremely accurate results.

In order to use the DaSiam algorithm you need to download the AI models and place them in:

Linux

\$HOME/.local/share/kdenlive/opencvmodels.

Flatpak

\$HOME/.var/app/org.kde.kdenlive/data/kdenlive/opencvmodels

Windows

%AppData%/kdenlive/opencvmodels

Press Win + R (Windows key and R key simultaneously) and copy **%AppData%/kdenlive/**. Then create the folder *opencvmodels*

1. https://files.kde.org/kdenlive/motion-tracker/DaSiamRPN/dasiamrpn_kernel_cls1.omx

2. https://files.kde.org/kdenlive/motion-tracker/DaSiamRPN/dasiampn_kernel_r1.onnx
3. https://files.kde.org/kdenlive/motion-tracker/DaSiamRPN/dasiampn_model.onnx

Frame shape

soon

Shape color

soon

Blur type



Four blur types are available: Median blur, Gaussian blur, Pixelate, Opaque fill

Rotoscoping

Contents

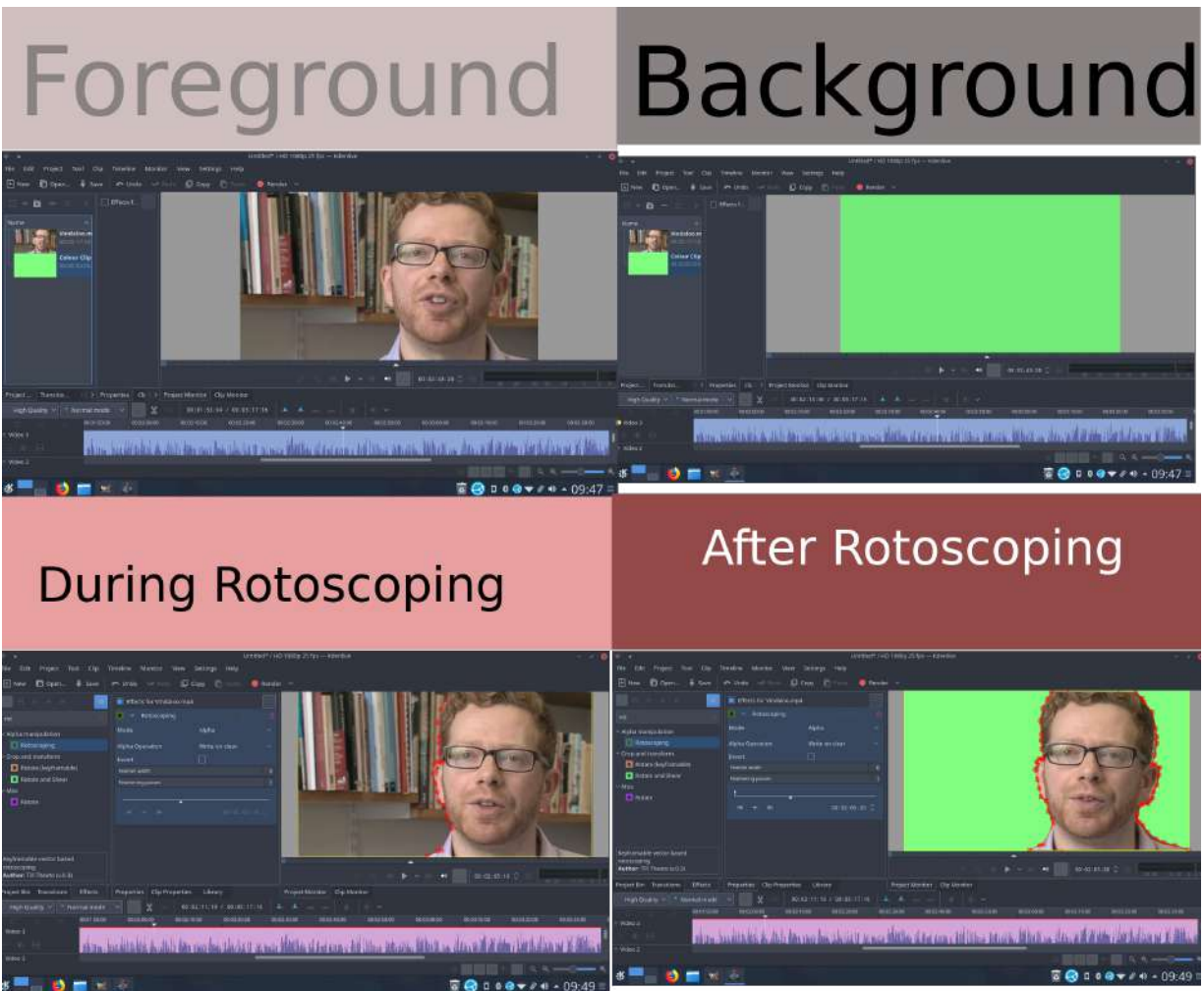
- [Rotoscoping](#)
 - [What is Rotoscoping?](#)
 - [How to draw the region in Kdenlive?](#)
 - [How to move the mask to follow the action - keyframes](#)
 - [Rotoscoping options greyed out](#)
 - [Examples](#)
 - [Example 1.How to make rotoscoping selection.](#)
 - [Tutorial with Rotoscoping](#)

What is Rotoscoping?

“In the visual effects industry, the term rotoscoping refers to the technique of manually creating a matte for an element on a live-action plate so it may be composited over another background.”

– [Wikipedia](https://en.wikipedia.org/wiki/Rotoscoping) [https://en.wikipedia.org/wiki/Rotoscoping]

Draw a region on one video track, and everything outside/inside that region will disappear, showing the video track underneath.



[How to draw the region in Kdenlive?](#)

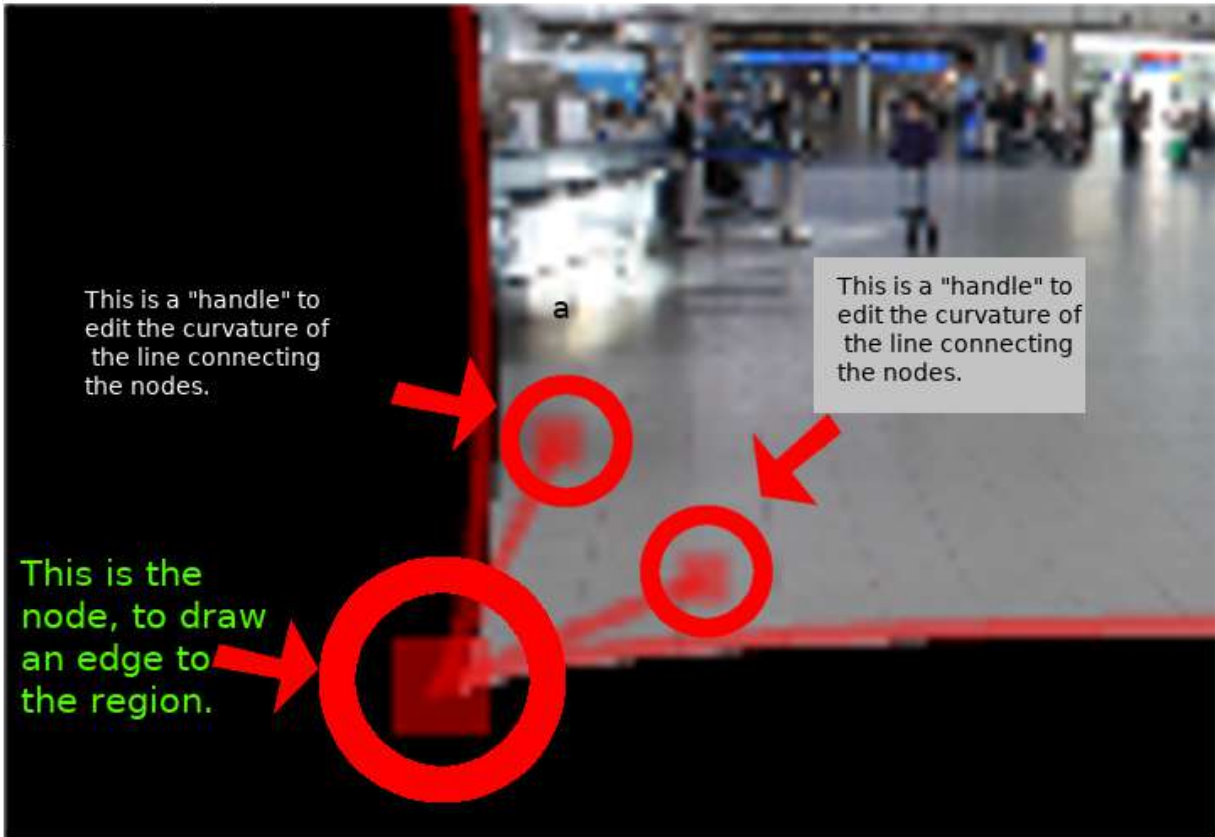
The region is drawn by adding nodes along your region. These act as edges for your rotoscope, and there is a line between each node. The line between each node can be made into a [Bézier curve](https://en.wikipedia.org/wiki/Bézier_curve) using “handles”.

Add nodes to the node by left clicking the mouse.

Close the region by right clicking the mouse on one of the nodes.

Change the position of the region by moving a node.

Make a line curved by dragging the control “handles”. These are the two dots on the ends of the straight lines that appear on the curve (see screen shot above).



To define if it is the inside or the outside of the curve that is transparent toggle the *Invert* checkbox.

In a previous version of Kdenlive you could add a new nodes by clicking on the line between existing nodes. You could subtract nodes by right clicking on them. But it looks like you can not do this with the 17.04 & 18.04 version.

[How to move the mask to follow the action - keyframes](#)

To make the drawn mask follow the action in a clip...

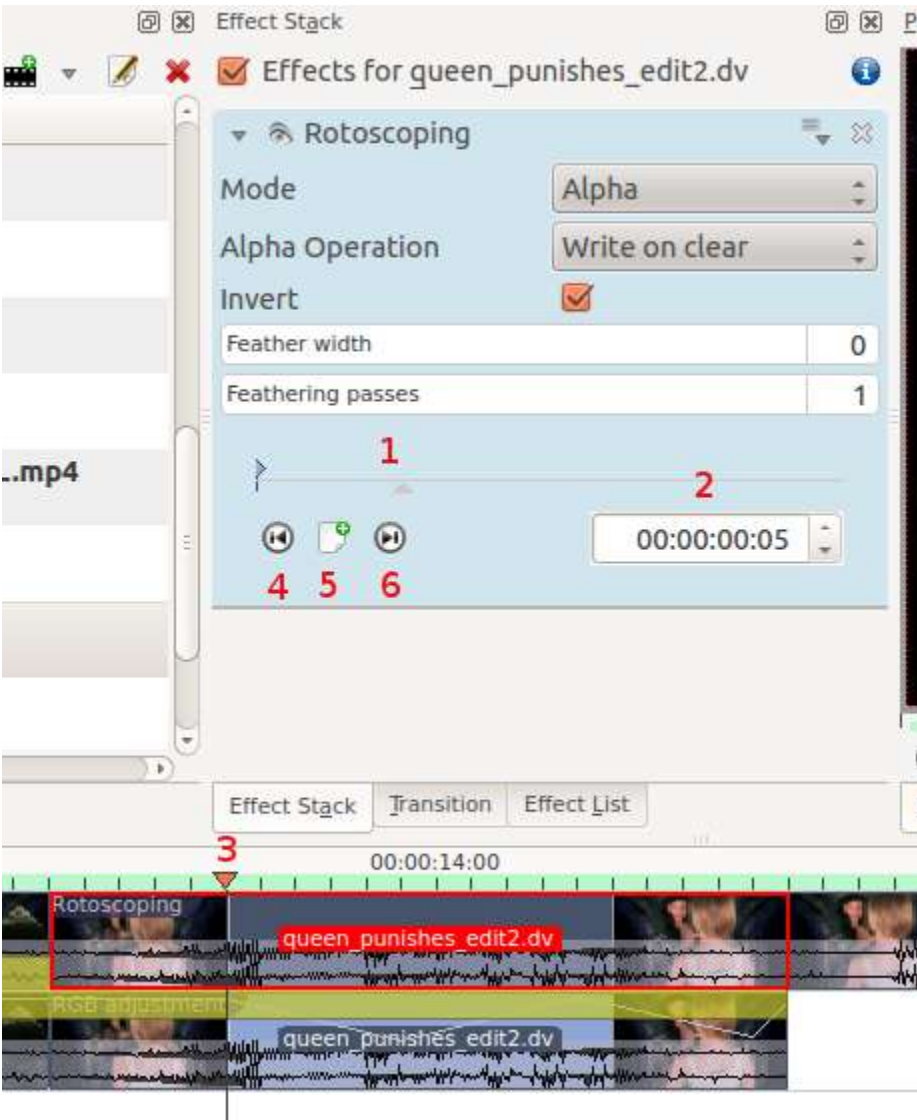
Move the position in the clip by dragging the carat on the time line (1 or 3 in screenshot below) or by using the time code control in the rotoscope effect (2 in the screenshot).

Click *Add keyframe* (5 in the screen shot).

Now adjust the position of the nodes in the curve to match the action.

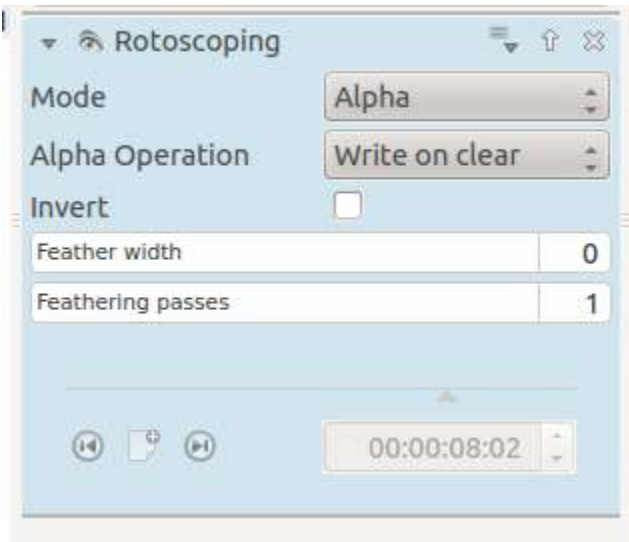
Kdenlive will calculate a path to move the nodes from the position they were in the previous key frame to the position you put them in at this keyframe. So you do not have to draw a curve for every frame in the clip.

To remove a key frame move to the frame with the key frame using the *Go to previous keyframe* (4) or *Go to next keyframe* (6) and then click the red X that which becomes *Add keyframe* (5) when you are on an existing keyframe.



This effect is based on the MLT [FilterRotoscoping](https://www.mltframework.org/plugins/FilterRotoscoping/) [https://www.mltframework.org/plugins/FilterRotoscoping/].

[Rotoscoping options greyed out](#)



When you first add the rotoSCOPE effect the keyframe options in it are greyed out. You can not even add a new keyframe.

Solution. Click in the project monitor and start drawing your rotoSCOPE matte. Then the rotoSCOPE keyframe options become enabled.

Examples

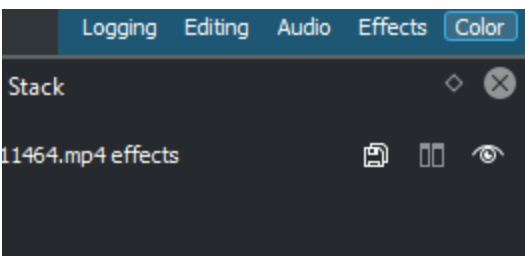
Examples of what you can do with the Rotoscoping effect.

<https://youtu.be/h36S-awjLBk>

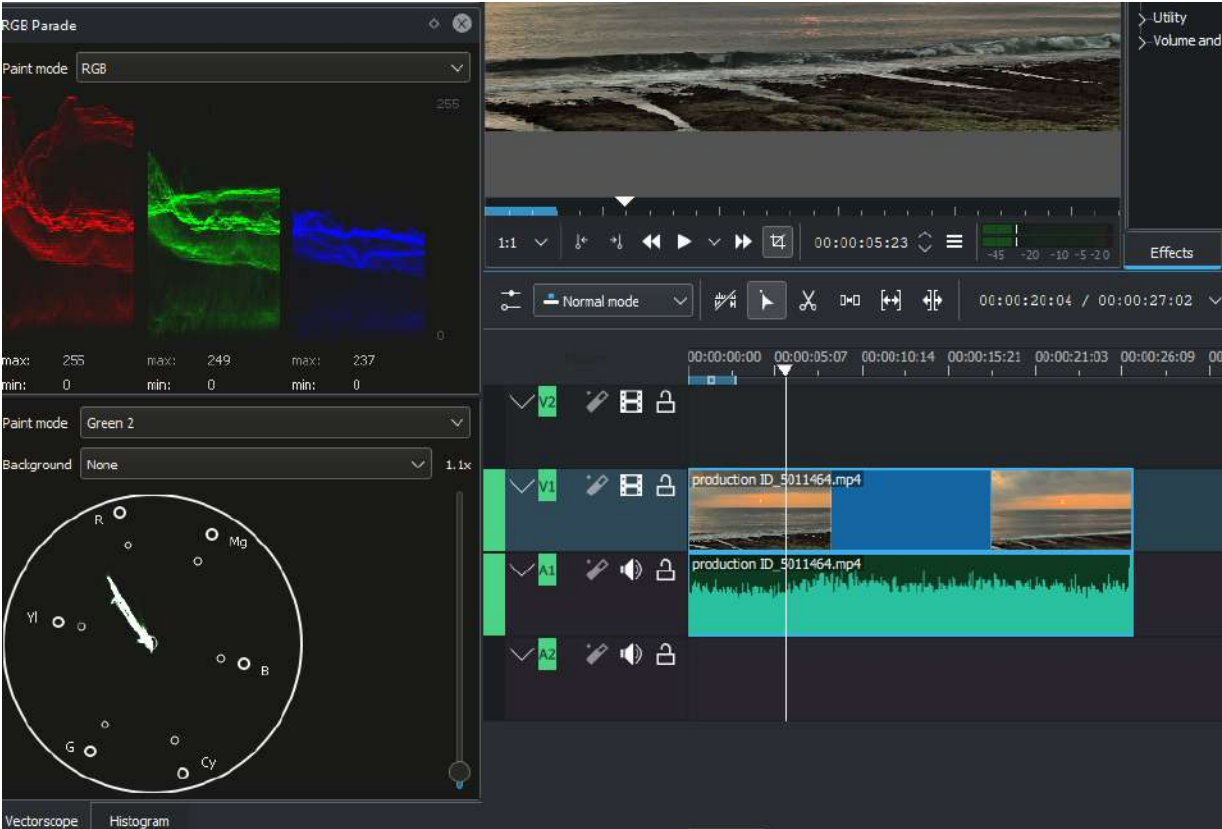
<https://youtu.be/nFv46XQUO34>

Example 1. How to make rotoSCOPE selection.

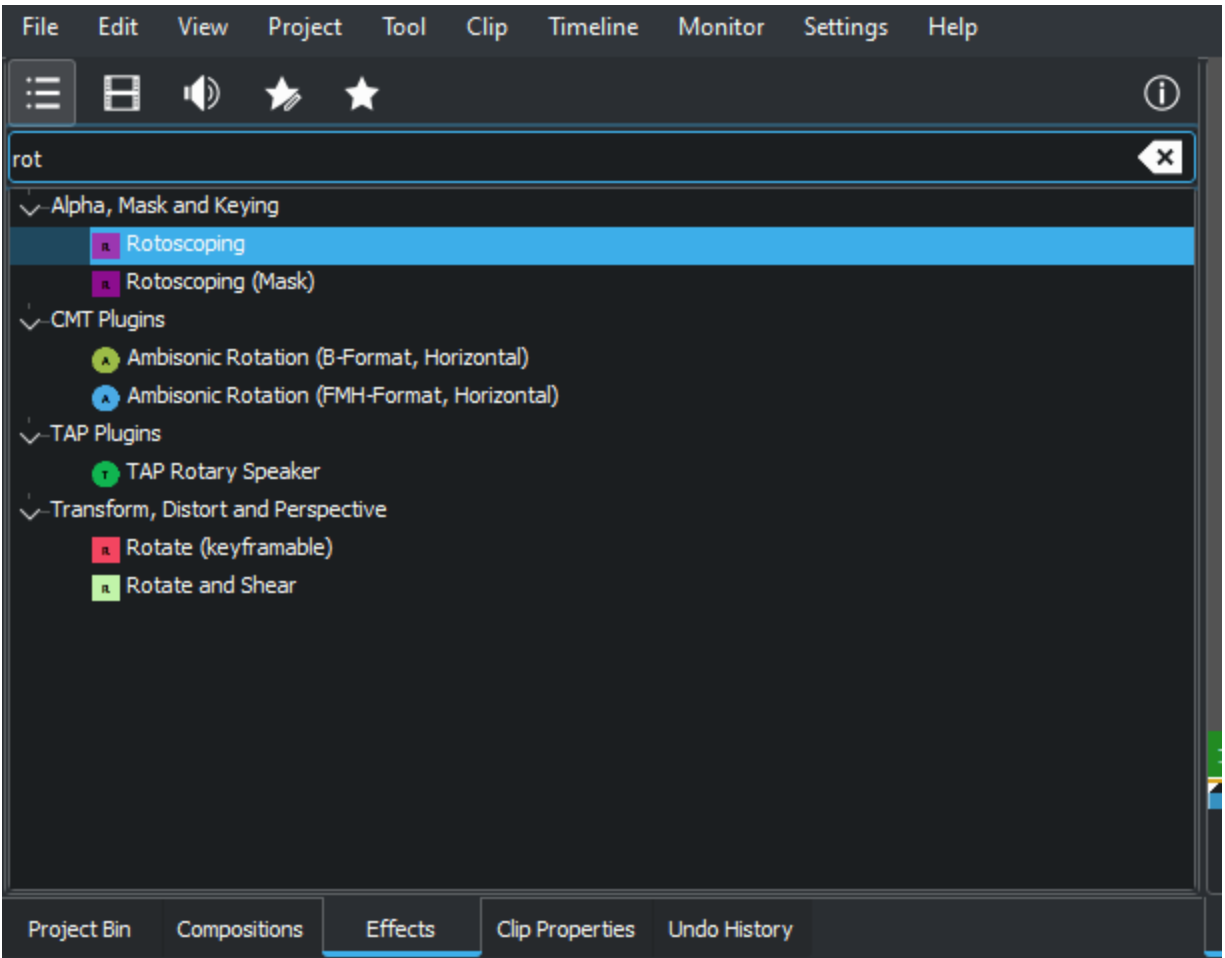
1. Choose Color, from the main menu to allow work with color scope.



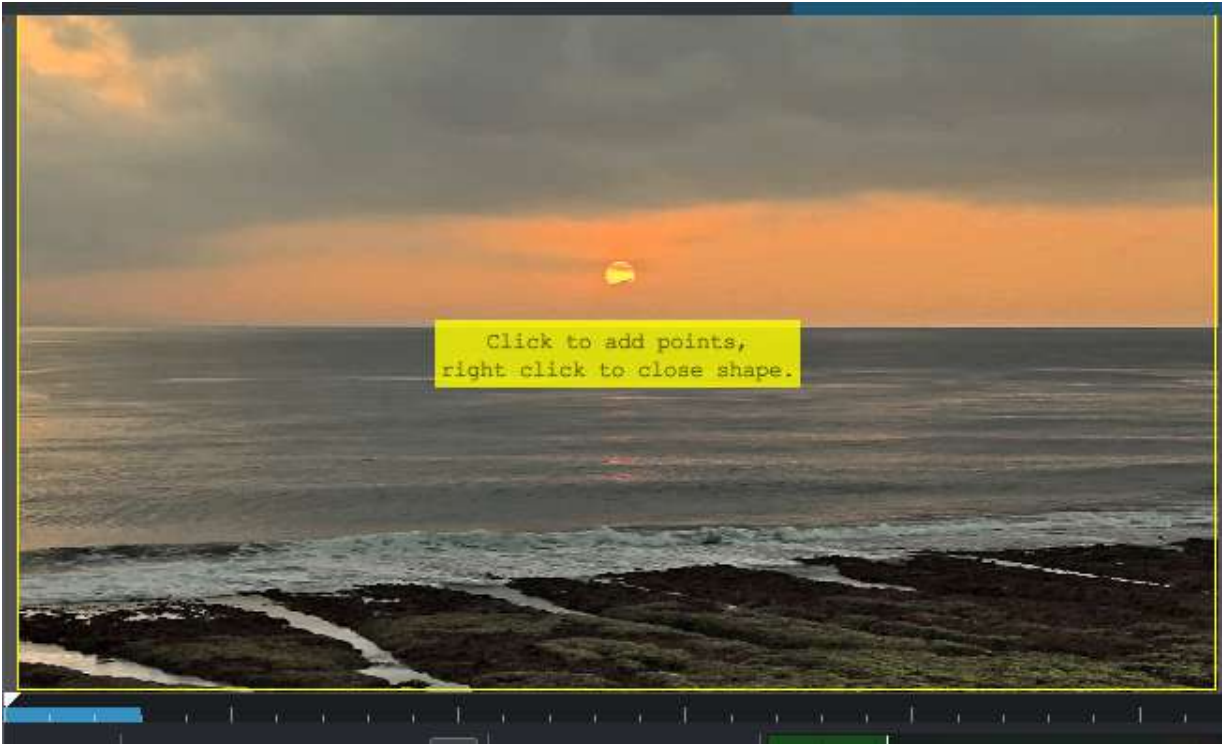
For this example, the Sun object will be chosen for changing tone. Come back to edit mode.



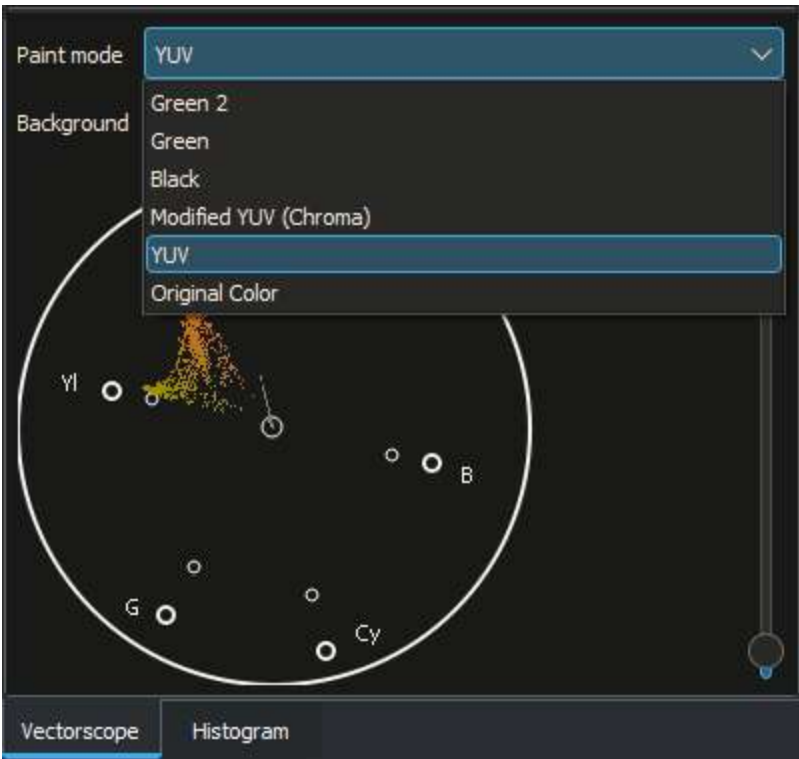
2. Head over to effects menu, type in Rotoscoping then drag it over video to see further instructions.



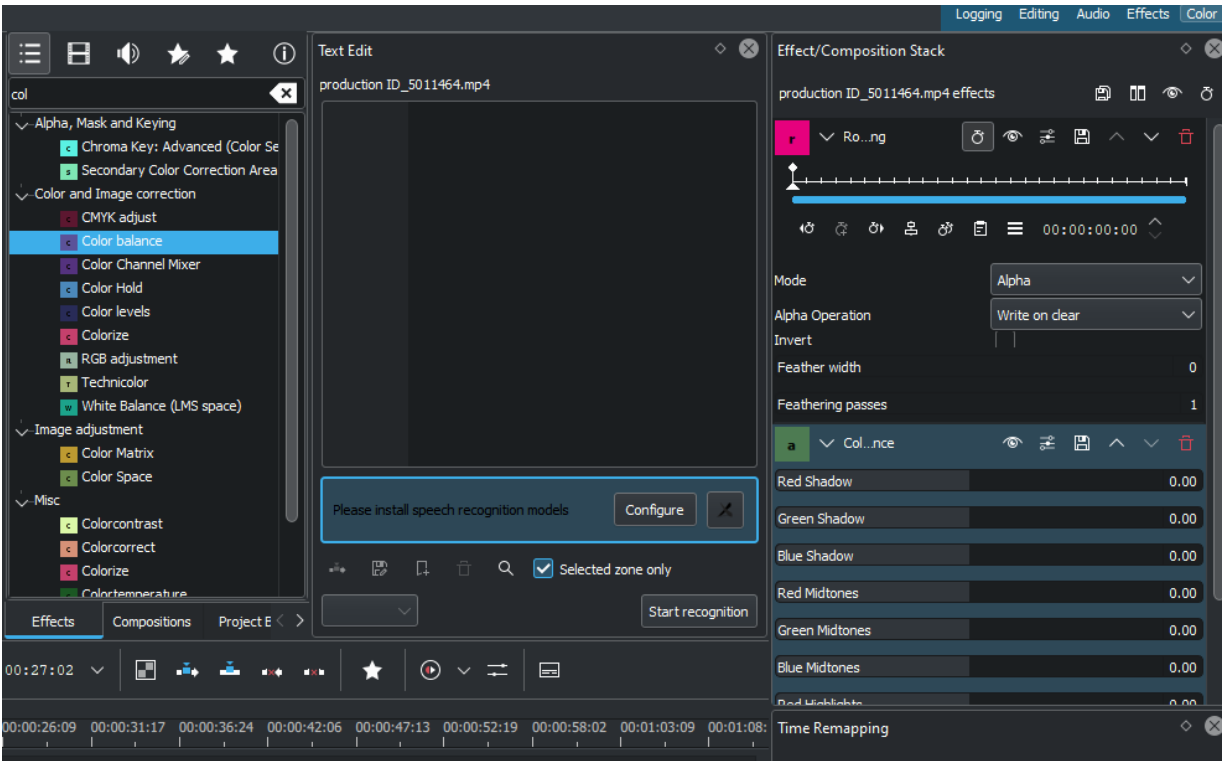
3. By clicking the left mouse button for selection object and right mouse click to complete selection.



4. Come back to color menu then vectorscope via drop-down at the bottom right-hand corner choose YUV paint mode.



5. Choose color balance for color grading.



[Tutorial with Rotoscoping](#)

This video is about green screen on **Kdenlive** but he does use rotoscoping in it too.

https://youtu.be/_6gxHLCFhLQ

Analysis and Data

Contents

- [Analysis and Data](#)

The Analysis and Data category of effects are useful for getting information about your video material rather than manipulating the imagery. The exception is Timeout Indicator - it can be used to add an effect to your video.

Effects in this category

- [Audio Spectrum Filter](#)
- [Oscilloscope](#)
- [Video Values](#)

- [Audio Wave](#)
- [RGB Parade](#)
- [Timeout Indicator](#)
- [Vectorscope Window](#)

Audio Spectrum Filter

Contents

- [Audio Spectrum Filter](#)

This is the [audiospectrum](https://www.mltframework.org/plugins/FilterAudiospectrum/) [https://www.mltframework.org/plugins/FilterAudiospectrum/] MLT filter.

It is a audio visualization filter that draws an audio spectrum on the image.

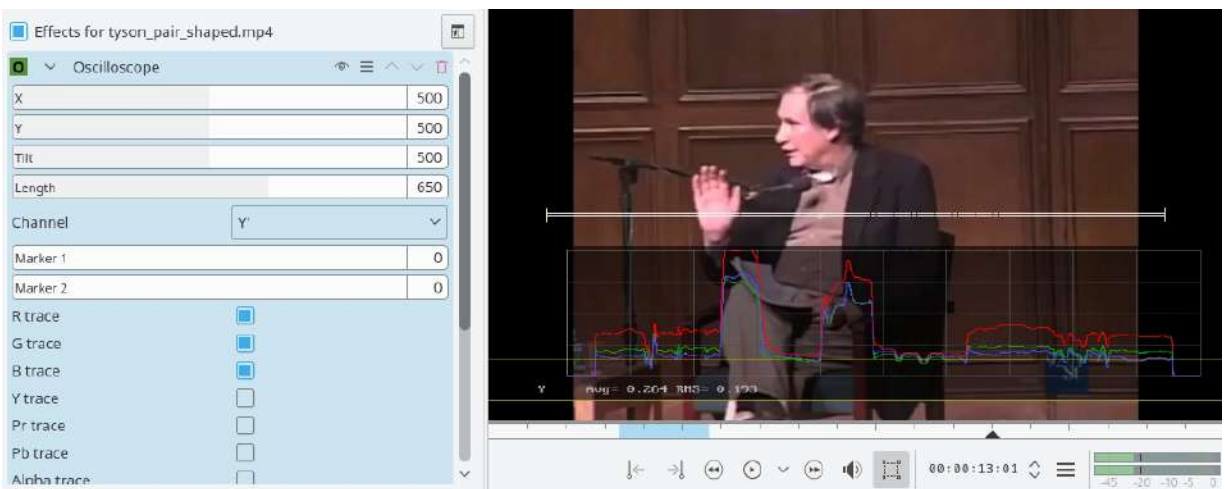
Oscilloscope

Contents

- [Oscilloscope](#)

This is the [Frei0r pr0file](https://www.mltframework.org/plugins/FilterFrei0r-pr0file/) [https://www.mltframework.org/plugins/FilterFrei0r-pr0file/] MLT filter.

2D video oscilloscope.



Video Values

Contents

- [Video Values](#)

This is the [Frei0r_pr0be](https://www.mltframework.org/plugins/FilterFrei0r-pr0be/) [https://www.mltframework.org/plugins/FilterFrei0r-pr0be/] MLT filter.

Measures video values.



Artistic Effects

Effects in this category

- [Binarize](#)
- [Charcoal](#)
- [Dust](#)
- [Grain](#)
- [Old Film](#)
- [Scratchlines](#)
- [Vignette Effect](#)

Binarize

Contents

- [Binarize](#)

Create a black and white image.



Charcoal

Contents

- [Charcoal](#)

This is the [Charcoal](https://www.mltframework.org/plugins/FilterCharcoal/) [https://www.mltframework.org/plugins/FilterCharcoal/] MLT filter.

Charcoal drawing effect.

<https://youtu.be/fl1YrZcT26k>

<https://youtu.be/1XpJCI6tHSc>

https://youtu.be/m-_MFMSb75w

Dust

Contents

- [Dust](#)

See [dust filter](https://www.mltframework.org/plugins/FilterDust/) [https://www.mltframework.org/plugins/FilterDust/] from MLT.

Add dust and specks to the video clip, as in old movies.

<https://youtu.be/h0s0PBfpcEE>

<https://youtu.be/wbX7Df8rC0M>

Grain

Contents

- [Grain](#)

<https://youtu.be/1HXNz3Ykdq4>

Old Film

Contents

- [Old Film](#)

This is the [OldFilm](https://www.mltframework.org/plugins/FilterOldfilm/) [https://www.mltframework.org/plugins/FilterOldfilm/] MLT filter.

Moves the video up and down and adds random brightness changes, making it look like old film footage.

<https://youtu.be/0g1xDo-pwm0>

<https://youtu.be/PuQTd6D2Y2Y>

Scratchlines

Contents

- [Scratchlines](#)

This is the [Lines](https://www.mltframework.org/plugins/FilterLines/) [https://www.mltframework.org/plugins/FilterLines/] MLT filter.

Adds scratch lines over the picture.

<https://youtu.be/F8gZhHDQQBE>

<https://youtu.be/31aMxZBwqqY>

Vignette Effect

Contents

- [Vignette Effect](#)

This is the [Vignette](https://www.mltframework.org/plugins/FilterVignette/) [https://www.mltframework.org/plugins/FilterVignette/] MLT filter.

Vignette around a point with adjustable smoothness, radius, position and transparency.

<https://youtu.be/FJrYRD6RzJ4>

Audio channels

The *Audio channels* group in the Effect List has the following effects:

- balance
- copy_channels
- mono_to_stereo_splitter
- pan
- swap_channels

Audio Correction

Effects in this category

- [Contrast](#)
- [Gain](#)
- [Mono Amplifier](#)
- [Audio Correction - Mute](#)
- [Stereo Amplifier](#)
- [Volume \(keyframable\)](#)

Contrast

Contents

- [Contrast](#)

This is the [Sox contrast](https://www.mltframework.org/plugins/FilterSox-contrast/) [https://www.mltframework.org/plugins/FilterSox-contrast/] MLT filter.

Process audio using a SoX effect.

Gain

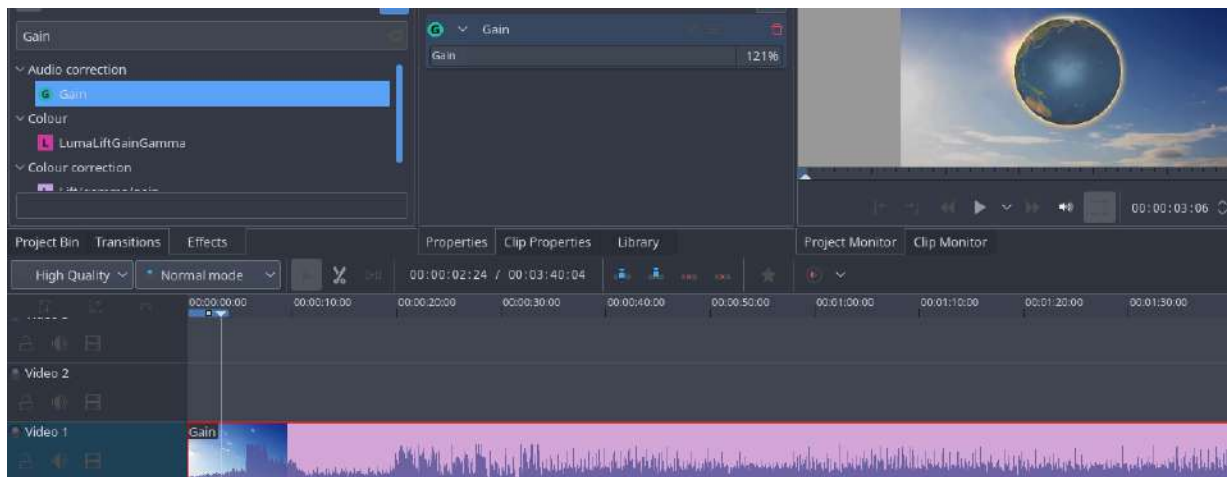
Contents

- [Gain](#)

An effect to increase or decrease the volume of a clip without the use of keyframes.

The effect changes volume it terms of percentage, not decibel like the effect [Volume \(Keyframable\)](#).

[[https://userbase.kde.org/Kdenlive/Manual/Effects/Audio_Correction/Volume_\(keyframable\)](https://userbase.kde.org/Kdenlive/Manual/Effects/Audio_Correction/Volume_(keyframable))].



Mono Amplifier

Contents

- [Mono Amplifier](#)

This is the LADSPA filter number [1048](#)

[<https://www.mltframework.org/plugins/FilterLadspa-1048/>] from MLT.

Audio Correction - Mute

Contents

- [Audio Correction - Mute](#)

This effect mutes the sound track on the video. The audio on the track will not be audible.

Stereo Amplifier

Contents

- [Stereo Amplifier](#)

This is the LADSPA filter number [1049](#)

[<https://www.mltframework.org/plugins/FilterLadspa-1049/>] from MLT.

Volume (keyframable)

Contents

- [Volume \(keyframable\)](#)

This is an audio effect to change the volume of a clip using keyframes (change of effect over time.) Volume (Keyframable) uses decibels as opposed to [Gain](https://userbase.kde.org/Kdenlive/Manual/Effects/Audio_Correction/Gain) [https://userbase.kde.org/Kdenlive/Manual/Effects/Audio_Correction/Gain].

Audio Effects

Contents

- [Audio Effects](#)

The following effects are available under the *Effects List* ▶ *Audio*. The links below are to the MLT framework documentation for these audio effects. Somewhat better documentation may be found at Steve Harris' LADSPA Plugin Docs [here](http://plugin.org.uk/ladspa-swh/docs/ladspa-swh.html) [http://plugin.org.uk/ladspa-swh/docs/ladspa-swh.html].

[4 x 4 pole allpass](https://www.mltframework.org/plugins/FilterLadspa-1218/) [https://www.mltframework.org/plugins/FilterLadspa-1218/]

[Aliasing](https://www.mltframework.org/plugins/FilterLadspa-1407/) [https://www.mltframework.org/plugins/FilterLadspa-1407/]

[Allpass delay line cubic spline interpolation](https://www.mltframework.org/plugins/FilterLadspa-1897/)

[https://www.mltframework.org/plugins/FilterLadspa-1897/]

[Allpass delay line linear interpolation](https://www.mltframework.org/plugins/FilterLadspa-1896/)

[https://www.mltframework.org/plugins/FilterLadspa-1896/]

[Allpass delay line noninterpolating](https://www.mltframework.org/plugins/FilterLadspa-1895/) [https://www.mltframework.org/plugins/FilterLadspa-1895/]

[AM pitchshifter](https://www.mltframework.org/plugins/FilterLadspa-1433/) [https://www.mltframework.org/plugins/FilterLadspa-1433/]

[Artificial latency](https://www.mltframework.org/plugins/FilterLadspa-1914/) [https://www.mltframework.org/plugins/FilterLadspa-1914/]

[Audio Divider \(Suboctave Generator\)](https://www.mltframework.org/plugins/FilterLadspa-1186/)

[https://www.mltframework.org/plugins/FilterLadspa-1186/]

[Audio Levels](https://www.mltframework.org/plugins/FilterAudiolevel/) [https://www.mltframework.org/plugins/FilterAudiolevel/]

[Audio Pan](https://www.mltframework.org/plugins/FilterPanner/) [https://www.mltframework.org/plugins/FilterPanner/]

[Auto phaser](https://www.mltframework.org/plugins/FilterLadspa-1219/) [https://www.mltframework.org/plugins/FilterLadspa-1219/]

[Barry's Satan Maximiser](https://www.mltframework.org/plugins/FilterLadspa-1408/) [https://www.mltframework.org/plugins/FilterLadspa-1408/]

[Bode frequency shifter](https://www.mltframework.org/plugins/FilterLadspa-1431/) [https://www.mltframework.org/plugins/FilterLadspa-1431/]

[Bode frequency shifter \(CV\)](https://www.mltframework.org/plugins/FilterLadspa-1432/) [https://www.mltframework.org/plugins/FilterLadspa-1432/]

[Chebyshev distortion](https://www.mltframework.org/plugins/FilterLadspa-1430/) [https://www.mltframework.org/plugins/FilterLadspa-1430/]

[Comb delay line cubic spline interpolation](https://www.mltframework.org/plugins/FilterLadspa-1888/)

[https://www.mltframework.org/plugins/FilterLadspa-1888/]

[Comb delay line linear interpolation](https://www.mltframework.org/plugins/FilterLadspa-1887/) [https://www.mltframework.org/plugins/FilterLadspa-1887/]

[Comb delay line noninterpolating](https://www.mltframework.org/plugins/FilterLadspa-1889/) [https://www.mltframework.org/plugins/FilterLadspa-1889/]

[Comb Filter](https://www.mltframework.org/plugins/FilterLadspa-1190/) [https://www.mltframework.org/plugins/FilterLadspa-1190/]

[Compand](https://www.mltframework.org/plugins/FilterAvfilter-compand/) [https://www.mltframework.org/plugins/FilterAvfilter-compand/]

[Constant Signal Generator](https://www.mltframework.org/plugins/FilterLadspa-1909/) [https://www.mltframework.org/plugins/FilterLadspa-1909/]

[Crossfade](https://www.mltframework.org/plugins/FilterLadspa-1915/) [https://www.mltframework.org/plugins/FilterLadspa-1915/]

[Crossfade \(4 outs\)](https://www.mltframework.org/plugins/FilterLadspa-1917/) [https://www.mltframework.org/plugins/FilterLadspa-1917/]

[Crossover distortion](https://www.mltframework.org/plugins/FilterLadspa-1404/) [https://www.mltframework.org/plugins/FilterLadspa-1404/]

[DC Offset Remover](https://www.mltframework.org/plugins/FilterLadspa-1207/) [https://www.mltframework.org/plugins/FilterLadspa-1207/]

[Decimator](https://www.mltframework.org/plugins/FilterLadspa-1202/) [https://www.mltframework.org/plugins/FilterLadspa-1202/]

[Declipper](https://www.mltframework.org/plugins/FilterLadspa-1195/) [https://www.mltframework.org/plugins/FilterLadspa-1195/]

[Delayorama](https://www.mltframework.org/plugins/FilterLadspa-1402/) [https://www.mltframework.org/plugins/FilterLadspa-1402/]

[Diode Processor](https://www.mltframework.org/plugins/FilterLadspa-1185/) [https://www.mltframework.org/plugins/FilterLadspa-1185/]

[DJ EQ](https://www.mltframework.org/plugins/FilterLadspa-1901/) [https://www.mltframework.org/plugins/FilterLadspa-1901/]

[DJ EQ \(mono\)](https://www.mltframework.org/plugins/FilterLadspa-1907/) [https://www.mltframework.org/plugins/FilterLadspa-1907/]

[DJ flanger](https://www.mltframework.org/plugins/FilterLadspa-1438/) [https://www.mltframework.org/plugins/FilterLadspa-1438/]

[Dyson compressor](https://www.mltframework.org/plugins/FilterLadspa-1403/) [https://www.mltframework.org/plugins/FilterLadspa-1403/]

[Exponential signal decay](https://www.mltframework.org/plugins/FilterLadspa-1886/) [https://www.mltframework.org/plugins/FilterLadspa-1886/]

[Fast overdrive](https://www.mltframework.org/plugins/FilterLadspa-1196/) [https://www.mltframework.org/plugins/FilterLadspa-1196/]

[Fast Lookahead limiter](https://www.mltframework.org/plugins/FilterLadspa-1913/) [https://www.mltframework.org/plugins/FilterLadspa-1913/]

[Flanger](https://www.mltframework.org/plugins/FilterLadspa-1191/) [https://www.mltframework.org/plugins/FilterLadspa-1191/]

[FM Oscillator](https://www.mltframework.org/plugins/FilterLadspa-1415/) [https://www.mltframework.org/plugins/FilterLadspa-1415/]

[Foldover distortion](https://www.mltframework.org/plugins/FilterLadspa-1213/) [https://www.mltframework.org/plugins/FilterLadspa-1213/]

[Fractionally Addressed Delay Line](https://www.mltframework.org/plugins/FilterLadspa-1192/) [https://www.mltframework.org/plugins/FilterLadspa-1192/]

[Frequency tracker](https://www.mltframework.org/plugins/FilterLadspa-1418/) [https://www.mltframework.org/plugins/FilterLadspa-1418/]

[Gate](https://www.mltframework.org/plugins/FilterLadspa-1410/) [https://www.mltframework.org/plugins/FilterLadspa-1410/]

[Giant flange](https://www.mltframework.org/plugins/FilterLadspa-1437/) [https://www.mltframework.org/plugins/FilterLadspa-1437/]

[Glame Bandpass Analog Filter](https://www.mltframework.org/plugins/FilterLadspa-1893/) [https://www.mltframework.org/plugins/FilterLadspa-1893/]

[Glame Bandpass Filter](https://www.mltframework.org/plugins/FilterLadspa-1892/) [https://www.mltframework.org/plugins/FilterLadspa-1892/]

[GLAME Butterworth Highpass](https://www.mltframework.org/plugins/FilterLadspa-1904/) [https://www.mltframework.org/plugins/FilterLadspa-1904/]

[GLAME Butterworth Lowpass](https://www.mltframework.org/plugins/FilterLadspa-1903/) [https://www.mltframework.org/plugins/FilterLadspa-1903/]

[Glame Butterworth X-over Filter](https://www.mltframework.org/plugins/FilterLadspa-1902/) [https://www.mltframework.org/plugins/FilterLadspa-1902/]

[Glame Highpass Filter](https://www.mltframework.org/plugins/FilterLadspa-1890/) [https://www.mltframework.org/plugins/FilterLadspa-1890/]

[Glame Lowpass Filter](https://www.mltframework.org/plugins/FilterLadspa-1891/) [https://www.mltframework.org/plugins/FilterLadspa-1891/]

[Gong beater](https://www.mltframework.org/plugins/FilterLadspa-1439/) [https://www.mltframework.org/plugins/FilterLadspa-1439/]

[Gong model](https://www.mltframework.org/plugins/FilterLadspa-1424/) [https://www.mltframework.org/plugins/FilterLadspa-1424/]

[GSM simulator](https://www.mltframework.org/plugins/FilterLadspa-1215/) [https://www.mltframework.org/plugins/FilterLadspa-1215/]

[GVerb](https://www.mltframework.org/plugins/FilterLadspa-1216/) [https://www.mltframework.org/plugins/FilterLadspa-1216/]

[Harmonic generator](https://www.mltframework.org/plugins/FilterLadspa-1220/) [https://www.mltframework.org/plugins/FilterLadspa-1220/]

[Hermes Filter](https://www.mltframework.org/plugins/FilterLadspa-1200/) [https://www.mltframework.org/plugins/FilterLadspa-1200/]

[Higher Quality Pitch Scaler](https://www.mltframework.org/plugins/FilterLadspa-1194/) [https://www.mltframework.org/plugins/FilterLadspa-1194/]

[Hilbert transformer](https://www.mltframework.org/plugins/FilterLadspa-1440/) [https://www.mltframework.org/plugins/FilterLadspa-1440/]

[Impulse convolver](https://www.mltframework.org/plugins/FilterLadspa-1199/) [https://www.mltframework.org/plugins/FilterLadspa-1199/]

[Inverter](https://www.mltframework.org/plugins/FilterLadspa-1429/) [https://www.mltframework.org/plugins/FilterLadspa-1429/]

[Karaoke](https://www.mltframework.org/plugins/FilterLadspa-1409/) [https://www.mltframework.org/plugins/FilterLadspa-1409/]

[L/C/R Delay](https://www.mltframework.org/plugins/FilterLadspa-1436/) [https://www.mltframework.org/plugins/FilterLadspa-1436/]

[LFO Phaser](https://www.mltframework.org/plugins/FilterLadspa-1217/) [https://www.mltframework.org/plugins/FilterLadspa-1217/]

[LS Filter](https://www.mltframework.org/plugins/FilterLadspa-1908/) [https://www.mltframework.org/plugins/FilterLadspa-1908/]

[Mag's Notch Filter](https://www.mltframework.org/plugins/FilterLadspa-1894/) [https://www.mltframework.org/plugins/FilterLadspa-1894/]

[Matrix Spatialiser](https://www.mltframework.org/plugins/FilterLadspa-1422/) [https://www.mltframework.org/plugins/FilterLadspa-1422/]

[Matrix: MS to Stereo](https://www.mltframework.org/plugins/FilterLadspa-1421/) [https://www.mltframework.org/plugins/FilterLadspa-1421/]

[Matrix: Stereo to MS](https://www.mltframework.org/plugins/FilterLadspa-1420/) [https://www.mltframework.org/plugins/FilterLadspa-1420/]

[Modulatable delay](https://www.mltframework.org/plugins/FilterLadspa-1419/) [https://www.mltframework.org/plugins/FilterLadspa-1419/]

[Mono to stereo](https://www.mltframework.org/plugins/FilterLadspa-1406/) [https://www.mltframework.org/plugins/FilterLadspa-1406/]

[Multiband EQ](https://www.mltframework.org/plugins/FilterLadspa-1197/) [https://www.mltframework.org/plugins/FilterLadspa-1197/]

[Multivoice Chorus](https://www.mltframework.org/plugins/FilterLadspa-1201/) [https://www.mltframework.org/plugins/FilterLadspa-1201/]

[Pitch Scaler](https://www.mltframework.org/plugins/FilterLadspa-1193/) [https://www.mltframework.org/plugins/FilterLadspa-1193/]

[Plate reverb](https://www.mltframework.org/plugins/FilterLadspa-1423/) [https://www.mltframework.org/plugins/FilterLadspa-1423/]

[Pointer cast distortion](https://www.mltframework.org/plugins/FilterLadspa-1910/) [https://www.mltframework.org/plugins/FilterLadspa-1910/]

[Rate shifter](https://www.mltframework.org/plugins/FilterLadspa-1417/) [https://www.mltframework.org/plugins/FilterLadspa-1417/]

[Retro Flanger](https://www.mltframework.org/plugins/FilterLadspa-1208/) [https://www.mltframework.org/plugins/FilterLadspa-1208/]

[Reverse Delay \(5s max\)](https://www.mltframework.org/plugins/FilterLadspa-1605/) [https://www.mltframework.org/plugins/FilterLadspa-1605/]

[Ringmod with LFO](https://www.mltframework.org/plugins/FilterLadspa-1189/) [https://www.mltframework.org/plugins/FilterLadspa-1189/]

[Ringmod with two inputs](https://www.mltframework.org/plugins/FilterLadspa-1188/) [https://www.mltframework.org/plugins/FilterLadspa-1188/]

[SC1](https://www.mltframework.org/plugins/FilterLadspa-1425/) [https://www.mltframework.org/plugins/FilterLadspa-1425/]

[SC2](https://www.mltframework.org/plugins/FilterLadspa-1426/) [https://www.mltframework.org/plugins/FilterLadspa-1426/]

[SC3](https://www.mltframework.org/plugins/FilterLadspa-1427/) [https://www.mltframework.org/plugins/FilterLadspa-1427/]

[SC4](https://www.mltframework.org/plugins/FilterLadspa-1882/) [https://www.mltframework.org/plugins/FilterLadspa-1882/]

[SC4 mono](https://www.mltframework.org/plugins/FilterLadspa-1916/) [https://www.mltframework.org/plugins/FilterLadspa-1916/]

[SE4](https://www.mltframework.org/plugins/FilterLadspa-1883/) [https://www.mltframework.org/plugins/FilterLadspa-1883/]

[Signal sifter](https://www.mltframework.org/plugins/FilterLadspa-1210/) [https://www.mltframework.org/plugins/FilterLadspa-1210/]

[Simple amplifier](https://www.mltframework.org/plugins/FilterLadspa-1181/) [https://www.mltframework.org/plugins/FilterLadspa-1181/]

[Simple Delay Line](https://www.mltframework.org/plugins/FilterLadspa-1043/) [https://www.mltframework.org/plugins/FilterLadspa-1043/]

[Simple delay line cubic spline interpolation](https://www.mltframework.org/plugins/FilterLadspa-1900/)

[https://www.mltframework.org/plugins/FilterLadspa-1900/]

[Simple delay line linear interpolation](https://www.mltframework.org/plugins/FilterLadspa-1899/)

[https://www.mltframework.org/plugins/FilterLadspa-1899/]

[Simple Delay Line, noninterpolating](https://www.mltframework.org/plugins/FilterLadspa-1898/) [https://www.mltframework.org/plugins/FilterLadspa-1898/]

[Simple High Pass Filter](https://www.mltframework.org/plugins/FilterLadspa-1042/) [https://www.mltframework.org/plugins/FilterLadspa-1042/]

[Simple Low Pass Filter](https://www.mltframework.org/plugins/FilterLadspa-1041/) [https://www.mltframework.org/plugins/FilterLadspa-1041/]

[Sine Oscillator \(Freq:Audio, Amp:audio\)](https://www.mltframework.org/plugins/FilterLadspa-1044/)

[https://www.mltframework.org/plugins/FilterLadspa-1044/]

[Sine Oscillator \(Freq:Audio, Amp:control\)](https://www.mltframework.org/plugins/FilterLadspa-1045/)

[https://www.mltframework.org/plugins/FilterLadspa-1045/]

[Sine Oscillator \(Freq:control, Amp:audio\)](https://www.mltframework.org/plugins/FilterLadspa-1046/)

[https://www.mltframework.org/plugins/FilterLadspa-1046/]

[Single band parametric](https://www.mltframework.org/plugins/FilterLadspa-1203/) [https://www.mltframework.org/plugins/FilterLadspa-1203/]

[Sinus wavewrapper](https://www.mltframework.org/plugins/FilterLadspa-1198/) [https://www.mltframework.org/plugins/FilterLadspa-1198/]

[Smooth Decimator](https://www.mltframework.org/plugins/FilterLadspa-1414/) [https://www.mltframework.org/plugins/FilterLadspa-1414/]

[Sox band](https://www.mltframework.org/plugins/FilterSox-band/) [https://www.mltframework.org/plugins/FilterSox-band/]

[Sox bass](https://www.mltframework.org/plugins/FilterSox-bass/) [https://www.mltframework.org/plugins/FilterSox-bass/]

[Sox echo](https://www.mltframework.org/plugins/FilterSox-echo/) [https://www.mltframework.org/plugins/FilterSox-echo/]

[Sox flanger](https://www.mltframework.org/plugins/FilterSox-flanger/) [https://www.mltframework.org/plugins/FilterSox-flanger/]

[Sox gain](https://www.mltframework.org/plugins/FilterSox-gain/) [https://www.mltframework.org/plugins/FilterSox-gain/]

[Sox phaser](https://www.mltframework.org/plugins/FilterSox-phaser/) [https://www.mltframework.org/plugins/FilterSox-phaser/]

[Sox stretch](https://www.mltframework.org/plugins/FilterSox-stretch/) [https://www.mltframework.org/plugins/FilterSox-stretch/]

[State Variable Filter](https://www.mltframework.org/plugins/FilterLadspa-1214/) [https://www.mltframework.org/plugins/FilterLadspa-1214/]

[Step Demuxer](https://www.mltframework.org/plugins/FilterLadspa-1212/) [https://www.mltframework.org/plugins/FilterLadspa-1212/]

[Surround matrix encoder](https://www.mltframework.org/plugins/FilterLadspa-1401/) [https://www.mltframework.org/plugins/FilterLadspa-1401/]

[Tape Delay Simulation](https://www.mltframework.org/plugins/FilterLadspa-1211/) [https://www.mltframework.org/plugins/FilterLadspa-1211/]

[Transient mangler](https://www.mltframework.org/plugins/FilterLadspa-1206/) [https://www.mltframework.org/plugins/FilterLadspa-1206/]

[Triple band parametric with shelves](https://www.mltframework.org/plugins/FilterLadspa-1204/) [https://www.mltframework.org/plugins/FilterLadspa-1204/]

[Valve rectifier](https://www.mltframework.org/plugins/FilterLadspa-1405/) [https://www.mltframework.org/plugins/FilterLadspa-1405/]

[Valve saturation](https://www.mltframework.org/plugins/FilterLadspa-1209/) [https://www.mltframework.org/plugins/FilterLadspa-1209/]

[VyNil \(Vinyl Effect\)](https://www.mltframework.org/plugins/FilterLadspa-1905/) [https://www.mltframework.org/plugins/FilterLadspa-1905/]

[Wave shaper](https://www.mltframework.org/plugins/FilterLadspa-1187/) [https://www.mltframework.org/plugins/FilterLadspa-1187/]

[Wave Terrain Oscillator](https://www.mltframework.org/plugins/FilterLadspa-1412/) [https://www.mltframework.org/plugins/FilterLadspa-1412/]

[z-1](https://www.mltframework.org/plugins/FilterLadspa-1428/) [https://www.mltframework.org/plugins/FilterLadspa-1428/]

Blur and Hide

Effects in this category

- [Auto Mask](#)
- [Blur](#)
- [Box Blur](#)
- [Glow](#)
- [Obscure](#)
- [Softglow](#)
- [Square Blur](#)

Auto Mask

Deprecated since version 21.08: Use [Motion Tracker](#) instead

Contents

- [Auto Mask](#)
 - [Demo](#)
 - [How to apply Auto Mask](#)
 - [Motion Tracking](#)
 - [Deleting Motion Tracking Data](#)

This effect can be used to mask peoples faces. It uses motion estimation to track subjects and mask faces. It is the [AutotrackRectangle](#)

[<https://www.mltframework.org/docs/FilterAutotrackRectangleDiscussion/>] MLT filter.

Demo

https://youtu.be/rRg_i5C8_Hc

How to apply Auto Mask

See video below on how to use this effect. Warning: The effect is not 100% reliable.

<https://youtu.be/ZD0W0sX6B5A>

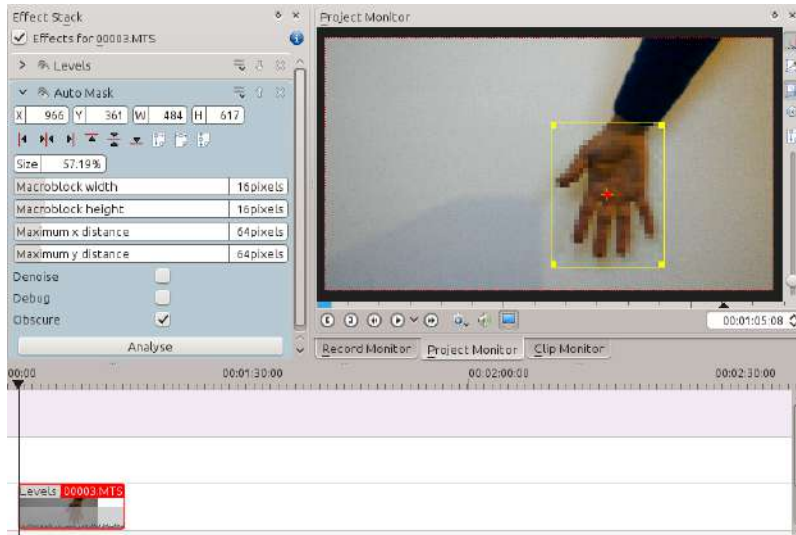
Motion Tracking

The Auto Mask effect can also be used to track motion of an object and use it later as keyframes for an effect / transition.

Note

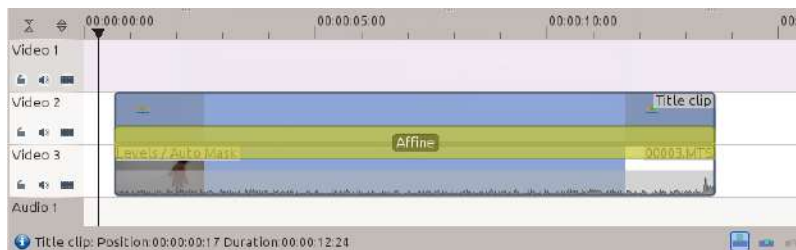
The method described here is a re-purposing of the motion tracking data that the Auto Mask effect calculates. You do not need to follow the method described below to generate an Auto Mask that will obscure faces. The instructions in the above video should be enough. Nor can you use the method described below to improve the tracking of the mask created by the Auto Mask effect.

To use this feature, first, add the clip you want to analyze in the timeline, and add the “Auto Mask” effect to it - Figure 1.

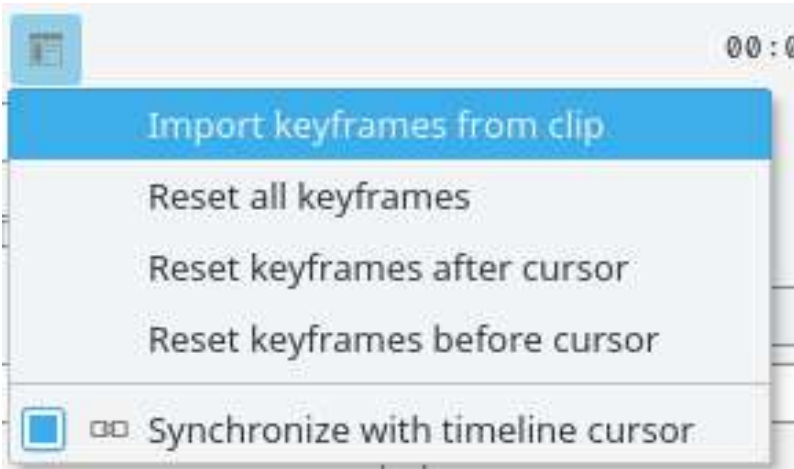


Go to the first frame where your object is visible, and adjust the yellow rectangle so that it surrounds the object, like the hand in Figure 1.

Then press the *Analyse* button in the effect options. This will start an analysis of the clip (you can follow its progress in the Project Bin view).



When the job is finished, the motion tracking data is stored in the clip properties. To use this data, you can, for example, add a title clip and affine transition over the clip you just analyzed, like in the screenshot in Figure 2.



Next step is to import the motion data in the transition. To do this, first, select the clip you have analyzed, then select the transition using the `Ctrl` key so that both items are selected. Finally, go in the transitions's Options menu.



Select *Import keyframes from clip*. You can now delete the “Auto Mask” effect from the clip in the timeline and play the project to see your title clip following the object.

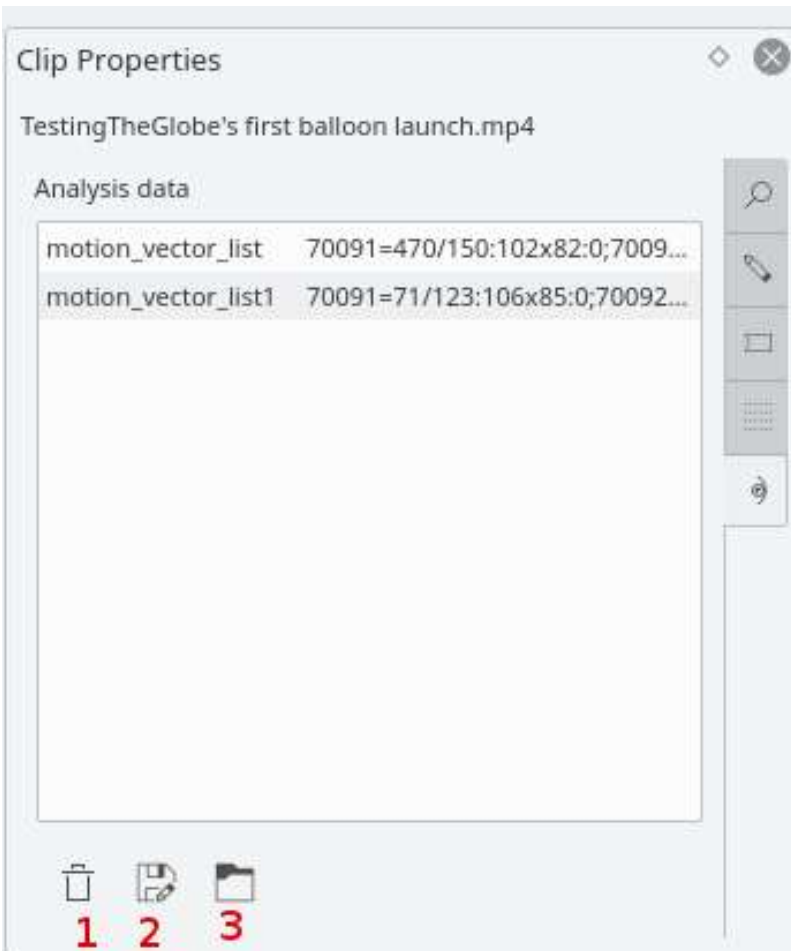


Checking the *Limit keyframe number* checkbox in the “Import Keyframes” dialog (Figure 4) will cause Kdenlive to only import every nth frame (where n is the number selected in the combo box). This is a useful feature if you want to manually edit the keyframes that are imported because it allows you to limit the number of keyframes you will need to manually edit. If this checkbox is not checked then you import a keyframe for every frame that is in the source clip.

[Deleting Motion Tracking Data](#)

The motion tracking data is saved with the [Clips](#). You can view this data from the clip properties Analysis tab - Figure 5. Delete the data using button

1.



Blur

Contents

- [Blur](#)

Blurs the entire image.



Box Blur

Contents

- [Box Blur](#)

This is the [Boxblur](https://www.mltframework.org/plugins/FilterBoxblur/) [https://www.mltframework.org/plugins/FilterBoxblur/] MLT filter.

Separate horizontal and vertical blur.

The unit for the boxblur “hori” and “vert” parameters is “pixels”. For each pixel in the image, the parameters indicate what pixels will be mixed with it in order to create the blur effect. For example, if you set “hori” to 5, then each pixel will be blurred with the sample that is 5 pixels away on each side.

https://youtu.be/MBO-STDoj_Y

- Not 100% sure if this sample is Box Blur or Square Blur. The caption on this sample was translated from Spanish. Original Spanish was “Difuminar en cuadro”.*

https://youtu.be/0Q_BtThC-V0

Glow

Contents

- [Glow](#)

This is the [Frei0r glow](https://www.mltframework.org/plugins/FilterFrei0r-glow/) [https://www.mltframework.org/plugins/FilterFrei0r-glow/] MLT filter.

Creates a Glamorous Glow.

<https://youtu.be/vh4lrkFaVWc>

<https://youtu.be/UtBWFrYN9kA>

Obscure

Contents

- [Obscure](#)

See the [Obscure](https://www.mltframework.org/plugins/FilterObscure/) [https://www.mltframework.org/plugins/FilterObscure/] MLT filter.

Hide a region of the clip.

<https://youtu.be/NL8cBqJc-WU>

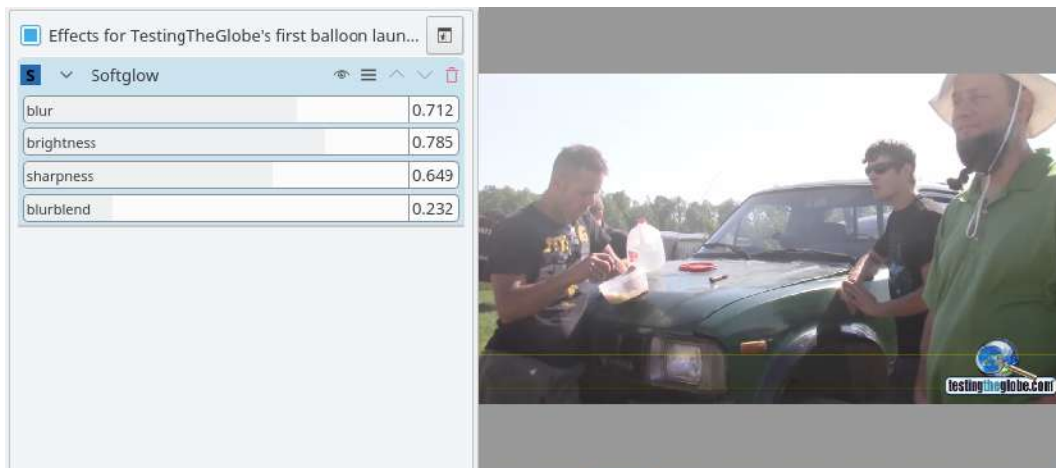
<https://youtu.be/oIu9FQwVx0c>

Softglow

Contents

- [Softglow](#)

This is the [Frei0r softglow](https://www.mltframework.org/plugins/FilterFrei0r-softglow/) [https://www.mltframework.org/plugins/FilterFrei0r-softglow/] MLT filter.



Softglow Applied



The frame without the Softglow

Square Blur

Contents

- [Square Blur](#)

This is the [Frei0r squareblur](https://www.mltframework.org/plugins/FilterFrei0r-squareblur/) [https://www.mltframework.org/plugins/FilterFrei0r-squareblur/] MLT filter.

Variable-size square blur.

<https://youtu.be/mNP3LTy7nao>

- Not 100% sure if this sample is Square Blur or Box Blur. The caption on this sample was translated from Spanish. Original Spanish was “Difuminar de cuadro”*

<https://youtu.be/dMJqPhO0DEQ>

Color

Effects in this category

- [Chroma Hold](#)
- [Greyscale](#)
- [Hue Shift](#)
- [Invert](#)
- [Primaries](#)
- [RGB Parade](#)
- [Saturation](#)
- [Sepia](#)
- [Technicolor](#)
- [Tint](#)

Chroma Hold

Contents

- [Chroma Hold](#)

This is the [Chroma_hold](https://www.mltframework.org/plugins/FilterChroma_hold/) [https://www.mltframework.org/plugins/FilterChroma_hold/] MLT filter.

Makes image greyscale except for chosen color.

<https://youtu.be/XDJEzN4XEXo>

<https://youtu.be/dXnFsOjS734>

Greyscale

Contents

- [Greyscale](#)

This is the [Greyscale](https://www.mltframework.org/plugins/FilterGreyscale/) [https://www.mltframework.org/plugins/FilterGreyscale/] MLT filter.

Convert colour image to greyscale.

<https://youtu.be/5L9KTfJFw80>

<https://youtu.be/bgNd2bHnvSY>

Hue Shift

Contents

- [Hue Shift](#)

This is the [Frei0r hueshift0r](https://www.mltframework.org/plugins/FilterFrei0r-hueshift0r/) [https://www.mltframework.org/plugins/FilterFrei0r-hueshift0r/] MLT filter.

Shifts the hue of a source image.

https://youtu.be/Mq_G-AFznoc

<https://youtu.be/J7RCdP0-4Qs>

<https://youtu.be/D9w-I8hb3kU>

Invert

Contents

- [Invert](#)

This is the [Invert](https://www.mltframework.org/plugins/FilterInvert/) [https://www.mltframework.org/plugins/FilterInvert/] MLT filter.

Inverts colors.

<https://youtu.be/7jQt8xmdSzI>

Primaries

Contents

- [Primaries](#)

This is the [Frei0r primaries](https://www.mltframework.org/plugins/FilterFrei0r-primaries/) [https://www.mltframework.org/plugins/FilterFrei0r-primaries/] MLT filter.

<https://youtu.be/gjgQphzQZrQ>

RGB Parade

Contents

- [RGB Parade](#)

This is the [Frei0r rgbparade](https://www.mltframework.org/plugins/FilterFrei0r-rgbparade/) [https://www.mltframework.org/plugins/FilterFrei0r-rgbparade/] MLT filter.

In ver 17.04 this is found in the [Analysis and Data](#) category of Effects.

Displays a histogram of R, G and B components of the video data.

<https://youtu.be/KaxBEhzS8fk>

This is different from the [RGB Parade](#) from the View Menu because the Effect version writes the histogram into the output video whereas the View Menu version just displays the histogram widget in the application while you preview your project.

Saturation

Contents

- [Saturation](#)

This is the [Frei0r saturat0r](https://www.mltframework.org/plugins/FilterFrei0r-saturat0r/) [https://www.mltframework.org/plugins/FilterFrei0r-saturat0r/] MLT filter.

Adjusts the saturation of a source image.

See [TheDiveo's blog](https://thediveo-e.blogspot.com/2013/10/grading-of-hero-3-above-waterline.html) [https://thediveo-e.blogspot.com/2013/10/grading-of-hero-3-above-waterline.html] for an example of the usage of the Saturation effect.

<https://youtu.be/rWqIQaWtCFs>

<https://youtu.be/reOG42ZrZA>

Sepia

Contents

- [Sepia](#)

This is the [Sepia](https://www.mltframework.org/plugins/FilterSepia/) [https://www.mltframework.org/plugins/FilterSepia/] MLT filter.

Turns clip colors to sepia.

<https://youtu.be/gD5bJBjp79M>

<https://youtu.be/wVFfb4E9ztQ>

Technicolor

Contents

- [Technicolor](#)

This is the [Tcolor](https://www.mltframework.org/plugins/FilterTcolor/) [https://www.mltframework.org/plugins/FilterTcolor/] MLT filter.

<https://youtu.be/hDLp5IymciA>

Tint

Contents

- [Tint](#)

This is the [Frei0r tint0r](https://www.mltframework.org/plugins/FilterFrei0r-tint0r/) [https://www.mltframework.org/plugins/FilterFrei0r-tint0r/] MLT filter.

<https://youtu.be/kq7w1ZdS6GI>

Color Correction

Effects in this category

- [3_point balance](#)
- [Apply LUT](#)
- [Example of LUT Filter](#)
- [Manually adjust the clip](#)
- [Bezier Curves](#)
- [Brightness](#)
- [Brightness \(keyframable\)](#)
- [Curves](#)
- [Gamma](#)
- [Levels](#)
- [Lift/Gamma/Gain](#)
- [RGB adjustment](#)
- [SOP](#)
- [White Balance](#)
- [White Balance \(LMS\)](#)

3 point balance

Contents

- [3_point balance](#)

This is the [Frei0r three_point_balance](https://www.mltframework.org/plugins/FilterFrei0r-three_point_balance/) [https://www.mltframework.org/plugins/FilterFrei0r-three_point_balance/] MLT filter.

<https://youtu.be/ZFhfTs17St8>

Apply LUT

Contents

- [Apply LUT](#)
- [Example of LUT Filter](#)
- [Manually adjust the clip](#)

This is the [Avfilter lut3d](https://www.mltframework.org/plugins/FilterAvfilter-lut3d/) [https://www.mltframework.org/plugins/FilterAvfilter-lut3d/] MLT filter.

Apply a 3D Look Up Table (LUT) to the video. A LUT is an easy way to correct the color of a video.

Supported formats:

.3dl (AfterEffects), .cube (Iridas), .dat (DaVinci), .m3d (Pandora)

Parameters:

Filename: File containing the LUT to be applied.

Interpolation Method: Can be Nearest, Trilinear or Tetrahedral. Defaults to Tetrahedral.

Example of LUT Filter

Example of Manual workflow Before and after applying LUT

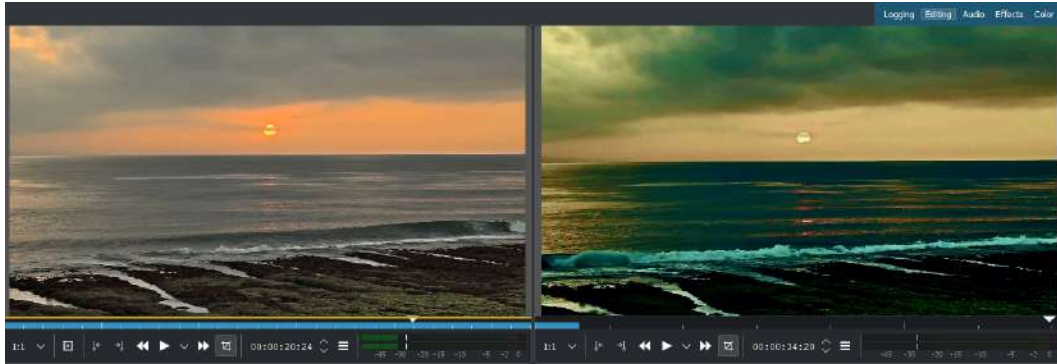


Figure 1 - View of the interface

Simple steps:

1. FREE LUTS – For our example, we rely on the files that can be downloaded from the address <https://goo.gl/OeIFkr>
2. SEVEN CUBE FILES – Download the zip file, just extract it into a folder: each of the files, which is then a simple text file, represents a Look Up Table. Those examples were developed inspired by famous films (whose titles are parodied in the file name).
3. Once package is downloaded and unpacked, open effects menu in the right corner of the program window.

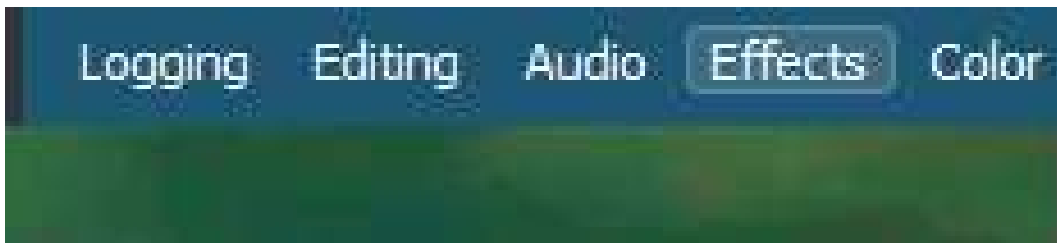


Figure 2 - View of main menu.

4. Then you need to find the LUT effect to apply. There are several, the majority of which are maintained only for backwards compatibility but not for any result. The right one is Apply LUT, in the section Color correction.

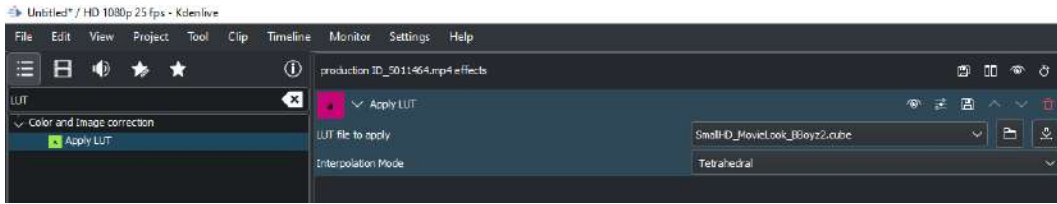


Figure 3 - Apply LUT

5. BALANCING – Adjusting color, for example col 3-point balance, you need to insert the effect above that of the LUT. This allows you to correct the image before it reaches the LUT, then obtaining homogeneous results with other clips.

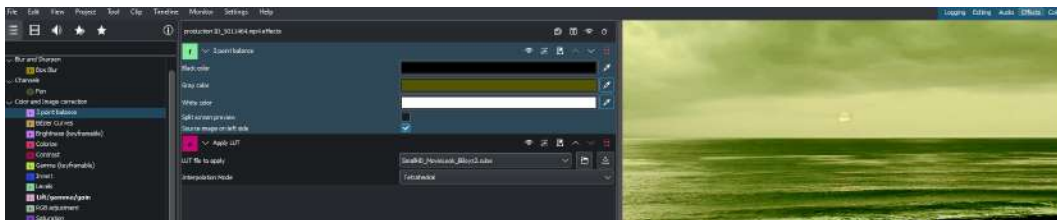


Figure 4 - Colour balance

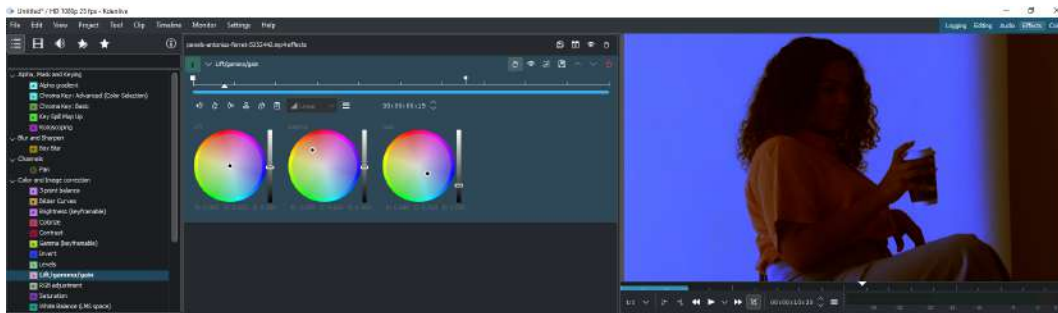
Manually adjust the clip

In addition to the LUT, other effects can be used to manually correct the colors

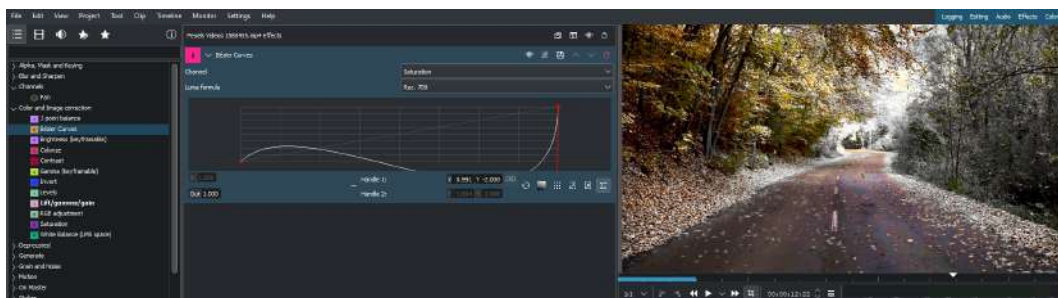


1. CHANGE OF SHADES – This allows, for example, to color the background in blue and the actor in orange, widely used in classic

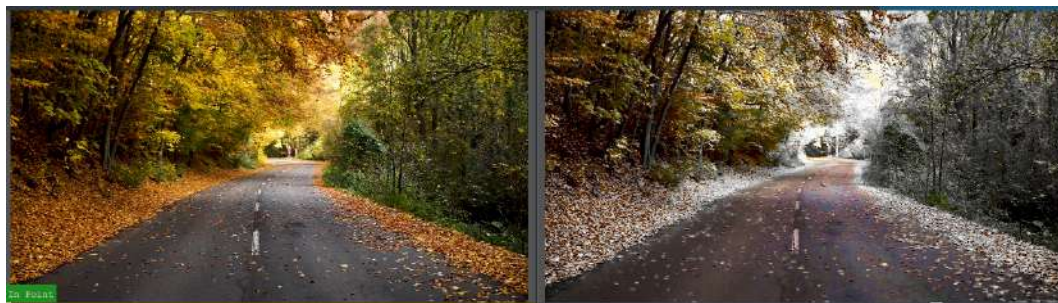
Hollywood postproduction setup. A faster but less detailed alternative is Hue shift, which shifts all shades towards red or blue.



2. SATURATION – After changing the coloration of the image, with one of the two effects that is presented, this allows saturate the color differently depending on the brightness by drawing a curve on the canal saturation.



Before and After



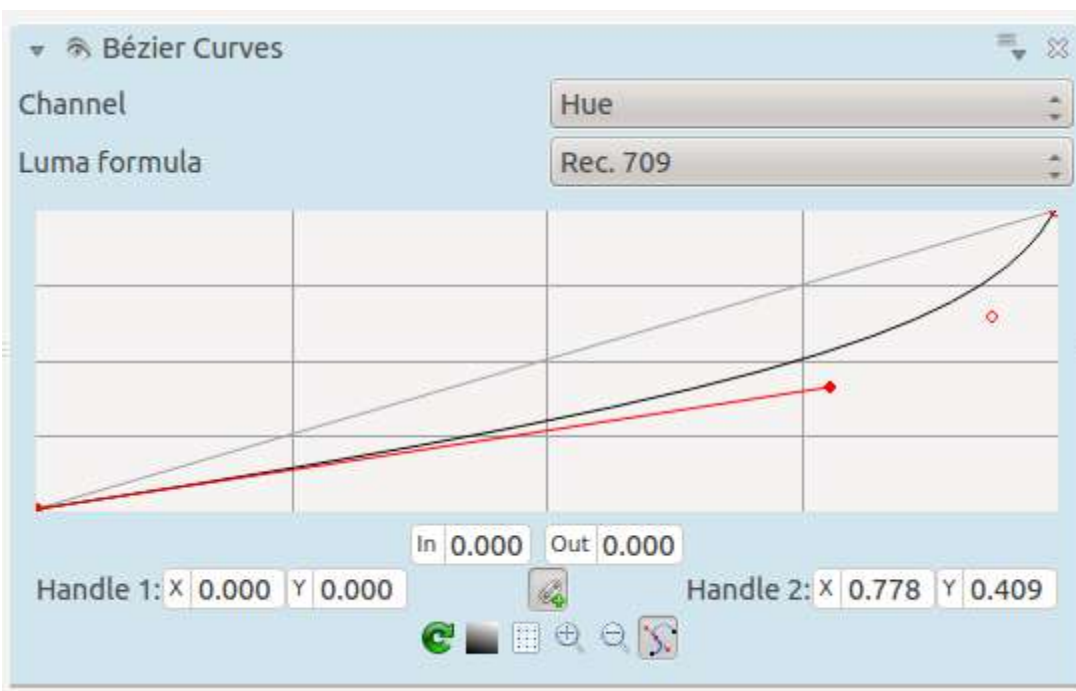
Bezier Curves

Contents

- [Bezier Curves](#)

This is the [Frei0r curves](https://www.mltframework.org/plugins/FilterFrei0r-curves/) [https://www.mltframework.org/plugins/FilterFrei0r-curves/] MLT filter by Maksim Golovkin and Till Theato.

Adjusts luminance or color channel intensity with curve level mapping.



See [TheDiveo blog](http://thediveo-e.blogspot.de/2013/10/grading-of-hero-3-above-waterline.html) [http://thediveo-e.blogspot.de/2013/10/grading-of-hero-3-above-waterline.html] for an example of how to use this effect to colour grade clips.

[Curves](#) is also an interface into this Frie0r filter.

Brightness

Contents

- [Brightness](#)

This is the [Frei0r brightness filter](https://www.mltframework.org/plugins/FilterFrei0r-brightness/) [https://www.mltframework.org/plugins/FilterFrei0r-brightness/] MLT filter.

Adjusts the brightness of a source image.

<https://youtu.be/qDZVBPoaEzY>

<https://youtu.be/t4SfVod5zCE>

Brightness (keyframable)

Contents

- [Brightness \(keyframable\)](#)

This is the [Brightness](https://www.mltframework.org/plugins/FilterBrightness/) [https://www.mltframework.org/plugins/FilterBrightness/] MLT filter.

Curves

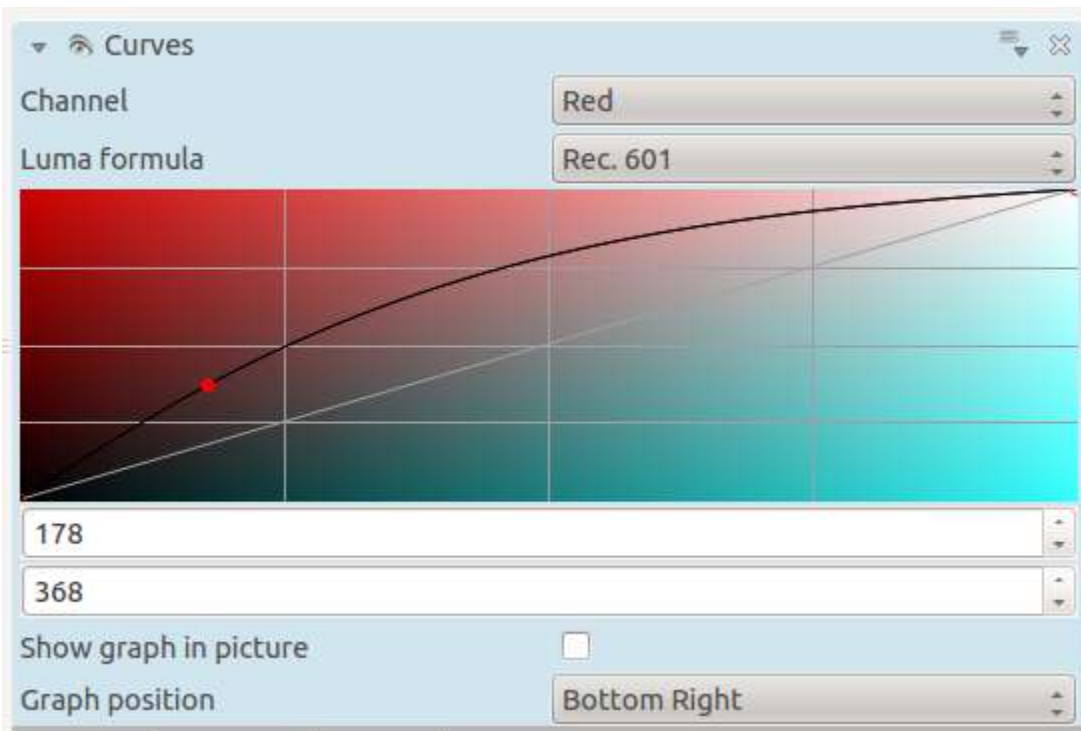
Contents

- [Curves](#)

This is the [Frei0r curves](https://www.mltframework.org/plugins/FilterFrei0r-curves/) [https://www.mltframework.org/plugins/FilterFrei0r-curves/] MLT filter.

Adjusts luminance or color channel intensity with curve level mapping.

The [Bezier Curves](#) filter is also an interface to this same Frei0r filter.



<https://youtu.be/xJ0SyVzssfI>

<https://youtu.be/Uiu6KfM3T9s>

<https://youtu.be/6S6SvdrxFBg>

Gamma

Contents

- [Gamma](#)

This is the [Gamma](https://www.mltframework.org/plugins/FilterGamma/) [https://www.mltframework.org/plugins/FilterGamma/] MLT filter.

Changes gamma color value.

<https://youtu.be/bceEqjbt2XM>

<https://youtu.be/v5KRzActKCQ>

Levels

Contents

- [Levels](#)

This is the [Frei0r levels](https://www.mltframework.org/plugins/FilterFrei0r-levels/) [https://www.mltframework.org/plugins/FilterFrei0r-levels/] MLT filter.

<https://youtu.be/iMbohQnyFV4>

Lift/Gamma/Gain

Contents

- [Lift/Gamma/Gain](#)

This is the [Lift_gamma_gain](https://www.mltframework.org/plugins/FilterLift_gamma_gain/) [https://www.mltframework.org/plugins/FilterLift_gamma_gain/] MLT filter.

Allows you to adjust the lift (impacting mainly shadows), gain (impacting mainly highlights) and gamma (impacting mainly midtones). The color wheel inputs allow to control the degree to which these effects apply to the R, G & B color channels. By default, the white color at the centre of the colour wheel is selected, meaning the effect applies equally to all three color channels. By choosing another color on the color wheel, the effect will be applied on the R, G & B channels in proportion to the RGB components that make up that color.

RGB adjustment

Contents

- [RGB adjustment](#)

This filter is for simple manual color adjustment by RGB channel, either through adding constants, or changing the channel gammas or gains.

Simple means that it works channel-wise, no crosstalk. The off-diagonal elements of the transform matrix are zero - no color crosstalk, no color space rotation. But this should be sufficient for many tasks. For example, when shooting under tungsten light, the blue signal will not migrate into red, it will simply be too small. Amplifying the blue (and a bit of green too) should be all that is needed. Similar, an underwater shot will simply be red deficient, needing some red boost, etc.

Parameters:

R,G,B:

These determine the change in each of the three color channels.

Action:

- *Add constant* adds a fixed value between -150 and +150 (this is sometimes called “black level” or “setup”).
- *Change gamma* changes channel gamma between 0.3333 and 3.0.
- *Multiply* multiplies channel with a value between 0.3333 and 3.0 (sometimes called “gain” or “contrast”).

Note

To apply more than one action above, use cascaded instances of `coloradj_RGB`.

Note

Add constant simply shifts the RGB “cube” colorspace. This means, that on one end we are left with empty space, which is filled with zeros, and on the other end, values can “fall outside”, and in this case they will be truncated to max (255). *Change gain* changes the size of the cube, keeping the “black” corner fixed, affecting predominately highlights, but the other end can still “fall out” and get 255 truncated. *Change gamma* keeps the whole cube in the same place, just stretches and squeezes its interior, so no zero filling or truncation is necessary.

To visualize this plugin’s actions, apply it to a gray gradient, and watch the result with “pr0file”.

Keep luma:

Fixes the luma value, so that the sliders only affect color.

This is the [Frei0r coloradj_rgb](https://www.mltframework.org/plugins/FilterFrei0r-coloradj_rgb/) [https://www.mltframework.org/plugins/FilterFrei0r-coloradj_rgb/] MLT filter.

SOP

Contents:

- [SOP/Sat Effect](#)

SOP/Sat Effect

Contents

- [SOP/Sat Effect](#)

This is the [FilterFrei0r-sopsat](https://www.mltframework.org/plugins/FilterFrei0r-sopsat/) [https://www.mltframework.org/plugins/FilterFrei0r-sopsat/] MLT framework filter. It changes Slope, Offset, and Power of the color components, and the overall Saturation, according to the ASC CDL (Color Decision List) [reference](https://en.wikipedia.org/wiki/ASC_CDL) [https://en.wikipedia.org/wiki/ASC_CDL].

Changing the slope means multiplying the pixel value with a constant value. Black pixels will remain black, while as brighter ones will be changed. All effects can be observed well when applied on a greyscale gradient and looking at the RGB Parade monitor.

You can use this effect to achieve proper white balance.

SOP/Sat	
Slope Red	100
Slope Green	100
Slope Blue	100
Slope Alpha	100
Offset Red	0
Offset Green	0
Offset Blue	0
Offset Alpha	0
Power Red	100
Power Green	100
Power Blue	100
Power Alpha	100
Overall Saturation	100

This filter implements a standard way of color correction proposed by the American Society of Cinematographers: The Color Decision List, also known as the ASC CDL.

More information about the ASC CDL can be found on [wikipedia](https://en.wikipedia.org/wiki/ASC_CDL) [https://en.wikipedia.org/wiki/ASC_CDL].

The ASC CDL is a standard format for basic primary color correction (primary meaning affecting the whole image and not only selected parts).

Basically there are two stages in the correction: 1. SOP correction for each channel separately 2. Overall saturation correction

All corrections work on $[0,1]$, so the RGB(A) values need to be transposed from $\{0, \dots, 255\}$ to $[0,1]$.

1. SOP correction

- **Slope:** $out = in * slope;$ $0 \leq slope < \infty$
- **Offset:** $out = in + offset;$ $-\infty < offset < \infty$
- **Power:** $out = in^{power};$ $0 < power < \infty$

2. Saturation

- **Luma:** $Y = 0.2126 R + 0.7152 G + 0.0722 B$ (according to Rec. 709)
- **For all channels:** $out = luma + sat * (in - luma)$

As the values may exceed 1 (or 0), they need to be clamped where necessary.

See [Granjow's blog](#) where he uses the effect to adjust white balance of a clip.

White Balance

Contents

- [White Balance](#)

This is the [Frei0r balanc0r](https://www.mltframework.org/plugins/FilterFrei0r-balanc0r/) [https://www.mltframework.org/plugins/FilterFrei0r-balanc0r/] MLT filter.

Adjust the white balance / color temperature.

https://youtu.be/foPVqzBV_vM

<https://youtu.be/BqmMi6L945E>

White Balance (LMS)

Contents

- [White Balance \(LMS\)](#)

This is the [Frei0r colgate](https://www.mltframework.org/plugins/FilterFrei0r-colgate/) [https://www.mltframework.org/plugins/FilterFrei0r-colgate/] MLT filter by Steiner H. Gunderson.

Do simple color correction, in a physically meaningful way.

Parameters:

Neutral Color: Choose a color from the source image that should be white.

Color Temperature: Choose an output color temperature, if different from 6500 K.

Crop and Transform

Effects in this category

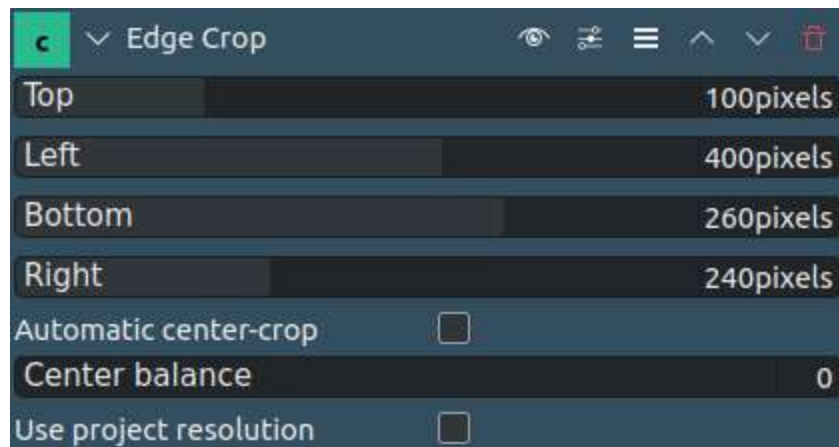
- [Edge Crop](#)
- [Letterboxed](#)
- [Position and Zoom](#)
- [Rotate and Shear](#)
- [Rotate](#)
- [Crop, Scale and Tilt](#)
- [Transform](#)

Edge Crop

Contents

- [Edge Crop](#)

This effect by Dan Dennedy trim the edges of a clip.



LetterB0xed

Contents

- [LetterB0xed](#)

This is the [Frei0r letterb0xed](https://www.mltframework.org/plugins/FilterFrei0r-letterb0xed/) [https://www.mltframework.org/plugins/FilterFrei0r-letterb0xed/] MLT filter.

Adds Black Borders at top and bottom for Cinema Look.

<https://youtu.be/9Ldj0QZPzs>

https://youtu.be/JP8wQW-_Qw

Position and Zoom

Contents

- [Position and Zoom](#)

Adjust size and position of clip using smooth affine transformations.
Formerly known as “Pan and Zoom”.

In this example we have two keyframes in the pan and zoom, one at the beginning and one at the end. Size is 25% at the start keyframe and 100% at the end. The images are centered on the screen at both keyframes.

<https://youtu.be/0aSe1y6e4RE>

See also this [Chroma Key](#) that describes how to use:

- Alpha Manipulation -> [Chroma Key](#)
- [Rotoscoping](#)
- [Composite Transition](#)
- Crop and Transform -> Pan and Zoom effect
- Enhancement -> [Sharpen](#)
- Alpha Manipulation -> [Alpha operations](#)

[Tutorial: How to do pan and zoom with Kdenlive video editor - Peter Thomson\(YouTube\)](#) [<https://youtu.be/B8ZPoWaxQrA>]

Rotate and Shear

Contents

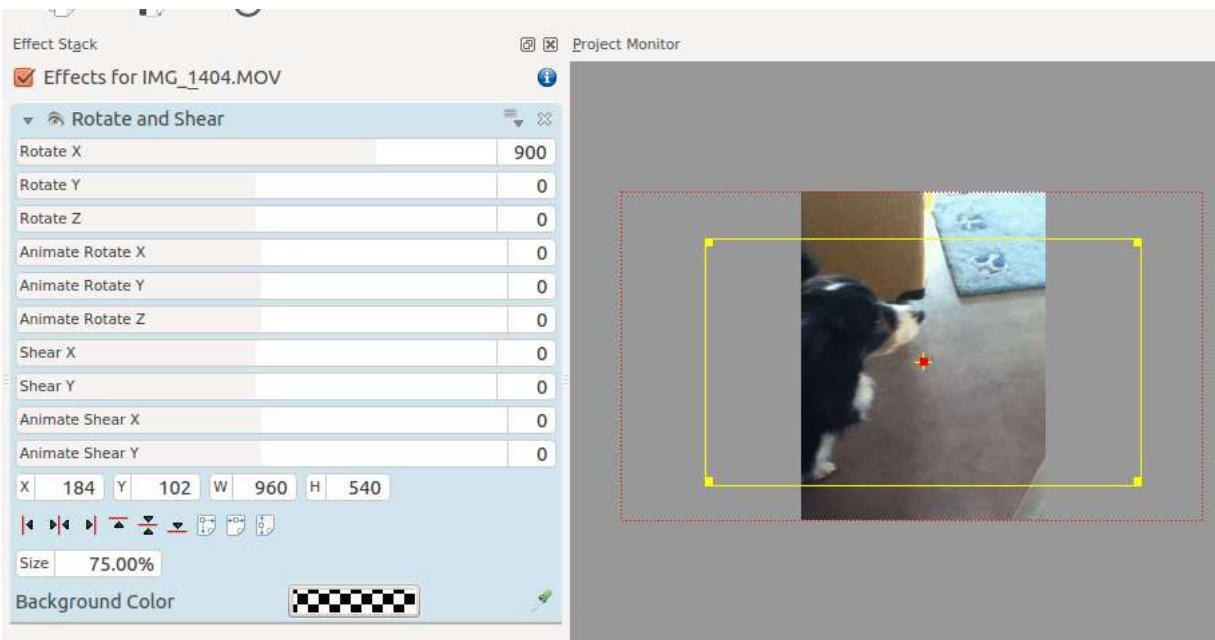
- [Rotate and Shear](#)

This would appear to be the [Affine](https://www.mltframework.org/plugins/FilterAffine/) [https://www.mltframework.org/plugins/FilterAffine/] MLT filter as defined in `rotation.xml (/usr/share/kdenlive/effects/)`.

Rotate clip in any 3 directions.

This screen shot shows settings for Rotate and Shear that can correct wide-screen footage shot while holding the camera the wrong orientation.

Do a rotate X of 900 units (the units are in tenths of a degree). You can also adjust the size with this effect.



<https://youtu.be/WadSGu05HAW>

Rotate

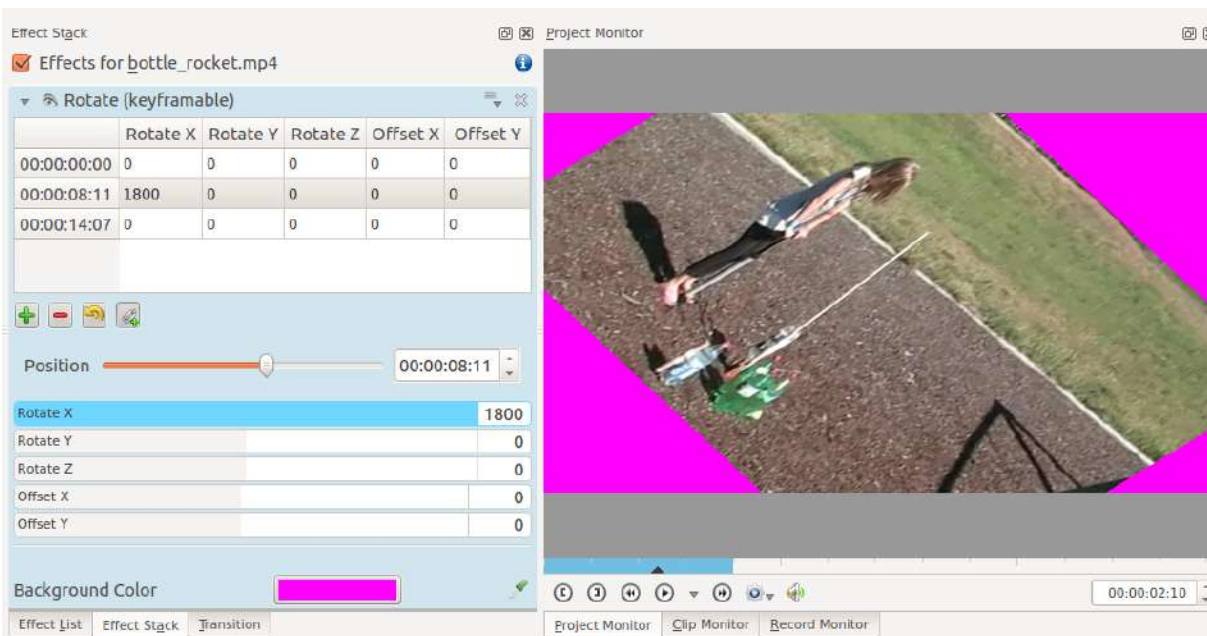
Contents

- [Rotate](#)

Rotates the image.

See also [Affine Transition](#) that can also achieve a similar effect.

<https://youtu.be/Wfx1Cp5g6Mo>



The units of rotation are tenths of a degree; e.g., 1800 = 180 degree rotation.

Rotate X rotates the frame in the plane of the screen.

Rotate Y and **Rotate Z** create the illusion of 3D rotation when used dynamically with keyframes.

The difference between **Rotate Y** and **Rotate Z** is that the apparent rotation in **Rotate Y** appears to be around a horizontal axis. The rotation in **Rotate Z** appears to be around a vertical axis.

Crop, Scale and Tilt

Contents

- [Crop, Scale and Tilt](#)

This effect was previously named as **Scale and Tilt** and **Crop, Scale and Position**.

This is the [Frei0r scale0tilt](https://www.mltframework.org/plugins/FilterFrei0r-scale0tilt/) [https://www.mltframework.org/plugins/FilterFrei0r-scale0tilt/] MLT filter from Richard Spindler.

Scales, Tilts and Crops an Image

<https://youtu.be/WV4bocj7ygw>

See also [Position and Zoom](#) which can do very similar things and may do them better.

Transform

Contents

- [Transform](#)

This is the [Qtblend](https://www.mltframework.org/plugins/FilterQtblend/) MLT filter.

Manipulates Position, scale and opacity.

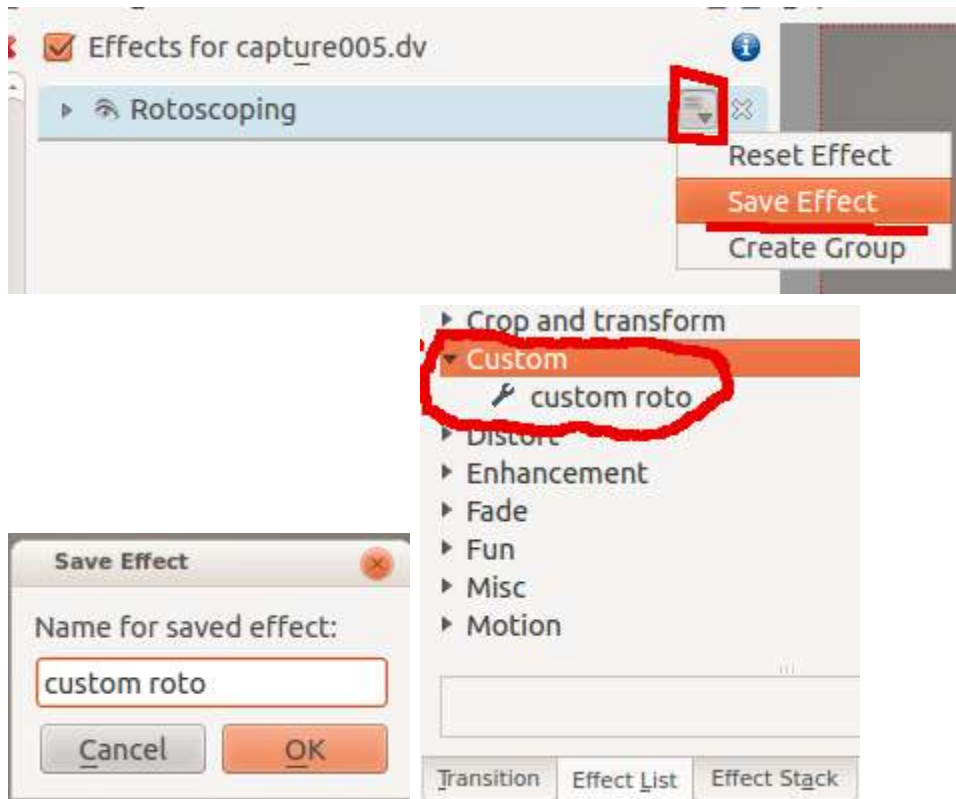
The Composition mode parameter of the effect is documented on the Qt documentation under [QPainter CompositionMode](https://doc.qt.io/qt-5/qpainter.html#CompositionMode-enum).

Custom Effects

Contents

- [Custom Effects](#)

The **Custom Group** in the **Effect List** is where effects appear when you choose *Save Effect* from an effect in the [Effects](#).



Distort

Effects in this category

- [Distort - Corners](#)
- [Defish](#)
- [Lens Correction](#)
- [Mirror](#)
- [Pixelize](#)
- [Wave](#)

Distort - Corners

Contents

- [Distort - Corners](#)

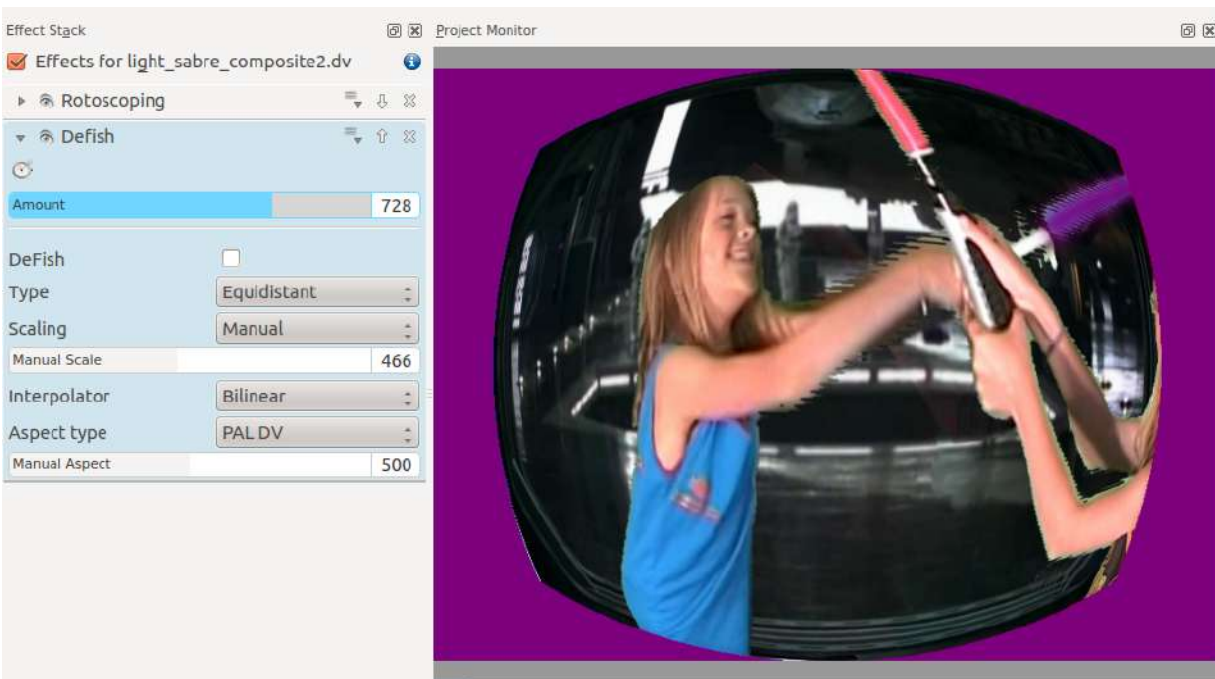


Defish

Contents

- [Defish](#)
 - [PARAMETERS](#)
 - [SOME APPLICATION NOTES](#)

This effect can transform footage shot with a fisheye lens, to look like it was shot with a rectilinear lens, and vice versa. It can also be used to straighten the video that was shot with one of these wide angle converters, which are only slightly curvy, or with a semi-fisheye camera, like the GoPro Hero.



PARAMETERS

“Amount”

Controls the amount of (de)distortion applied to the video. It controls the ratio of fisheye focal length to image half diagonal, but in an nonlinear inverse way, to make the control more “comfortable”. It can be adjusted beyond “reasonable” values (which differ between the mapping function types), to produce some looney effects. When exploring this range, and the image disappears, check the scaling, could be that the image became too big or too small to see. For some unreasonable values the image might indeed disappear, when there are math overflows or imaginary results... (types 1 and 2 are more prone to image vanishing). Anyway, when working in the “special effect” range, it is always worth to try manual scaling. If the video contains zooming through a curvy wide angle adaptor, the needed amount will vary. In this case use keyframing.

“DeFish”

If checked, the transform direction is from fisheye to rectilinear, when not checked, it is rectilinear to fisheye.

“Type”

Selects the fisheye angular mapping function used, among four possibilities:

- equidistant
- orthographic
- equiarea
- stereographic

Wikipedia has a nice article about these.

“Scaling”

Select among three auto scaling options and manual scale:

- scale to fill
- keep center scale
- scale to fit
- manual scale

“Fill” means that no empty borders will be left, but some of the input image will be cropped. “Fit” means that no part of the input image will be cropped, but there will be blank areas at the borders.

“Manual Scale”

When “Scaling” is set to manual scale, this control directly affects the image scale, from 1/100 to 100X size. Only has effect when “Scaling” is set to manual!

“Interpolator”

Selects among seven different interpolators. This allows one to make a quality/speed tradeoff. The interpolators are ordered from fast, low quality to (very) slow high quality. The spline interpolating polynomials are from Helmut Dersch. For realtime use, option 0 is the fastest, in fact it is equal to no interpolation. In most cases bilinear should be good enough, and on a decent machine should still run in real time. Beyond bicubic, the quality gain is marginal for a single resampling. Lanczos takes an eternity!

- Nearest neighbor
- Bilinear
- Bicubic smooth
- Bicubic sharp
- Spline 4x4
- Spline 6x6
- Lanczos 16x16

“Aspect Type”

Selects among four pixel aspect ratio presets, and manual: To get the math right, Defish0r needs to know the pixel aspect ratio.

- Square pixels
- PAL DV 1.067
- NTSC DV 0.889
- HDV 1.333
- manual variable

“Manual aspect”

When “Aspect Type” is set to option manual variable, this control directly affects the pixel aspect ratio, from 0.5 to 2. Only has effect when “Aspect Type” is set to manual!

SOME APPLICATION NOTES

1. Tweaking the parameters for best defish

Take a shot of something like a brick wall or bathroom tiles, that has a lot of horizontal and vertical straight lines. Be careful to keep the optical axis as perpendicular as possible to the wall (=keep a maximally symmetrical image in the viewfinder). Use this image to tweak the parameters, primarily amount, type and aspect.

2. Some examples of Defish0r abuse

These were tried with PAL DV. These examples work best, when there is some interesting action near the center of the image.

For a kind of roundish kaleidoscope, try this:

Amount=775, Defish = OFF, Type = equidistant, Scaling = manual scale,
Manual Scale = 300...400

Another crazy distortion:

Amount = 921, Defish = OFF, Type = stereographic, Scaling = manual scale,
Manual Scale = 191

For an effect, reminiscent of some scenes from the “2001 Space Odyssey” try this:

Amount = 900, Defish = ON, Type = stereographic, Scaling = fill

Lens Correction

Contents

- [Lens Correction](#)

This is the [Frei0r lenscorrection](https://www.mltframework.org/plugins/FilterFrei0r-lenscorrection/) [https://www.mltframework.org/plugins/FilterFrei0r-lenscorrection/] MLT filter.

Allows compensation of lens distortion.

<https://youtu.be/axQdm482Uto>

<https://youtu.be/cEwZzNRiVks>

Mirror

Contents

- [Mirror](#)

This is the [Mirror](https://www.mltframework.org/plugins/FilterMirror/) [https://www.mltframework.org/plugins/FilterMirror/] MLT filter.

Provides various mirror and image reversing effects.

<https://youtu.be/ao32j0dSVII>

<https://youtu.be/3-hcMZu52Vk>

Pixelize

Contents

- [Pixelize](#)

This is the [Frei0r pixeliz0r](https://www.mltframework.org/plugins/FilterFrei0r-pixeliz0r/) [https://www.mltframework.org/plugins/FilterFrei0r-pixeliz0r/] MLT filter.

Pixelize input image.

<https://youtu.be/iFj1y1OES2Q>

<https://youtu.be/jvuFSVGbVRg>

Wave

Contents

- [Wave](#)

This is the [Wave](https://www.mltframework.org/plugins/FilterWave/) MLT filter.

Make waves on your clip with keyframes.

https://youtu.be/8VDzfR-q_sc

<https://youtu.be/KEjSvZ6vvc>

Enhancement

Effects in this category

- [Denoiser](#)
- [Sharpen](#)
- [Spill Suppress](#)

Denoiser

Contents

- [Denoiser](#)
 - [Tutorial 1](#)

This is the [Frei0r hqdn3d](https://www.mltframework.org/plugins/FilterFrei0r-hqdn3d/) [https://www.mltframework.org/plugins/FilterFrei0r-hqdn3d/] MLT filter - a High quality 3D denoiser from Mplayer.

Tutorial 1

Shows usage of the denoiser effect as well as: [Chroma Key](#), [Alpha operations](#) - shrinkhard and [Key Spill Mop Up](#).

<https://youtu.be/143Hz7YEcYU>

Sharpen

Contents

- [Sharpen](#)

The sharpen tool is a port of [unsharp_mask](#) [https://en.wikipedia.org/wiki/Unsharp_masking] from Mplayer. The parameters are the usual ones for unsharp masking. The “size” means the size of the blur, and the amount is how much of the blurred version gets subtracted.

The Size parameter ranges from 0 to 1000, where 0 represents a 3x3 neighbourhood, 250 represents a 5x5 neighbourhood, and 1000 represents an 11x11 neighbourhood. Typically values from 0-250 are a good starting point.

The Amount parameter also ranged from 0 to 1000, and defaults to an input value of 300. The default value of 300 represents a neutral input, corresponding to a 0% sharpening. Increasing above 300 will increase the sharpening amount, with 500 representing 100% sharpening, 700 representing 200% sharpening, and 1000 representing 350% sharpening. A value of 500 (ie. 100% sharpening) is typically a good place to start. Reducing the input to below 300 will result in a gaussian blurring of the picture, with an input value of 0 representing a -150% “sharpening” (ie. gaussian blurring).

See this [Chroma Key](#) that describes how to use.

- Alpha Manipulation -> [Chroma Key](#)
- [Rotoscoping](#)
- [Composite Transition](#)
- Crop and Transform -> [Position and Zoom](#)
- Sharpen Effect
- Alpha Manipulation -> [Alpha operations](#)

<https://youtu.be/143Hz7YEcYU>

Spill Suppress

Contents

- [Spill Suppress](#)

Remove green or blue spill light from subjects shot in front of green or blue screen.

Fade

Effects in this category

- [Fade From Black](#)
- [Fade to Black](#)
- fade_in (audio effect)
- fade_out (audio effect)

Fade From Black

Contents

- [Fade From Black](#)

<https://youtu.be/xkulfHyJm18>

Fade to Black

Contents

- [Fade to Black](#)

<https://youtu.be/HKWeFL0DKJs>

In version 17.04 of Kdenlive you can add Fade to Black and Fade from Black effects with a single click. And you can adjust the length of the fade with a drag of the mouse. Hover over the grey rectangle that appears in the top corner at the end of the clip on the time line and a tool tip will appear saying “Drag to Add or Resize a Fade Effect”. And if you do Drag you will add a Fade to Black or a Fade From Black effect (depending on which end of the clip you are working on).

<https://youtu.be/08bTC3VPtqM>

Adjusting the duration of the fade - older Kdenlive versions: Adjust the duration of the fade by dragging the green blob that appears when you hover over the triangle vertex (see pic below) or by using the [Effects](#) duration slider.

Effect Stack

Effects for bottle_rocket.mp4

▼ Fade to Black

Duration 00:00:06:22

Effect List Effect Stack Transition

00:00:10:00 00:00:20:00 00:00

The image shows a video editing software interface. At the top, there is a window titled 'Effect Stack' with a close button. Below the title bar, there is a checked checkbox and the text 'Effects for bottle_rocket.mp4'. A blue bar contains a dropdown arrow, an eye icon, the text 'Fade to Black', a help icon, and a close icon. Below this bar is a 'Duration' slider with a white handle and a digital display showing '00:00:06:22'. At the bottom, there are three tabs: 'Effect List', 'Effect Stack', and 'Transition'. Below the tabs is a timeline with markers at '00:00:10:00', '00:00:20:00', and '00:00'. A red-bordered box highlights a portion of the timeline containing a 'Fade to Black' effect clip and a 'bottle_rocket.mp4' video clip. A mouse cursor is positioned over the transition point between the two clips.

Misc Effects

Effects in this category

- [Audio Wave](#)
- [Baltan](#)
- [cairogradient](#)
- [cairoimagegrid](#)
- [Cartoon](#)
- [Color Distance](#)
- [Color Effect](#)
- [Colorhalfone](#)
- [Dance](#)
- [Delay_grab effect](#)
- [Dither](#)
- [Dynamic Text](#)
- [Edge Glow](#)
- [Equaliz0r](#)
- [K-Means Clustering](#)
- [Key_Spill Mop Up](#)
- [Misc - Light Graffiti](#)
- [Lumakey Effect](#)
- [Luminance](#)
- [Medians](#)
- [NDVI Filter](#)
- [Nervous](#)
- [nosync0r](#)
- [Owdenoiise](#)
- [Regionalize](#)
- [rgbnoise](#)
- [Rgbsplit0r](#)
- [scanline0r](#)
- [sigmoidaltransfer](#)
- [Sobel](#)
- [tehroxx0r](#)

- [Threshold](#)
- [threshold0r](#)
- [Timeout Indicator](#)
- [twolay0r](#)
- [Analysis and Data - Vectorscope](#)
- [Vignette](#)

- atadenoise
- bgsubtract
- colorchannelmixer
- colorlevels
- colormatrix
- cropdetect
- dctdnoiz
- deband
- deflate
- delay0r
- delogo
- deshake
- dilation
- drawbox
- drawgraph
- drawgrid
- edgedetect
- elbg
- eq
- erosion
- face_blur
- face_detect
- fftfilt
- flippo
- framerate
- fspp
- glitch0r
- gradfun
- histeq
- histogram

- hqdn3d
- hqx
- hue
- idet
- inflate
- lenscorrection
- lightshow
- lut
- lutrgb
- lutyuv
- noise
- pad
- perspective
- pp
- pp7
- random
- removegrain
- rotate
- sab
- shuffleplanes
- signalstats
- smartblur
- spp
- tblend
- transpose
- unsharp
- uspp
- vertigo
- vid.stab_deshake
- vid.stab_detect_and_transform
- w3fdif
- waveform
- xbr
- zmq
- zoompan

Audio Wave

Contents

- [Audio Wave](#)
 - [Overlaying the Wave](#)

This is the [Audiowave](https://www.mltframework.org/plugins/FilterAudiowave/) [https://www.mltframework.org/plugins/FilterAudiowave/] MLT filter.

In ver 17.04 this is found in the [Analysis and Data](#) category of Effects.

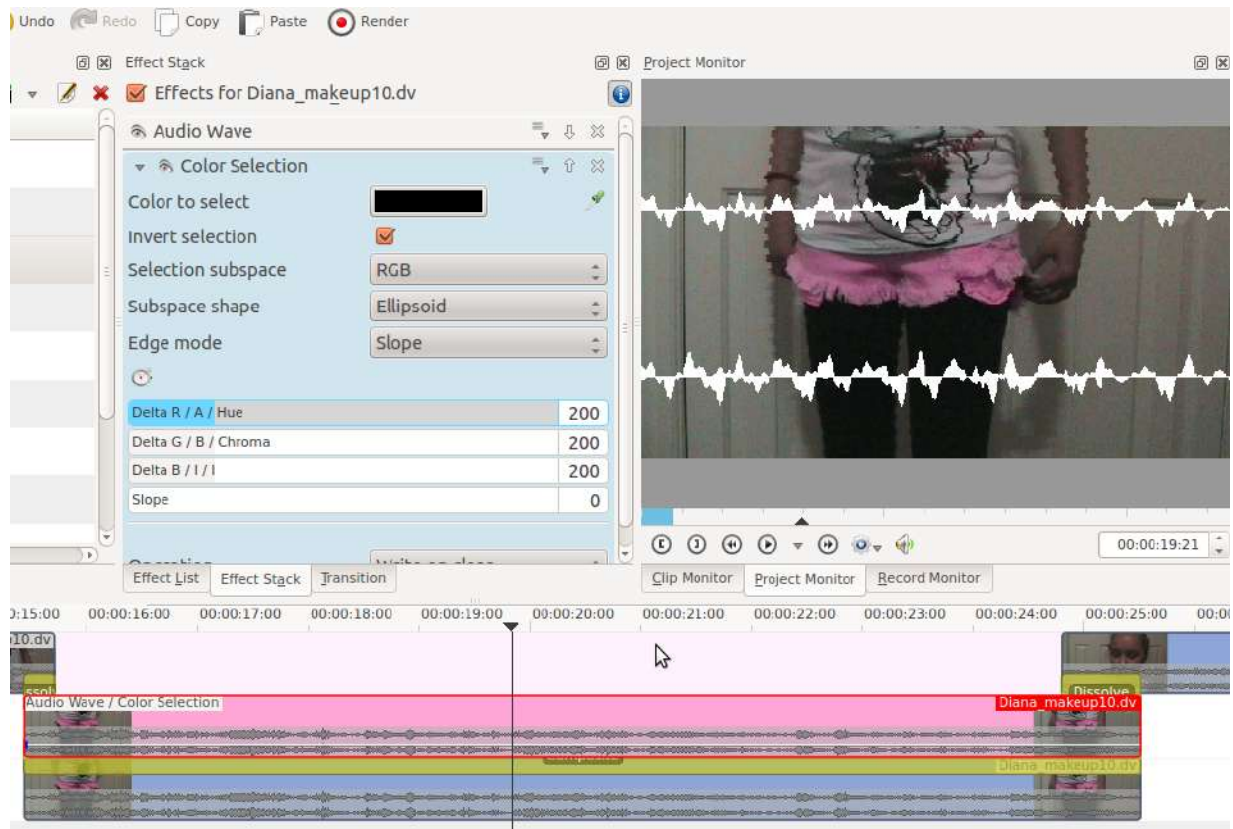
Display the audio waveform instead of the video. Author Dan Denny.

This does not work alone on audio-only clips. It must have video to overwrite. A workaround is to apply this to a multi-track with a color generator.



[Overlaying the Wave](#)

This effect replaces the video. If you want the effect overlaying the video you can do something like shown below.



Duplicate the video track on a track below the one with the Audio wave on it.

Add a composite transition.

On the top video track (the one with the audio wave effect) add a [Color selection](#) effect.

Make the color you are selecting black and check the invert selection.

Baltan

Contents

- [Baltan](#)

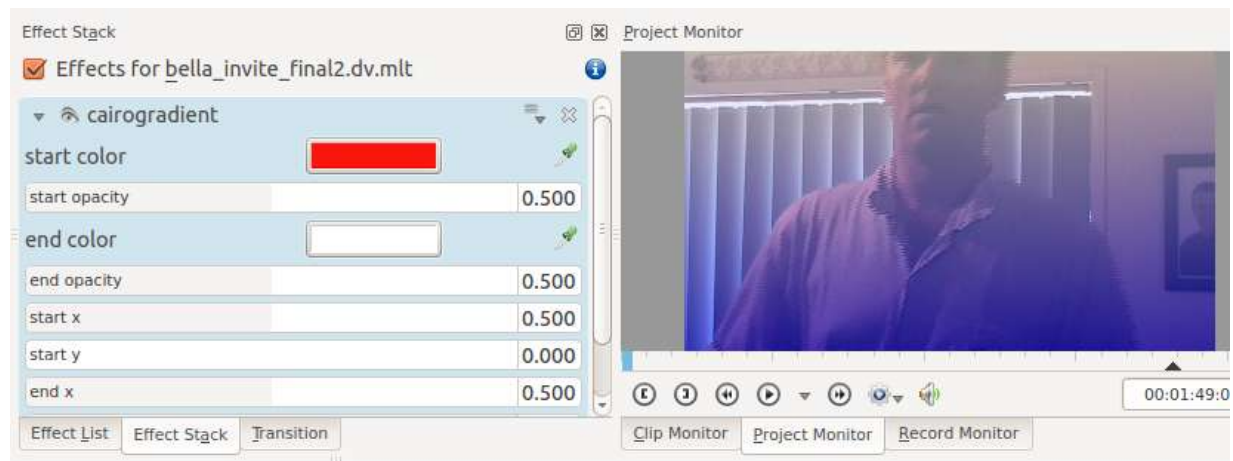
<https://youtu.be/BBdcOCrEcC4>

cairogradient

Contents

- [cairogradient](#)

This effect adds a gradient of colour across the frame.

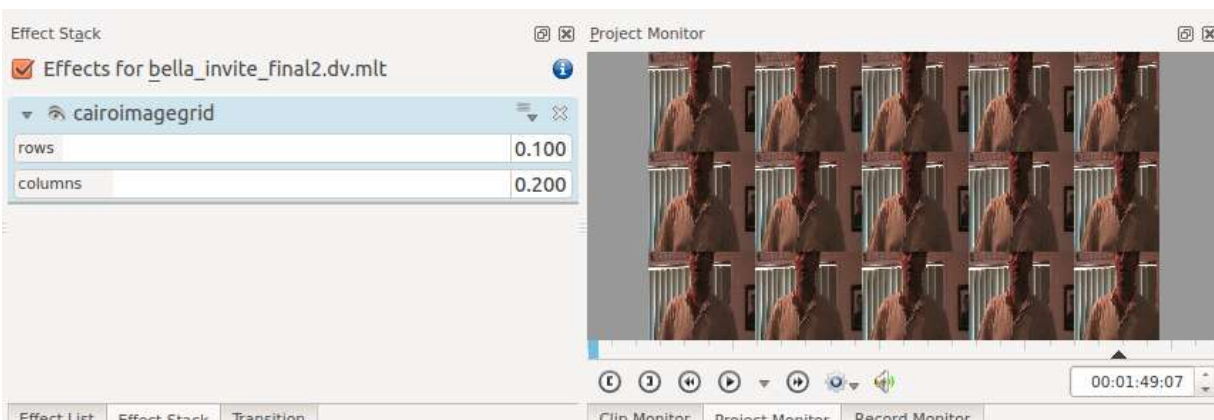


cairoimagegrid

Contents

- [cairoimagegrid](#)

This effect creates a grid of copies of the video footage as shown in the screen shot.



You adjust the number of rows and columns in the image with the rows and columns parameters. These take decimal fractions from zero to 1. The maximum value of 1 means 20 rows or columns.

Number of rows/columns = $(p \times 20) + 1$ [where p = the value of the row or column parameter]

In this eg:

rows = 0.1 -> means $(0.1 \times 20) + 1 = 3$ rows

columns = 0.2 -> means $(0.2 \times 20) + 1 = 5$ columns

Cartoon

Contents

- [Cartoon](#)

This is the [Frei0r cartoon](https://www.mltframework.org/plugins/FilterFrei0r-cartoon/) [https://www.mltframework.org/plugins/FilterFrei0r-cartoon/] MLT filter.

Cartoonify video, do a form of edge detect.

<https://youtu.be/92fI4znypEo>

Color Distance

Contents

- [Color Distance](#)

This is the [Frei0r colordistance](https://www.mltframework.org/plugins/FilterFrei0r-colordistance/) [https://www.mltframework.org/plugins/FilterFrei0r-colordistance/] MLT filter.

Calculates the distance between the selected color and the current pixel and uses that value as new pixel value.

<https://youtu.be/eL8cFUJrUo0>

<https://youtu.be/4Ta9UE2nflU>

<https://youtu.be/7VRQyCUxYUQ>

Color Effect

Contents

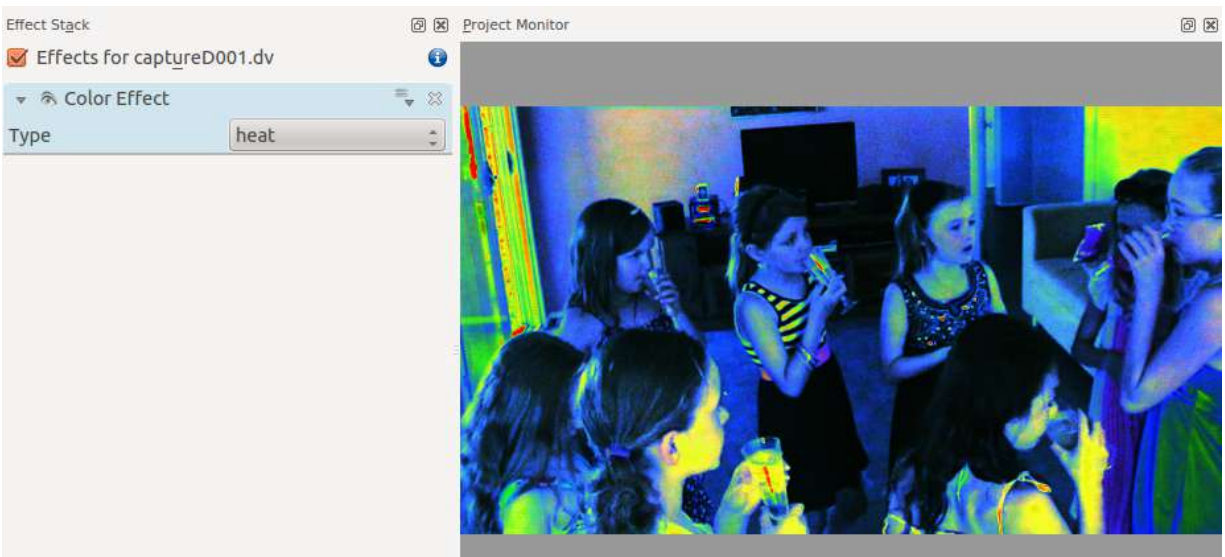
- [Color Effect](#)

This is the [Frei0r colortap](https://www.mltframework.org/plugins/FilterFrei0r-colortap/) [https://www.mltframework.org/plugins/FilterFrei0r-colortap/] MLT filter.

Applies a pre-made color effect to image.

Possible effects are:

xpro, sepia, heat, red_green, old_photo, xraym, esses and yellow_blue.



Colorhalftone

Contents

- [Colorhalftone](#)

Filters image to resemble a halftone print in which tones are represented as variable sized dots.



Dance

Contents

- [Dance](#)

This effect causes the video frame to dance around the screen.

Add this effect to a video and include another video track below it and a composite transition between the two tracks.

<https://youtu.be/gqxU1nvh6JI>

Delay_grab effect

Contents

- [Delay_grab effect](#)

This effect is available from the misc group.

This is the [Frei0r delaygrab](https://www.mltframework.org/plugins/FilterFrei0r-delaygrab/) [https://www.mltframework.org/plugins/FilterFrei0r-delaygrab/] MLT filter by Bill Spinhover, Andreas Scheffler and Jaromil.

Delayed frame blitting mapped on a time bitmap.

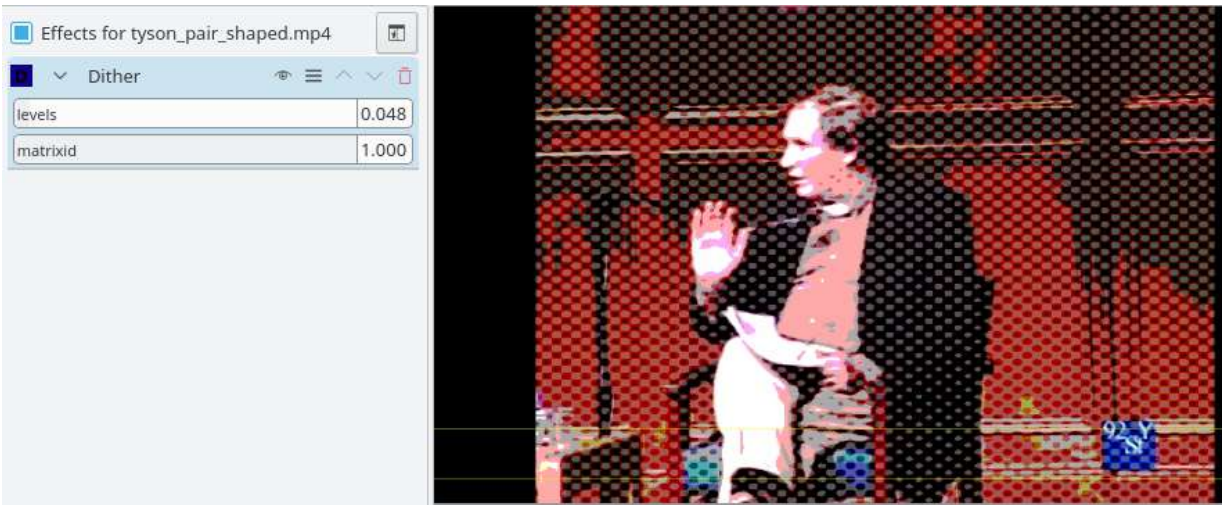
<https://youtu.be/t6rsEdDiuAQ>

<https://youtu.be/vh63RxHm8Lg>

Dither

Contents

- [Dither](#)



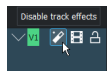
Dynamic Text

Contents

- [Dynamic Text](#)

The “Dynamic Text” effect allows you to overlay a timecode - which counts up relative to the start of the clip or timeline it is applied to.

Hint: You can add effects to entire video tracks by clicking on the **Track Header** and choosing *Timeline* ▶ *Add Effect*. Video tracks that have effects added to them are marked with a yellow star in the Track Header.



If you add this effect to the Video track rather than individual clips the timecode will not reset at the beginning of the next clip but rather count across the whole length of your project.

See also the [Rendering](#) option in the render dialog to add time code or frame count to the entire rendered project.

<https://youtu.be/A4ObXRhi6ZM>

Edge Glow

Contents

- [Edge Glow](#)

This is the [Frei0r edgeglow](https://www.mltframework.org/plugins/FilterFrei0r-edgeglow/) [https://www.mltframework.org/plugins/FilterFrei0r-edgeglow/] MLT filter.

In version 15.n of Kdenlive this is in the Blur and Hide section.

https://youtu.be/d0MvA_7VuJk

<https://youtu.be/C10Z8FXULbQ>

Equaliz0r

Contents

- [Equaliz0r](#)

This is the [Frei0r equaliz0r](https://www.mltframework.org/plugins/FilterFrei0r-equaliz0r/) [https://www.mltframework.org/plugins/FilterFrei0r-equaliz0r/] MLT filter.

Equalizes the intensity histograms.

(Moved to Color section in ver 15.n).

<https://youtu.be/KdlxSA2gs68>

<https://youtu.be/w8gqpJmdGug>

K-Means Clustering

Contents

- [K-Means Clustering](#)

This is the [Frei0r cluster](https://www.mltframework.org/plugins/FilterFrei0r-cluster/) [https://www.mltframework.org/plugins/FilterFrei0r-cluster/] MLT filter.

Clusters of a source image by color and spatial distance.

<https://youtu.be/a3Yz2xJWmN8>

https://youtu.be/qwTD__a5oqo

Key_Spill_Mop_Up

Contents

- [Key_Spill_Mop_Up](#)
 - [Tutorial](#)
 - [Details](#)

Warning

This page is outdated. You may find the new one here: [Key_spill_mop_up](#).

This effect is used when using chroma keying (otherwise known as greenscreen or [Chroma Key](#) effect). Its purpose is to compensate for the fact that sometimes the color from the green or blue screen reflects onto the subject and will make them a shade of blue or green - especially around the edges. This is known as “keyspill”. This effect can attempt to compensate for this issue.

The effect may be found in the [Misc Effects](#) group or in the [Alpha manipulation](#) group (version $\geq 0.9.3$)

Tutorial

This tutorial shows usage of the following effects: keyspillm0pup, blue screen, alpha operations - shrinkhard and denoiser

<https://youtu.be/143Hz7YEcYU>

Details

The README for the keyspillm0pup is this:

DESCRIPTION:

After some experimentation with chroma keying, it looked to me that there is no single method of key cleaning, that works in all situations, like keyspill on bright, keyspill on dark, etc. So I included several cleaning options, which can be used alone or in combination. In short, it offers three ways of pixel selection (masking), that can be combined with four types of color changing operations. The three selection / masking modes are based on:

- similarity to key color
- transparency
- closeness to the edge

and the four things that can be done to the selected pixels are:

- move away from the key color (De-Key)
- move towards an target color (Target)
- desaturate
- luma (brightness) adjust.

MASKS:

Color difference masks are based on the color of the image, and do not depend on the alpha from the preceding keying, except for ignoring the 100% transparent areas, to increase speed.

Transparency and Edge masks are based on the alpha channel from the preceding keying operation. Transparency masks will affect only the parts that are neither 100% opaque nor 100% transparent, based on the alpha values from the preceding keying operation. The effect will be proportional to the transparency.

Note

If a “hard key” was used in the preceding keying, there will be no areas that T operations could affect. Edge masks will affect only pixels close to the

edge, with the effect diminishing away from the edge. The outer edge is the edge of the fully opaque part, where the alpha from the preceding keying is 1.0 (255).

Note

The edge masking algorithm is not yet what I would like it to be. I will have to look some more into this, and improve it, so consider it a “temporary solution” that will change in the future.

All masks can be further pruned with two parameters: an “hue gate”, which will limit the mask to hues close to the key hue, and an “saturation threshold”, which will limit the mask to areas with color saturation above a threshold.

CASCADING:

This plugin can be cascaded, but it is not possible to get the same color based mask in the second instance, because the colors will be changed by the first instance. To enable two operations with the same mask, each plugin instance can do two operations. With transparency and edge masks, cascading is a bit easier. If the hue gate and saturation threshold are not used, transparency and edge masks can be exactly the same in cascaded plugins.

PARAMETERS:

Key color: This should be the same or similar to the key color used for the preceding keying operation.

Target color: This is only used when “Target” operation is used with one of the masks. The colors in the affected areas will be moved towards this color, according to the “Amount” parameter.

Mask type: Selects the type of mask that will determine where the color altering operations will occur.

Tolerance: For the color difference mask, the range of colors around the key, that will be 100% affected. For the transparency mask, the “amplification”. For the edge mask, the width of the affected area.

Slope: For the color difference mask, the range of colors outside of “Tolerance”, that will be gradually less affected. No function for the transparency and edge masks.

Hue gate: Reduces the mask according to difference from key hue, to prevent change to pixels that are within the mask, but not polluted by key.

Saturation threshold: Reduces the mask according to color saturation, to avoid affecting the neutral areas.

Operation 1: Selects which of the four possible operations will be done on the mask-selected pixels. Apart from no operation, there are four possibilities: De-key, Target, De-saturate and Luma adjust.

Amount 1: The amount of the selected operation 1, how much the colors will change.

Operation 2, Amount 2: Enable a second operation to be performed with the same mask.

Show mask: This will show the selected mask as a greyscale image, to help with fine tuning of the masks. Should be OFF for the final render.

Mask to Alpha: Copies the active mask to the alpha channel. For all normal spill cleaning operations, this should be OFF. By setting it ON, the keyspillm0pup itself can be used as a keyer, or to generate some special effects.

Misc - Light Graffiti

Contents

- [Misc - Light Graffiti](#)

<https://vimeo.com/18497028>

<https://vimeo.com/20217266>



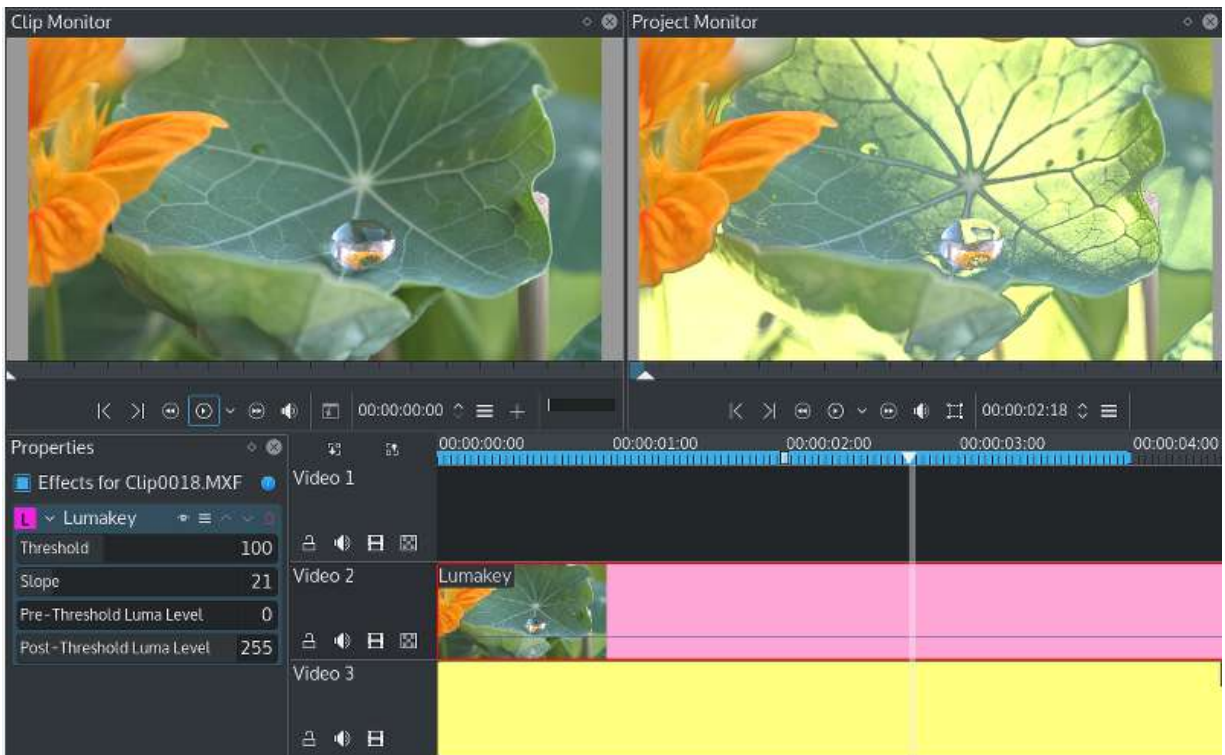
Lumakey Effect

Contents

- [Lumakey Effect](#)

In version 15.n of Kdenlive this is in the Misc category of effects.

The Lumakey effect changes the clip's alpha channel. To see its effect, you need a transition (like the Composite transition that is available in tracks) and another clip beneath.



Luminance

Contents

- [Luminance](#)

This is the [Frei0r luminance](https://www.mltframework.org/plugins/FilterFrei0r-luminance/) [https://www.mltframework.org/plugins/FilterFrei0r-luminance/] MLT filter.

Creates a luminance map of the image.

(Moved to Color section in ver 15.n).

<https://youtu.be/2NITk95kCY8>

<https://youtu.be/0wiM77K-ENQ>

Medians

Contents

- [Medians](#)

This filter implements several median type filters.

INTRODUCTION:

Median is a quite popular non-linear filter in image processing. Most often it is used to remove impulsive noise, like “salt & pepper” noise, “dead” and “hot” pixels, dirt on film, etc. This is because it behaves kind of “inversely” compared to linear denoisers. The more a bad pixel stands out from the surrounding area, the bigger residual it will leave with a linear filter - but the more probably it will be eliminated by the median.

The down side is that the median operation is quite slow. As an order-statistic filter, it is similar to sorting, that must be done for each pixel, so using a fast algorithm is very important. For the small medians, the algorithms of the type described in [this page](#)

[<http://ndevilla.free.fr/median/median/src/optmed.c>] are used here, with some small modifications for a further slight improvement in speed. For the “Variable size” median, code from [1] is used. The compound filters (ArceBI, ML3D, ML3dEX) are made according to the formulas given in the corresponding work [2]. For more info on median filtering see [Wikipedia article](#)

[https://en.wikipedia.org/wiki/Median_filter].

IMPLEMENTED ALGORITHMS:

Cross5

Median of the pixel with its top, bottom, left and right neighbor.

Square3x3

Median of the pixel with the surrounding 8 pixels. (3x3 box)

Bilevel

First, make cross5 median, then make median of the pixel with its four diagonal neighbors, and finally take the median of the pixel and the two previously calculated medians. Slightly better preserves detail than the simple medians above.

Diamond3x3

Takes median of the pixel with 12 neighboring pixels arranged in a diamond pattern.

Square5x5

Median of the pixel with the 5x5 surrounding box.

Temp3

Temporal only median of three frames. Can be used to reduce single frame time-impulsive noise like photoflash. Delays the video by 1 frame.

Temp5

Temporal only median of five frames. Can be used to reduce double frame time-impulsive noise, but the artifacts on fast moving objects are stronger than with temp3. Delays the video by 2 frames.

ArceBI

Spatio-temporal multilevel median, as described by Arce. See the corresponding work [\[2\]](#). Delays the video by 1 frame.

ML3D

Spatio-temporal multilevel median, as described by Alp. See the corresponding work [\[2\]](#). Delays the video by 1 frame.

ML3dEX

Spatio-temporal multilevel median. Further development of ML3D by Kokaram, see the corresponding work [\[2\]](#). Delays the video by 1 frame.

VarSize

Simple spatial only median in a user selected size square box around each pixel. The effect could be described as “quasi edge preserving, corner rounding, small stuff eliminator”. Or maybe just an “artsy blur”.

PARAMETERS:

Type

Selects one of the eleven algorithms.

Size

Only active when “VarSize” type is selected. Determines the size of the square area over which the median is taken.

[1] Simon Perreault, Patrick Hebert: Median filtering in constant time, [PDF version](https://nomis80.org/ctmf.pdf) [https://nomis80.org/ctmf.pdf], [HTML version](https://nomis80.org/ctmf.html) [https://nomis80.org/ctmf.html]

[2] ([1](#),[2](#),[3](#),[4](#)) [Anil Christopher Kokaram: Motion Picture Restoration, Ph.D. thesis](https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.36.9618&rep=rep1&type=pdf) [https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.36.9618&rep=rep1&type=pdf]

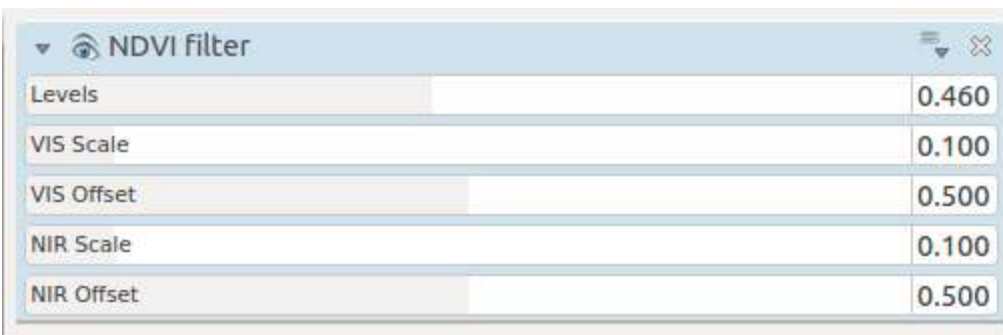
NDVI Filter

Contents

- [NDVI Filter](#)

This is the [Frei0r ndvi](https://www.mltframework.org/plugins/FilterFrei0r-ndvi/) [https://www.mltframework.org/plugins/FilterFrei0r-ndvi/] MLT filter by Brian Matherly.

This filter creates a Normalized Difference Vegetation Index ([NDVI](https://en.wikipedia.org/wiki/Normalized_Difference_Vegetation_Index) [https://en.wikipedia.org/wiki/Normalized_Difference_Vegetation_Index]) false image from an infrablue source.



Nervous

Contents

- [Nervous](#)

<https://youtu.be/CUTPB8zZvcA>

[nosync0r](#)

Contents

- [nosync0r](#)

This is the [Frei0r nosync0r](https://www.mltframework.org/plugins/FilterFrei0r-nosync0r/) [https://www.mltframework.org/plugins/FilterFrei0r-nosync0r/] MLT filter.

Video looks like a broken TV with bottom half of picture on the top of screen.

<https://youtu.be/91IPpm1nMTk>

<https://youtu.be/VO1Mele0lzU>

Owdenoise

Contents

- [Owdenoise](#)

This is the [Avfilter owdenoise](https://www.mltframework.org/plugins/FilterAvfilter-owdenoise/) [https://www.mltframework.org/plugins/FilterAvfilter-owdenoise/] MLT filter.

Denoise using wavelets.

Regionalize

Contents

- [Regionalize](#)

Apply subeffects to a region defined by a clip's alpha channel.

This is the [Region](https://www.mltframework.org/plugins/FilterRegion/) [https://www.mltframework.org/plugins/FilterRegion/] MLT filter.

Arguments:

File A file whose alpha channel will “shape” the region. The string “circle” is a shortcut but it requires pixbuf with the libsvg loader. The circle is automatically stretched to the region to create an ellipse.

Region Properties may be set on the encapsulated region transition. See “region” transition for details.

rgbnoise

Contents

- [rgbnoise](#)

This is an effect in the Misc category.

This is the [Frei0r rgbnoise](https://www.mltframework.org/plugins/FilterFrei0r-rgbnoise/) [https://www.mltframework.org/plugins/FilterFrei0r-rgbnoise/] MLT filter by Janne Liljeblad.

It adds RGB noise to image and takes one parameter *noise* in the range 0 to 1 which controls the amount of noise added.

<https://youtu.be/zkJUitSzWYc>

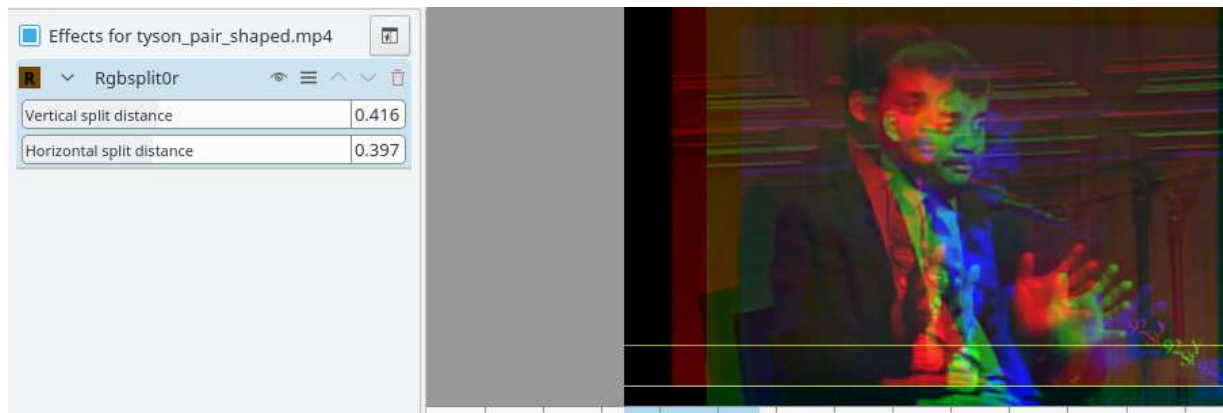
Rgbsplit0r

Contents

- [Rgbsplit0r](#)

This is the [Frei0r rgbsplit0r](https://www.mltframework.org/plugins/FilterFrei0r-rgbsplit0r/) [https://www.mltframework.org/plugins/FilterFrei0r-rgbsplit0r/] MLT filter.

This video effect is found in the Misc section of effects. The effect takes the red, green and blue channels in the video and separates them by a given x and y amount to produce a rainbowish effect.



scanline0r

Contents

- [scanline0r](#)

This is the [Frei0r scanline0r](https://www.mltframework.org/plugins/FilterFrei0r-scanline0r/) [https://www.mltframework.org/plugins/FilterFrei0r-scanline0r/] MLT filter.

Interlaced black lines.

<https://youtu.be/nJ2TE4SdaJM>

<https://youtu.be/St4P6Ziwmcw>

[sigmoidaltransfer](#)

Contents

- [sigmoidaltransfer](#)

This is the [Frei0r sigmoidaltransfer](https://www.mltframework.org/plugins/FilterFrei0r-sigmoidaltransfer/) [https://www.mltframework.org/plugins/FilterFrei0r-sigmoidaltransfer/] MLT filter by Janne Liljeblad.

Desaturates image and creates a particular look that could be called Stamp, Newspaper or Photocopy.

Two parameters:

Brightness: Controls Brightness of image. Range 0 to 1.

Sharpness: Controls sharpness of transfer. Range 0 to 1.

Both parameters default to 0 in **Kdenlive** - which is unfortunate because this results in a totally black frame. You need to have numbers above zero to see the effect.

Sobel

Contents

- [Sobel](#)

This is the [Frei0r sobel](https://www.mltframework.org/plugins/FilterFrei0r-sobel/) [https://www.mltframework.org/plugins/FilterFrei0r-sobel/] MLT filter.

Sobel filter is an edge detection filter.

<https://youtu.be/sSlJovKEZJk>

tehroxx0r

Contents

- [tehroxx0r](#)

This is the [Frei0r tehroxx0r](https://www.mltframework.org/plugins/FilterFrei0r-tehroxx0r/) [https://www.mltframework.org/plugins/FilterFrei0r-tehroxx0r/] MLT filter.

Something videowall-ish.

The effect might not show up during preview but it does appear in the rendered file.

This effect has one parameter – *interval* – with a range from zero to 1. This parameter controls the number of small video frames which appear around the border and how frequently they flash. Higher number = fewer frames and slower flashing.

<https://youtu.be/qyv15F834h4>

<https://youtu.be/ii47tIsYFHQ>

Threshold

Contents

- [Threshold](#)

This is the [Threshold](https://www.mltframework.org/plugins/FilterThreshold/) [https://www.mltframework.org/plugins/FilterThreshold/] MLT filter.

Make monochrome clip.

Different to [threshold0r](#).

threshold0r

Contents

- [threshold0r](#)

This is the [Frei0r threshold0r](https://www.mltframework.org/plugins/FilterFrei0r-threshold0r/) [https://www.mltframework.org/plugins/FilterFrei0r-threshold0r/] MLT filter.

Thresholds a source image.

<https://youtu.be/Bx5frOYPIKU>

<https://youtu.be/PWueJhFIHsg>

Different to [Threshold](#).

Timeout Indicator

Contents

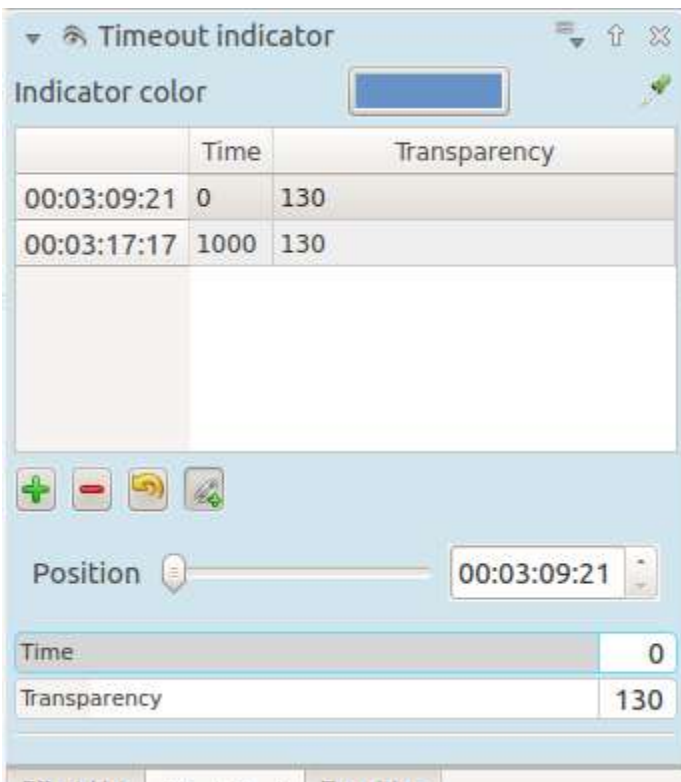
- [Timeout Indicator](#)

This is [Frei0r timeout](https://www.mltframework.org/plugins/FilterFrei0r-timeout/) [https://www.mltframework.org/plugins/FilterFrei0r-timeout/] MLT filter by Simon A. Eugster.

In ver 17.04 this is found in the [Analysis and Data](#) category of Effects.

This adds a little countdown bar to the bottom right of the video and is available in ver. 0.9.5 of **Kdenlive**.

The settings in this screen shot produced the sample video below.



https://youtu.be/ry3DLZD_bRc

twolay0r

Contents

- [twolay0r](#)

This is the [Frei0r twolay0r](https://www.mltframework.org/plugins/FilterFrei0r-twolay0r/) [https://www.mltframework.org/plugins/FilterFrei0r-twolay0r/] MLT filter.

Dynamic thresholding.

<https://youtu.be/yEPzS6AKFyo>

<https://youtu.be/N9TpjQmVSyQ>

Analysis and Data - Vectorscope

Contents

- [Analysis and Data - Vectorscope](#)

This is the [Frei0r vectorscope](https://www.mltframework.org/plugins/FilterFrei0r-vectorscope/) [https://www.mltframework.org/plugins/FilterFrei0r-vectorscope/] MLT filter.

Displays the vectorscope of the video-data.

In ver 17.04 this is found in the [Analysis and Data](#) category of Effects.

It is recommended to use the vectorscope from [Vectorscope Window](#), because the effect *Analysis and Data - Vectorscope* is not correct - it uses a graticule from an analog NTSC vectorscope, but equations from digital video.

<https://youtu.be/2ybBzDEjdRo>

https://youtu.be/O1hbS6VZh_s

Vignette

Contents

- [Vignette](#)

This is the [Frei0r vignette](https://www.mltframework.org/plugins/FilterFrei0r-vignette/) MLT filter.

Lens vignetting effect, applies natural vignetting.

Motion

Effects in this category

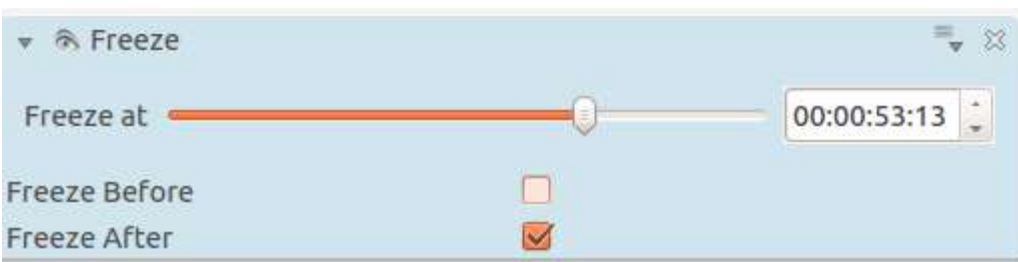
- [Motion - Freeze](#)
- [Motion Effects - Speed](#)

Motion - Freeze

Contents

- [Motion - Freeze](#)

This effect causes the video to freeze. If you add the effect and leave both check boxes unchecked, the clip will be frozen for its entire length. To change this, check either the *Freeze Before* or *Freeze After* option and move the *Freeze At* slider to the time where you want the freeze to start or end. If *Freeze Before* is selected, the video will be frozen at the start and then start moving when it hits the *Freeze At* time. If *Freeze After* is selected, the video will be moving at the start and then freeze when it hits the *Freeze At* time. The audio in the video plays for the entire length, i.e. the **Freeze** effect does not alter the audio.



Motion Effects - Speed

Attention

Deprecated since version 21.04: Use [Change speed](#) instead

Contents

- [Motion Effects - Speed](#)

Make clip play faster or slower. Use of this effect mutes the audio of the clip.



The *Stroboscope* setting defines the number frames the effect skips when playing back. For example, if *Stroboscope* is set to 5 then the effect will only show every fifth frame but will show these frames for five times as long, producing a jumpy, stroboscopic effect.

It has been reported that the **Speed** effect does not work very well on H.264-formatted source video. It is recommended to transcode your source material into the DNxHD format and apply the **Speed** effect to that. ([forum post](https://forum.kde.org/viewtopic.php?f=270&t=121296&p=311629#p311427) [https://forum.kde.org/viewtopic.php?f=270&t=121296&p=311629#p311427])

Alphabetical List of Effects and Compositions

Contents

- [Alphabetical List of Effects and Compositions](#)

Note

The effects and compositions included will differ depending on the available plug-ins on the specific packaging on each operating system. Kdenlive will auto-detect and make available any supported LADSPA plug-in packages from your distribution. For the greatest compatibility, please use the AppImage version of Kdenlive.

Effect or Transition Name	Type	Category	Description
3_point_balance	Video Effect	Color and Image correction	Balances colors along with 3 points (frei0r.t
3d_fft_denoiser	Video Effect	Grain and Noise	Denoise frames using 3D FFT (Frequency D (avfilter.fftdnoiz)
3-level_threshold	Video Effect	Stylize	Dynamic 3-level thresholding (frei0r.threela
4 x 4 pole allpass	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1218)
acontrast	Audio Effect	Audio	Simple audio dynamic range compression/e
acrusher	Audio Effect	Audio	Reduce audio bit resolution (avfilter.acrushe
acue	Audio Effect	Audio	Delay filtering to match a cue (avfilter.acue)
addition transition	Compositions		Perform an RGB[A] addition operation of th (frei0r.addition)
Addition_alpha transition	Compositions		Perform an RGB[A] addition_alpha operati sources (frei0r.addition_alpha)
addroi	Compositions		Add region of interest to frame (avfilter.addi

Effect or Transition Name	Type	Category	Description
adeclick	Audio Effect	Audio	Remove impulsive noise from input audio (a
adenorm	Audio Effect	Audio	Remedy denormals by adding extremely low (avfilter.adenorm)
aderivative	Audio Effect	Audio	Compute derivative of input audio (avfilter.a
aexciter	Audio Effect	Audio	Enhance high frequency part of audio (avfilt
afftdn	Audio Effect	Audio	Denoise audio samples using FFT (avfilter.a
afreqshift	Audio Effect	Audio	Apply frequency shifting to input audio (avfi
aintergral	Audio Effect	Audio	Compute integral of input audio (avfilter.ain
Aliasing	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1407)
alimiter	Audio Effect	Audio	Audio lookahead limiter (avfilter.alimiter)
allpass	Audio Effect	Audio	Apply a two-pole all-pass filter (avfilter.all
Allpass delay line cubic spline interpolation	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1897)
Allpass delay line linear interpolation	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1896)
Allpass delay line noninterpolating	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1895)
aloop	Audio Effect	Audio	Loop audio samples (avfilter.aloop)

Effect or Transition Name	Type	Category	Description
Alpha gradient	Video Effect	Alpha, Mask and Keying	Fill the alpha channel with the specified gradient (frei0r.alphagrad)
Alpha operations	Video Effect	Alpha, Mask and Keying	Display and manipulation of the alpha channel
Alpha Shapes	Video Effect	Alpha, Mask and Keying	Draws simple shapes into the alpha channel
alphastrobing	Video Effect	Alpha, Mask and Keying	Strobes the alpha channel to 0. Many other filters affect the alpha channel, in that case this needs to be layered
alphaatop transition	Compositions		The alpha ATOP operation (frei0r.alphaatop)
alphain transition	Compositions	•	The alpha IN operation (frei0r.alphain)
alphaout transition	Compositions		The alpha OUT operation (frei0r.alphaout)
alphaover transition	Compositions		The alpha OVER operation (frei0r.alphaover)
alphaxor transition	Compositions		The alpha XOR operation (frei0r.alphaxor)
AM pitchshifter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1433)
anlmdn	Audio Effect	Audio	Reduce broadband noise from stream using low-pass filter (avfilter.anlmdn)
aphaser	Audio Effect	Audio	Add a phasing effect to the audio (avfilter.aphaser)
aphaseshift	Audio Effect	Audio	Apply phase shifting to input audio (avfilter.aphaseshift)
Apply LUT	Video Effect	Color and Image correction	Apply a Look Up Table (LUT) to the video. A common way to correct the color of a video. Supported by AfterEffects, .cube (Iridas), .dat (DaVinci) (avfilter.lut3d)

Effect or Transition Name	Type	Category	Description
apulsator	Audio Effect	Audio	Audio Pulsator (avfilter.apulsator)
arndn	Audio Effect	Audio	Reduce noise from speech using recurrent N (avfilter.arndn)
Artificial latency	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1914)
asidedata	Audio Effect	Audio	Manipulate audio frame side data (avfilter.a
asoftclip	Audio Effect	Audio	Audio soft clipper (avfilter.asoftclip)
asubboost	Audio Effect	Audio	Show time domain statistics about audio frai
astats	Audio Effect	Audio	Boost subwoofer frequencies (avfilter.asubb
asubcut	Audio Effect	Audio	Cut subwoofer frequencies (avfilter.asubcut)
asupercut	Audio Effect	Audio	Cut super frequencies (avfilter.asupercut)
asuperpass	Audio Effect	Audio	Apply high order Butterworth band-pass filt (avfilter.asuperpass)
asuperstop	Audio Effect	Audio	Apply high order Butterworth band-stop filte (avfilter.asuperstop)
Audio Divider (Suboctave Generator)	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1186)
audio_equalizer_(avfilter)	Audio Effect	Audio	Apply two-pole peaking equalization (EQ) f (avfilter.equalizer)
audio_levels	Audio Effect	Audio	Compute the audio amplitude (audiolevel)
audio_pan	Audio Effect	Audio	Pan an audio channel, adjust balance, or adj

Effect or Transition Name	Type	Category	Description
Audio Spectrum Filter	Video Effect	On Master	An audio visualization filter that draws an a image (audiospectrum)
Audio Wave	Video Effect	On Master	Display the audio waveform instead of the v
audio_waveform_filter	Audio Effect	Audio	An audio visualization filter that draws an a the image (audiowaveform)
audiomap	Audio Effect	Audio	audiomap (audiomap)
Auto Mask	Video Effect	Alpha, Mask and Keying	Hide a selected zone and follow its moveme (autotrack_rectangle)
Auto phaser	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1219)
average_blur	Video Effects	Blur and Sharpen	Apply average blur filter (avfilter.avgblur)
bandpass	Audio Effect	Audio	Apply a two-pole band-pass filter (avfilter.l
bandreject	Audio Effect	Audio	Apply a two-pole Butterworth band-reject fi (avfilter.bandreject)
balance	Video Effect	Color and Image correction	Extracts Blue from Image (frei0r.B)
Barry's Satan Maximiser	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1408)
bass	Audio Effect	Audio	Boost or cut lower frequencies (avfilter.bass
Bezier Curves	Video Effect	Color and Image Correction	Color curves adjustment (frei0r.curves)

Effect or Transition Name	Type	Category	Description
bilateral	Video Effect	Misc	Apply Bilateral filter (avfilter.bilateral)
Binarize	Video Effect	Stylize	Make monochrome clip (threshold)
binarizedynamically	Video Effect	Stylize	Dynamic thresholding (frei0r.twolay0r)
biquad	Audio Effect	Audio	Apply a biquad IIR filter with the given coefficients (avfilter.biquad)
bluescreen0r	Video Effect	Alpha, Mask and Keying	Color to alpha (blit SRCALPHA) (frei0r.bluescreen0r)
Blur	Video Effect	Deprecated	Blur using 2D IIR filters (exponential, lowpass) (frei0r.IIRblur)
Bode frequency shifter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1431)
Bode frequency shifter (CV)	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1432)
Box Blur	Video Effect	Blur and Sharpen	Box blur (separate horizontal and vertical blurs)
Box Blur	Video Effect	Blur and Sharpen	Apply a boxblur algorithm to the input video
Brightness	Video Effect	Color and Image correction	Adjusts the brightness of a source image (frei0r.adjust_brightness)
Brightness (keyframable)	Video Effect	Color and Image correction	Change the image brightness with keyframes

Effect or Transition Name	Type	Category	Description
burn	Compositions		Perform an RGB[A] dodge operation between two images using the generalized algorithm: $D = \text{saturation}(\frac{a + b \cdot I}{b + 1})$ (frei0r.burn)
BurningTV – Deprecated	Video Effect	Deprecated	burningtv
bw0r	Video Effect	Color and Image correction	Turns image Black/White (frei0r.bw0r)
cairo_affine_blend	Compositions		Composites second input on first input apply transformations, opacity, and blend mode (frei0r.cairoaffineblend)
cairo_blend	Compositions	•	Composites second input on the first input with blend mode and opacity (frei0r.cairoblend)
cairogradient	Video Effect	Generate	Draws a gradient on top of image. Filter is given start and end points, colors and opacities.
cairoimagegrid	Video Effect	Generate	Create a video grid (frei0r.cairoimagegrid)
Cartoon	Video Effect	Stylize	Cartoonify video, do a form of edge detect (frei0r.cartoon)
Cartoon	Video Effect	Misc	Contrast Adaptive Sharpen (avfilter.cas)
Charcoal	Video Effect	Stylize	Charcoal drawing effect (charcoal)
Chebyshev distortion	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1430)
Chroma Hold	Video Effect	Color and Image correction	Make image greyscale except for chosen color (frei0r.chromahold)
chromahold	Video Effect	Color and Image correction	Removes all color information for all colors (avfilter.chromahold)

Effect or Transition Name	Type	Category	Description
Chroma Key	Video Effect	Alpha, Mask and Keying	Make Selected Color transparent (chroma)
chroma_shift	Video Effect	Stylize	Shift chroma pixels horizontally and/or vertically (avfilter.chromashift)
chromanr	Video Effect	Misc	Reduce chrominance noise (avfilter.chromanr)
ciescope	Video Effect	Utility	Video CIE scope (avfilter.ciescope)
cmyk_adjust_(avfilter)	Video Effect	Color and Image correction	Apply CMYK correction to specific color ranges (avfilter.selectivecolor)
color_balance	Video Effect	Color and Image correction	Modify intensity of primary colors (red, green, blue) (avfilter.colorbalance)
color_channel_mixer	Video Effect	Color and Image correction	Modifies a color channel by adding the value of other channels of the same pixels (avfilter.colorchannelmixer)
Color Distance	Video Effect	Stylize	Calculates the distance between the selected current pixel and uses that value as a new pixel value (frei0r.colordistance)
Color Effect	Video Effect	Stylize	Applies a pre-made color effect to image (frei0r.coloreffect)
color_hold	Video Effect	Color and Image correction	Remove all color information all RGB color information (avfilter.colorhold)
Color selection	Video Effect	Alpha, Mask and Keying	Chroma Key with more advanced options (e.g. color selection). Use if basic chroma key is not working (frei0r.select0r)
color_only	Compositions		Perform a conversion to color only of the source video (frei0r.coloronly)

Effect or Transition Name	Type	Category	Description
colorcontrast	Video Effect	Stylize	Calculates the distance between the selected current pixel and uses that value as a new pi (frei0r.colordistance)
colorcorrect	Video Effect	Stylize	Applies a pre-made color effect to image (fr
colorize	Video Effect	Color and Image correction	Colorizes image to selected hue, saturation & (frei0r.colorize)
colorize	Video Effect	Color and Image correction	Overlay a solid color on the video stream (a
colorlevels	Video Effect	Color and Image correction	Adjust video input frames using levels (avfil
colormatrix	Video Effect	Image Adjustment	Convert color matrix (avfilter.colormatrix)
colortemperature	Video Effect	Misc	Adjust color temperature of video (avfilter.c
Comb delay line cubic spline interpolation	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1888)
Comb delay line linear interpolation	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1887)
Comb delay line noninterpolating	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1889)
Comb Filter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1190)

Effect or Transition Name	Type	Category	Description
comb_splitter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1411)
comband	Audio Effect	Audio	LADSPA plugin (ladspa.1430)
compensationdelay	Audio Effect	Audio	Audio Compensation Delay Line (avfilter.co
Composite Transition	Compositions		A key-framable alpha-channel compositor fc (composite)
compositeandtransform	Compositions		Composites second input on the first input w blend mode, opacity and scale (qblend)
Constant Signal Generator	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1909)
Contrast	Audio Effect	Audio correction	Process audio using a SoX effect
contrast	Video Effect	Color and Image correction	Adjusts the contrast of a source image (frei0
copy_channels	Audio Effect	Audio	Copy one audio channel to another (channel
Distort - Corners	Video Effect	Transform, Distort and Perspective	Four corners geometry engine (frei0r.c0rner:
crop_by_padding	Video Effect	Transform, Distort and Perspective	This filter crops the image to a rounded rect padding it with a color (qtcrop)
Crop, Scale and Tilt	Video Effect	Transform, Distort and Perspective	Scales, Tilts and Crops an Image (frei0r.scal

Effect or Transition Name	Type	Category	Description
Crossfade	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1915)
Crossfade (4 outs)	Audio Effect	Steve Harris' SWH plugins	LADSPA Plugin (ladspa.1917)
crossfeed	Audio Effect	Steve Harris' SWH plugins	Apply headphone crossfeed filter (avfilter.c)
Crossover distortion	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1404)
crystalizer	Audio Effect	Audio	Simple audio noise sharpening filter (avfilter.c)
Curves	Video Effect	Color and Image correction	Color curves adjustment (frei0r.curves)
Dance	Video Effect	On Master	An audio visualization filter that moves the i proportional to the magnitude of the audio sp
darken	Compositions		Perform a darken operation between two sou value fo both sources) (frei0r.darken)
datascope	Video Effect	Utility	Video data analysis (avfilter.datascope)
dblur	Video Effect	Transform, Distort and Perspective	Non rectilinear lens mappings (frei0r.defisht)
DC Offset Remover	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1207)

Effect or Transition Name	Type	Category	Description
dctdnoiz	Video Effect	Deprecated	Denoise frames using 2D DCT frequency domain filtering (avfilter.dctdnoiz)
deband	Video Effect	Image Adjustment	Remove banding artifacts from input video. Replace banded pixels with an average value of reference pixels (avfilter.deband)
Decimator	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1202)
Declipper	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1195)
deesser	Audio Effect	Audio	Apply a de-essing to the audio (avfilter.deesser)
Defish	Video Effect	Transform, Distort and Perspective	Non rectilinear lens mappings (frei0r.defish)
deinterlace_qsv	Video Effect	Misc	QuickSync video deinterlacing (avfilter.deinterlace_qsv)
Delayorama	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1402)
delogo	Video Effect	Deprecated	Perform an RGB[A] difference operation between two video sources (frei0r.difference)
Denoiser	Video Effect	Grain and Noise	High Quality 3d denoiser (frei0r.hqdn3d)
deshake	Video Effect	Misc	Feature-point based video stabilization filter (avfilter.deshake_openc1)
despill	Video Effect	Alpha, Mask and Keying	Remove unwanted contamination of foreground by reflected color of greenscreen or bluescreen (avfilter.despill)

Effect or Transition Name	Type	Category	Description
difference	Compositions		Plasma (frei0r.distort0r)
dilation	Video Effect	Image Adjustment	Apply dilation effect (avfilter.dilation)
Diode Processor	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1185)
dissolve	Compositions		Fade out one video while fading in the other
Distort	Video Effect	Transform, Distort and Perspective	Plasma (frei0r.distort0r)
Dither	Video Effect	Deprecated	Dithers the image and reduces the number of (frei0r.dither)
divide	Compositions		Perform an RGB[A] divide operation between input1 is the numerator, input2 the denominator
DJ EQ	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1901)
DJ EQ (mono)	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1907)
DJ flanger	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1438)
dnn_processing	Video Effect	Misc	Apply DNN processing filter to the input (avfilter.dnn_processing)

Effect or Transition Name	Type	Category	Description
dodge	Compositions		Perform an RGB[A] dodge operation between two images using the generalized algorithm: $D = \text{saturation}((A * 256) / (256 - B))$ (frei0r.dodge)
drawbox	Video Effect	Generate	Draw a colored box on the input video (avfi)
drawgrid	Video Effect	Generate	Draw a colored grid on the input video (avfi)
drmeter	Audio Effect	Audio	Measure audio dynamic range (avfilter.drme)
Dust	Video Effect	Stylize	Add dust and specks to the video, as in old r
Dynamic Text	Video Effect	Stylize	Overlay text with keywords replaced (dynam)
dynaunorm	Audio Effect	Audio	Dynamic Audio Normalizer (avfilter.dynaun)
Dyson compressor	Audio Effect	Audio	
Edge Crop	Video Effect	Transform, Distort and Perspective	Trim the edges of a clip (crop)
Edge Glow	Video Effect	Stylize	Edge glow filter (frei0r.edgeglow)
edgedetect	Video Effect	Transform, Distort and Perspective	Detect and draw edges. The filter uses the Canny algorithm (avfilter.edgedetect)
elastic_scale_filter	Video Effect	Transform, Distort and Perspective	This is a frei0r filter which allows to scale video non-linearly (frei0r.elastic_scale)
elbg	Video Effect	Stylize	Apply posterize effect, using the ELBG algorithm
emboss	Video Effect	Stylize	Creates embossed relief image of source image
Equaliz0r	Video Effect	Color and Image correction	Equalizes the intensity histograms (frei0r.equaliz0r)

Effect or Transition Name	Type	Category	Description
erosion	Video Effect	Image Adjustment	Apply erosion effect (avfilter.erosion)
estdif	Video Effect	Misc	Apply edge Slope Tracking deinterlace (avfi
Exponential signal decay	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1886)
exposure	Video Effect	Misc	Adjust exposure of the video stream (avfilte
extrastereo	Audio Effect	Audio	Increase difference between stereo audio ch (avfilter.extrastereo)
Fade From Black (video effect)	Video Effect	Motion	Fade video from black (brightness)
fade_in (audio effect)	Audio Effect	fade	Fade in audio track (volume)
fade_out (audio effect)	Audio Effect	fade	Fade out audio track (volume)
Fade to Black (video effect)	Video Effect	Motion	Fade video to black (brightness)
fast_lookahead_limiter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1913)
Fast overdrive	Audio Effect	Audio	
fft	Audio Effect	Audio	An audio filter that computes the FFT of the does not modify the audio or the image. It on and stores the result in the "bins" property o
fill_boarders	Video Effect	Transform, Distort, and Perspective	Fill borders of the input video, without chan dimensions. Sometimes video can have garb and you may not want to crop video input to some number (avfilter.fillborders)

Effect or Transition Name	Type	Category	Description
flip_horizontally	Video Effect	Transform, Distort and Perspective	Horizontally flip the input video (avfilter.hfl)
firequalier	Audio Effect	Audio	Finite Impulse Response Equalizer (avfilter.
Flanger	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1191)
flanger	Audio Effect	Audio	Apply a flanging effect to the audio (avfilter.
flip_vertically	Video Effect	Transform, Distort and Perspective	Vertically flip the input video (avfilter.vflip)
flippo	Video Effect	Transform, distort and Perspective	Flipping X and Y axis (frei0r.flippo)
FM Oscillator	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1415)
Foldover distortion	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1213)
Fractionally Addressed Delay Line	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1192)
Motion - Freeze	Video Effect	Motion	Freeze video on a chosen frame (freeze)
Frequency tracker	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1418)

Effect or Transition Name	Type	Category	Description
Gain	Audio Effect	Audio Correction	Adjust the audio volume without keyframes (
Gamma	Video Effect	Color and Image correction	Adjusts the gamma value of a source image (
Gamma	Video Effect	Color and Image correction	Change gamma color value (gamma)
Gate	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1410)
gaussian_blur	Video Effect	Blur and Sharpen	Apply Gaussian Blur filter (avfilter.gblur)
Giant flange	Audio Effect	Stylize	LADSPA plugin (ladspa.1437)
Glame Bandpass Analog Filter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1893)
Glame Bandpass Filter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1892)
GLAME Butterworth Highpass	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1904)
GLAME Butterworth Lowpass	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1903)

Effect or Transition Name	Type	Category	Description
Glame Butterworth X-over Filter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1902)
Glame Highpass Filter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1890)
Glame Lowpass Filter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1891)
glitch0r	Video Effect	Motion	Adds glitches and block shifting (frei0r.glitch)
Glow	Video Effect	Blur and Hide	Creates a Glamorous Glow (frei0r.glow)
Gong beater	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1439)
Gong model	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1424)
gradfun	Video Effect	Grain and Noise	Debands video quickly using gradients (avfi)
Grain	Video Effect	Deprecated	Grain over the image (grain)
grain_extract	Compositions		Perform an RGB[A] grain-extract operation sources (frei0r.grain_extract)
grain_merge	Compositions		Perform an RGB[A] grain-merge operation l sources (frei0r.grain_merge)

Effect or Transition Name	Type	Category	Description
Greyscale	Video Effect	Color and Image correction	Discard color information (greyscale)
GSM simulator	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1215)
GVerb	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1216)
haas	Audio Effect	Audio	Apply Haas Stereo Enhancer (avfilter.haas)
hard_limiter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1413)
hardlight	Compositions		Perform an RGB[A] hardlight operation between sources (frei0r.hardlight)
Harmonic generator	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1220)
hdcd	Audio Effect	Audio	Apply High Definition Compatible Digital (avfilter.hdcd)
Hermes Filter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1200)
Higher Quality Pitch Scaler	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1194)

Effect or Transition Name	Type	Category	Description
highpass	Audio Effect	Audio	Apply a high-pass filter with 3dB point freq (avfilter.highpass)
highshelf	Audio Effect	Audio	Apply a high shelf filter (avfilter.highshelf)
Hilbert transformer	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1440)
histogram_equalizer	Video Effect	Color and Image correction	This filter applies a global color histogram on a per-frame basis (avfilter.histeq)
Histogram	Video Effect	Utility	Compute and draw a color distribution histogram on video (avfilter.histogram)
hqx	Video Effect	Image Adjustment	Scale the input by 2, 3 or 4 using the hq*x m algorithm (avfilter.hqx)
Hue	Compositions		Perform a conversion to hue only of the source hue of input2 (frei0r.hue)
Hue Shift	Video Effect	Color and Image correction	Shifts the hue of a source image (frei0r.huesl)
Impulse convolver	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1199)
interlace_field_order	Video Effect	Image Adjustment	Transform the field order of the input video
interleavedeinterleave	Video Effect	Image Adjustment	Deinterleave or interleave fields (avfilter.il)
Invert	Video Effect	Color and Image correction	AllNegate (invert) the input video (avfilter.r)

Effect or Transition Name	Type	Category	Description
Invert	Video Effect	Color and Image correction	Invert colors (invert)
invert0r	Video Effect	Color and Image correction	Inverts all colors of a source image (frei0r.invert)
Inverter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1429)
K-Means Clustering	Video Effect	Deprecated	Clusters of a source image by color and spatial information (frei0r.cluster)
Karaoke	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1409)
kernel_deinterlacer	Video Effect	Image Adjustment	Deinterlace input video by applying Donald Duck kernel deinterlacing. Works on interlaced and progressive frames (avfilter.kernel_deinterlacer)
Key Spill Mop Up	Video Effect	Alpha, Mask and Keying	Reduces the visibility of key color spill in chroma keying (frei0r.keyspillmopup)
kirsch	Video Effect	Misc	Apply kirsch operator (avfilter.kirsch)
L/C/R Delay	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1436)
ladspa	Audio Effect	Audio	Process audio using LADSPA plugins (ladspa)
Lens Correction	Video Effect	Transform, Distort and Perspective	Allow compensation of lens distortion (frei0r.lenscorrection)

Effect or Transition Name	Type	Category	Description
Lens Correction	Video Effect	Transform, Distort and Perspective	Correct radial lens distortion (avfilter.lenscor
lenscorrection	Video Effect	misc	
LetterB0xed	Video Effect	Transform, Distort and Perspective	Adds black borders at the top and bottom for (frei0r.letterb0xed)
Levels	Video Effect	Color and Image correction	Adjust levels (frei0r.levels)
LFO Phaser	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1217)
Lift/Gamma/Gain	Video Effect	Color Correction	
lightshow	Video Effect	On Master	An audio visualization filter that colors the i the magnitude of the audio spectrum (lightsh
lighten	Compositions		Perform a lighten operation between two so value of both sources) (frei0r.lighten)
limiter	Video Effect	Color and Image correction	Limits the pixel components values to the sp [min,max] (avfilter.limiter)
loudness_meter	Audio Effect	Audio	Measure audio loudness as recommended by (Loudness_meter)
lowpass	Audio Effect	Audio	EBU R128 loudness normalization (avfilter.
lowshelf	Audio Effect	Audio	Apply a low-pass filter with 3dB point freq (avfilter.lowpass)
lighten	Audio Effect	Audio	Apply a low shelf filter (avfilter.lowshelf)

Effect or Transition Name	Type	Category	Description
LS Filter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1908)
luma	Composition	•	Applies a stationary transition between the c frames (luma)
Lumakey Effect	Video Effect	Alpha, Mask and Keying	This filter modifies image's alpha channel as luma value. This is used together with a cor two images so that bright or dark areas of so overwritten on top of the destination image (
lumaliftgaingamma	Video Effect	Color and Image correction	Filter can be used to apply lift gain and gam luma values of an image (lumaliftgammagair
Luminance	Video Effect	Color and Image correction	Creates a luminance map of the image (frei0
Mag's Notch Filter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1894)
Matrix Spatialiser	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1422)
Matrix: MS to Stereo	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1421)
Matrix: Stereo to MS	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1420)
lighten	Compositions		Replace the alpha channel of track A with th track B (matte)

Effect or Transition Name	Type	Category	Description
mcompand	Audio Effect	Audio	Multiband Compress or expand audio dynam (avfilter.mcompand)
:compositions	Compositions		Perform an RGB[A] multiply operation betw sources (frei0r.multiply)
Medians	Video Effect	Deprecated	Implements several median-type filters (frei
Mirror	Video Effect	Transform, Distort and Perspective	Flip your image in any direction (mirror)
mixdown	Audio Effect	Audio	Mix all channels of audio into a mono signal channels (mono)
Modulatable delay	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1419)
Mono Amplifier	Audio Effect	Misc	
mono_to_stereo_splitter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1406)
monochrome	Video Effect	Misc	Convert video to gray using custom color fil (avfilter.monochrome)
motion_compensation_deinterlacing	Video Effect	Image Adjustment	Apply motion-compensation deinterlacing (ε
Motion Tracker	Video Effect	Alpha, Mask and Keying	Select a zone to follow its movements (open
Multiband EQ	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1197)

Effect or Transition Name	Type	Category	Description
multiply	Compositions		Perform an RGB[A] multiply operation between sources (frei0r.multiply)
Multivoice Chorus	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1201)
Audio Correction - Mute	Audio Effect	Audio Correction	
NDVI Filter	Video Effect	Utility	This filter creates a false image from a visible (frei0r.ndvi)
Nervous	Video Effect	Motion	Flushes frames in time in a nervous way (frei0r.nervous)
nikon_d90_stairstepping_fix	Video Effect	Utility	Removes stairstepping artifacts from Nikon Sharp lines in videos from the Nikon D90 sensor. The 9th line, assumedly due to poor downsampling, is smoothed out with this filter if they become visible (frei0r.d90stairsteppingfix)
normalise	Audio Effect	Audio Correction	Correct audio loudness as recommended by ITU (loudness)
normalise	Audio Effect	Audio Correction	Dynamically normalise the audio volume (frei0r.normalise)
normaliz0r	Video Effect	Color and Image correction	Normalize (aka histogram stretch, contrast stretch) (frei0r.normaliz0r)
normalize_rgb_video	Video Effect	Color and Image correction	Normalize RGB video (aka histogram stretch, contrast stretching). See: https://en.wikipedia.org/wiki/Normalization (avfilter.normalize)
nosync0r	Video Effect	Transform, Distort and Perspective	Broken TV (frei0r.nosync0r)

Effect or Transition Name	Type	Category	Description
Obscure	Video Effect	Blur and Hide	
Old Film	Video Effect	Stylize	Moves the Picture up and down and random (oldfilm)
Oscilloscope	Video Effect	Utility	2D video oscilloscope (frei0r.pr0file)
Oscilloscope	Video Effect	Utility	2D Video Oscilloscope (avfilter.oscilloscop
overlay	Compositions		Perform an RGB[A] overlay operation betw sources, using the generalised algorithm: D = (255 - A)) (frei0r.overlay)
pad	Video Effect	Stylize	
pan	Audio Effect	Audio Channels	Adjust the left/right spread of a channel (par
phase	Video Effect	Image Adjustment	Delay interlaced video by one field time so changes (avfilter.phase)
photosensitivity	Video Effect	Misc	Filter out photosensitive epilepsy seizure-in (avfilter.photosensitivity)
pillar_echo	Video Effect	Transform, Distort and Perspective	Create an echo effect (blur) outside of an arc (pillar_echo)
Pitch Scaler	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1193)
Pixelize	Video Effect	Stylize	Pixelize input image (frei0r.pixeliz0r)
Plate reverb	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1423)

Effect or Transition Name	Type	Category	Description
Pointer cast distortion	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1910)
Position and Zoom	Video Effect	Transform, Distort and Perspective	Adjust size and position of clip (affine)
posterize	Video Effect	Stylize	Posterizes image by reducing the number of colors (frei0r.posterize)
pp	Video Effect	Utility	
prewitt	Video Effect	Stylize	Apply prewitt operator to input video stream
Primaries	Video Effect	Stylize	Reduce image to primary colors (frei0r.primaries)
r	Video Effect	Color and Image correction	Extracts Red from Image (frei0r.R)
Rate shifter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1417)
Mask0mate	Video Effect	Transform, Distort and Perspective	Creates a square alpha-channel mask (frei0r.mask0mate)
Regionalize	Compositions		Use alpha channel of another clip to create a mask
rescale	Video Effect	Image Adjustment	Scale the producer video frames size to match the consumer video filter is designed for use as a normaliser for (rescale)
Retro Flanger	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1208)

Effect or Transition Name	Type	Category	Description
Reverse Delay (5s max)	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1605)
RGB adjustment	Video Effect	Color and Image correction	Simple color adjustment (frei0r.coloradj_RC)
rgb_parade_MLT	Video Effect	Utility	Display a histogram of R, G and B compone (frei0r.rgbparade).
rgba_shift	Video Effect	Stylize	Shift R/G/B/A pixels horizontally and/or ve (avfilter.rgbashift)
rgbnoise	Video Effect	Deprecated	Adds RGB noise to image (frei0r.rgbnoise)
Rgbsplit0r	Video Effect	Stylize	RGB splitter and shifting (frei0r.rgbsplit0r)
Ringmod with LFO	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1189)
Ringmod with two inputs	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1188)
roberts	Video Effect	Stylize	Apply roberts cross operator to input video (avfilter.roberts)
Rotate	Video Effect	Transform, Distort and Perspective	Rotate clip in any 3 directions (affine)
Rotate and Shear	Video Effect	Transform, Distort and Perspective	Rotate clip in any 3 directions (affine)
rubber_band_mono_pitch_shifter	Audio Effect	Audio	LADSPA plugin (ladspa.2979)

Effect or Transition Name	Type	Category	Description
rubber_band_mono_pitch_shifter	Audio Effect	Audio	Adjust the audio pitch using the Rubberband
rubber_band_mono_pitch_shifter	Audio Effect	Audio	LADSPA plugin (ladspa.2979)
Rotoscoping	Video Effect	Alpha, Mask and Keying	Keyframable vector based rotoscoping (roto
Saturation	Composition		Perform a conversion to saturation only of th using the saturation level of input2 (frei0r.sa
Saturation	Video Effect	Color and Image correction	Adjusts the saturation of a source image (fre
SC1	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1425)
SC2	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1426)
SC3	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1427)
SC4	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1882)
SC4 mono	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1916)
scale_cuda	Video Effect	Stylize	

Effect or Transition Name	Type	Category	Description
scale_qsv	Video Effect	misc	QuickSync video scaling and format conversion (avfilter.scale_qsv)
scanline0r	Video Effect	Generate	Interlaced black lines (frei0r.scanline0r)
scdet	Video Effect	Misc	Detect video scene change (avfilter.scdet)
Scratchlines	Video Effect	Grain and Noise	Scratchlines over the picture (lines)
Transitions - Screen	Compositions		Perform an RGB[A] screen operation between two clips using the generalised algorithm: $D = 255 - (C - A) * B$ (frei0r.screen)
scroll	Video Effect	Misc	Scroll input video (avfilter.scroll)
SE4	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1883)
Sepia	Video Effect	Color and Image correction	Turn clip colors to sepia (sepia)
set_range	Video Effect	Blur and Sharpen	Force color range for the output video frame
shape_adaptive_blur	Video Effect	Color and Image correction	Shape Adaptive Blur (avfilter.sab)
shapealpha	Video Effect	Alpha, Mask, and Keying	Create an alpha channel (transparency) base resource (shape)
sharp-unsharp	Video Effect	Blur and Sharpen	Sharpen or Blur your video (avfilter.unsharp)
Sharpen	Video Effect	Deprecated	Unsharp masking (port from Mplayer) (frei0r.unsharp)

Effect or Transition Name	Type	Category	Description
shear	Video Effect	Misc	Shear transform the input image (avfilter.shear)
shufflepixels	Video Effect	Misc	Shuffle video pixels (avfilter.shufflepixels)
shuffleplanes	Video Effect	misc	
sigmoidaltransfer	Video Effect	Stylize	Desaturates image and creates a particular look called Stamp, Newspaper, or Photocopy (frei0r.sigmoidaltransfer)
Signal sifter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1210)
signalstats	Video Effect	Stylize	
silencedetect	Video Effect	Stylize	Detect silence (avfilter.silencedetect)
Simple amplifier	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1181)
Simple delay line cubic spline interpolation	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1900)
Simple delay line linear interpolation	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1899)
Simple Delay Line, noninterpolating	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1898)
simple_high_pass_filter	Audio Effect	Audio	LADSPA plugin (ladspa.1042)

Effect or Transition Name	Type	Category	Description
simple_low_pass_filter	Audio Effect	Audio	LADSPA plugin (ladspa.1041)
sine_oscillator	Audio Effect	Audio	LADSPA plugin (ladspa.1044)
sine_oscillator	Audio Effect	Audio	LADSPA plugin (ladspa.1045)
sine_oscillator	Audio Effect	Audio	LADSPA plugin (ladspa.1046)
Single band parametric	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1203)
Sinus wavewrapper	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1198)
slide	Compositions		Slide image from one side to another (comp)
smartblur	Video Effect	Blur and Sharpen	Blur the input video without impacting the o (avfilter.smartlblur)
Smooth Decimator	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1414)
Sobel	Video Effect	Stylize	Sobel filter (frei0r.sobel)
Sobel	Video Effect	Stylize	Apply sobel operators to input video stream
Softglow	Video Effect	Stylize	Does softglow effect on highlights (frei0r.so
softlight	Compositions		Perform an RGB[A] softlight operation betw sources (frei0r.softlight)
SOP/Sat Effect	Video Effect	Color and Image correction	Changes Slope, Offset, and Power of the col the overall Saturation, according to the ASC Decision List) (frei0r.sopsat)

Effect or Transition Name	Type	Category	Description
Sox band	Audio Effect	Audio	Process audio using a SoX effect (sox)
Sox band	Audio Effect	Audio	Sox band audio effect (sox)
Sox bass	Audio Effect	Audio	Sox bass audio effect (sox)
Sox echo	Audio Effect	Audio	Sox echo audio effect (sox)
Sox flanger	Audio Effect	Audio	Sox flanger audio effect (sox)
Sox gain	Audio Effect	Audio	Sox gain audio effect (sox)
Sox phaser	Audio Effect	Audio	Sox phaser audio effect (sox)
Sox stretch	Audio Effect	Audio	Sox stretch audio effect (sox)
Spill Suppress	Video Effect	Enhancement	
speechnorm	Audio Effect	Audio	Speech Normalizer (avfilter.speechnorm)
spill_suppress	Video Effect	Alpha, Mask and Keying	Remove green or blue spill light from subject green or blue screen (frei0r.spillsuppress)
spotremover	Video Effect	Alpha, Mask and Keying	Replace an area with interpolated pixels. They are interpolated from the nearest pixel.
Square Blur	Video Effect	Blur and Hide	Square Blur (frei0r.squareblur)
State Variable Filter	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1214)
Step Demuxer	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1212)

Effect or Transition Name	Type	Category	Description
Stereo Amplifier (version >= 0.9.10)	Audio Effect	Audio Correction	LADSPA plugin (ladspa.1049)
stereo_to_mono	Audio Effect	Audio Correction	Copy one channel to another (channelcopy)
stereoscopic_3d	Video Effect	VR360 and 3D	Convert between different stereoscopic images (avfilter.stereo3d)
stereotools	Audio Effect	Audio	Apply various stereo tools (avfilter.stereotools)
stereowiden	Audio Effect	Audio	Apply stereo widening effect (avfilter.stereowiden)
subtract	Compositions		Perform an RGB[A] subtract operation of the second input from input1 (frei0r.subtract)
super2xsai	Video Effect	Image Adjustment	Scale the input by 2x using the Super2xSai plugin (avfilter.super2xsai)
superequalizer	Audio Effect	Audio	Apply 18 band equalization filter (avfilter.superequalizer)
Surround matrix encoder	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1401)
swap_channels	Audio Effect	Audio Channels	Move the left channel to the right and the right channel to the left (channelswap)
swapuv	Video Effect	Color and Image correction	Swap U and V components (avfilter.swapuv)
Tape Delay Simulation	Audio Effect	Audio Channels	Move the left channel to the right and the right channel to the left (channelswap)
TAP AutoPanmer	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2146)
TAP Chrous/Flanger	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2159)

Effect or Transition Name	Type	Category	Description
TAP DeEsser	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2147)
TAP Dynamics (M)	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2152)
TAP Dynamics (St)	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2153)
TAP Equalizer	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2141)
TAP Equalizer/BW	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2151)
TAP Fractal Doubler	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2156)
TAP Pink/Fractal Noise	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2155)
TAP Pitch Shifter	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2150)
TAP Reflector	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2154)
TAP Reverberator	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2142)
TAP Rotary Speaker	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2149)
TAP Scaling Limiter	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2145)
TAP Sigmoid Booster	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2157)
TAP Stereo Echo	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2143)
TAP Tremolo	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2144)
TAP Tube Warmth	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2158)
TAP Vibrato	Audio Effect	TAP Plugins	LADSPA plugin (ladspa.2148)

Effect or Transition Name	Type	Category	Description
tape_delay_simulation	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1211)
Technicolor	Video Effect	Color and Image correction	Oversaturate the color in video, like in old TV (tcolor)
tehroxx0r	Video Effect	Misc	Something videowall-ish (frei0r.tehRoxx0r)
thistogram	Compositions		Uses Input 1 as a UV Map to distort Input 2 (thistogram)
Threshold	Video Effect	Stylize	Thresholds a source image (frei0r.threshold)
Timeout Indicator	Video Effect	Utility	Timeout indicators e.g. for slides (frei0r.timeout)
Tint	Video Effect	Color and Image correction	Maps source image luminance between two (frei0r.tint0r)
tmedian	Video Effect	Misc	Pick median pixels from successive frames (tmedian)
tmidequalizer	Video Effect	Misc	Apply Temporal Midway Equalization (avfilter.tmid)
tonemap_vaapi	Video Effect	Misc	VAAPI VPP for tone-mapping (avfilter.tonemap)
Transform	Video Effect	Transform, Distort and Perspective	Position, Scale and opacity, (qtblend)
Transform	Compositions		Perform an affine transform on for composition (transform)
Transient mangler	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1206)
transparency	Video Effect	Alpha, Mask and Keying	Tunes the alpha channel (frei0r.transparency)

Effect or Transition Name	Type	Category	Description
transpose	Video Effect	Transform, Distort and Perspective	Transpose rows with columns in the input video and flip it (avfilter.transpose)
treble	Audio Effect	Audio	Boost or cut upper frequencies (avfilter.treble)
tremolo	Audio Effect	Audio	Apply tremolo effect (avfilter.tremolo)
Triple band parametric with shelves	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1204)
Typewriter	Text Effect	Misc	Typewriter effect v0.3.3 (typewriter)
untile	Video Effect	Misc	Untile a frame into a sequence of frames (avfilter.untile)
v360	Video Effect	Misc	Convert 360 projection of video (avfilter.v360)
value	Transition		Applies a stationary transition between the current and next frames (composite)
Valve rectifier	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1405)
Valve saturation	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1209)
Analysis and Data - Vectorscope	Video Effect	Utility	Display a vectorscope of the video data (frequency and phase) (avfilter.vectorscope)
Vectorscope Window	Video Effect	Utility	Display 2 color component values in the two channels (which is called a vectorscope) (avfilter.vecw)
vertigo	Video Effect	Motion	Alpha blending with zoomed and rotated images (avfilter.vertigo)
vibrato	Audio Effect	Audio	Apply vibrato effect (avfilter.vibrato)

Effect or Transition Name	Type	Category	Description
video_noise_generator	Video Effect	Grain and Noise	Add noise on video input frame (avfilter.noise)
videoquality_measurement	Transition		This performs the PSNR and SSIm video quality measurement by comparing the B frames to the reference frame. The numbers to stdout in space-delimited format. The bottom half of the B frame is compared to the top half of the A frame for visual comparison.
Video Values	Video Effect	Utility	Measure video values (frei0r.pr0be)
Vignette	Video Effect	Generate	Natural Lens vignetting effect (frei0r.vignette)
Vignette Effect	Video Effect	Generate	Adjustable Vignette (vignette)
vocoder	Audio Effect	Audio	LADSPA plugin (ladspa.1337)
Volume (keyframable)	Audio Effect	Audio Correction	Adjust the audio volume with keyframes (vo)
vpp_qsv	Video Effect	Misc	Quick Sync Video VPP (avfilter.vpp_qsv)
vr360_equirectangular_mas	Video Effect	VR360 and 3D	Adds a black matte to the frame. Use this if you have a 360 camera but only want to use part of the field of view. For example if you and the film crew occupy the center of the camera (frei0r.bigsh0t_eq_mask)
vr360_equirectangular_to_rectilinear	Video Effect	VR360 and 3D	converts an equirectangular frame (panoramic frame) to a rectilinear frame (what you're used to seeing). Can be used to place "normal" footage in a 360 video viewer. Delay mapping on a time bitmap (frei0r.bigsh0t_eq)
vr360_hemispherical_to_equirectangular	Video Effect	VR360 and 3D	Converts a video frame with two hemispherical projections to a single equirectangular frame. The plugin assumes the two hemispheres are in the frame (frei0r.bigsh0t_eq)
vr360_rectilinear_to_equirectangular	Video Effect	VR360 and 3D	Converts a rectilinear (a normal-looking) image to an equirectangular image. Use this together with vr360_equirectangular_to_rectilinear to place "normal" footage in a 360 movie (frei0r.bigsh0t_rect_to_eq)

Effect or Transition Name	Type	Category	Description
vr360_stabilize	Video Effect	VR360 and 3D	Stabilizes 360 footage. The plugin works in analysis and stabilization. When analyzing frame-to-frame rotation, and when stabilizing high-frequency motion (shake) (frei0r.bigsh0t_t)
vr360_transform	Video Effect	VR360 and 3D	Rotates a panoramic image (frei0r.bigsh0t_t)
VyNil (Vinyl Effect)	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1905)
Wave	Video Effect	Deprecated	Makes waves on your clip with keyframes (v)
Wave shaper	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1187)
Wave Terrain Oscillator	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1412)
White Balance	Video Effect	Color Correction	
White Balance	Video Effect	Color and Image correcting	Adjust the white balance / color temperature
White Balance (LMS)	Video Effect	Color and Image correcting	Do simple color correction, in a physically (frei0r.colgate)
Composition - Wipe	Compositions		Applies a stationary transition between the frames (composite)

Effect or Transition Name	Type	Category	Description
xbr	Video Effect	Image Adjustment	Apply the xBR high-quality magnification filter designed for pixel art. It follows a set of edge detection rules. For more information see https://forums.libreto.com/t/xbr-algorithm (avfilter.xbr)
yadif_cuda	Video Effect	Misc	Deinterlace CUDA frames (avfilter.yadif_cuda)
yaepblur	Video Effect	Misc	Yet another edge preserving blur filter (avfilter.yaepblur)
z-1	Audio Effect	Steve Harris' SWH plugins	LADSPA plugin (ladspa.1428)
zmq	Video Effect	misc	
zoompan	Video Effect	Transform, Distort and Perspective	Apply Zoom and Pan effect (avfilter.zoompan)
zscale	Video Effect	Misc	Apply resizing, colorspace and bit depth correction (avfilter.zscale)

Speech to text

New in version 21.04.0.

Warning

Speech to text doesn't work with version 21.04.2 due to [Vosk API](https://github.com/alphacep/vosk-api) [https://github.com/alphacep/vosk-api] issues. Use version 21.04.1 or 21.04.3 and later versions.

Install Python

Python 3 needs to be installed on your computer as well as the vosk and srt python modules:

Linux

On most Linux distributions python is installed by default. You can check if that is the case for you too by running `python3 -v` in a terminal. If python is missing just search the internet, there are lots of instructions around.

To install vosk and srt open a terminal and run: `pip3 install vosk srt`

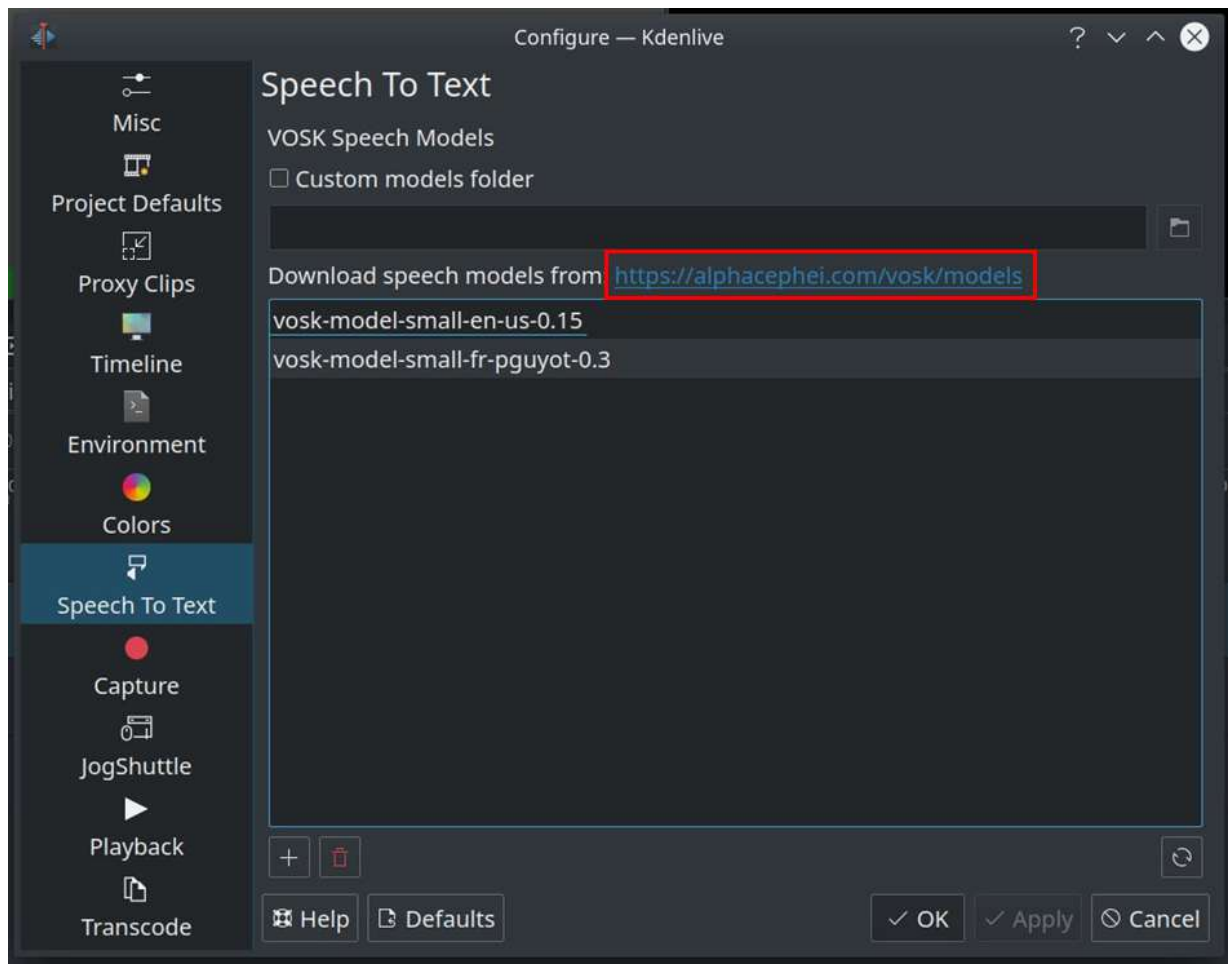
Windows

1. Download python from <https://www.python.org/downloads/> for installation on your computer.
2. Download this batch file (`install_vosk_srt.zip`). After download a double click starts the installations.

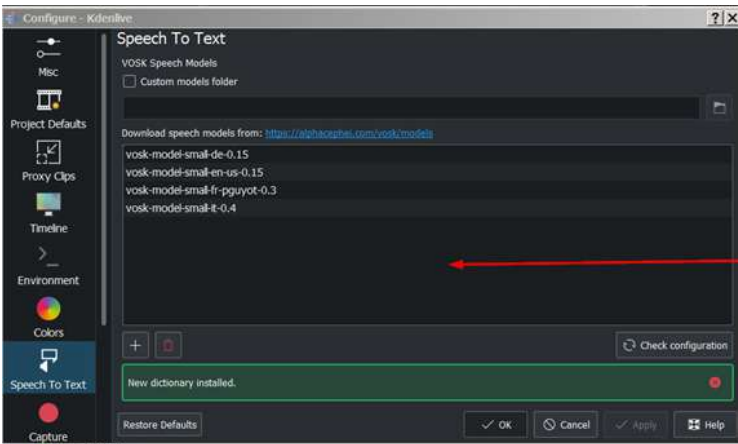
Install a language

Goto *Settings* ▶ *Configure Kdenlive...* ▶ *Speech to Text* page

Click on the link to get a language model.



Drag & drop the language you want from the vosk-model download page to the model window, and it will download and extract it for you.



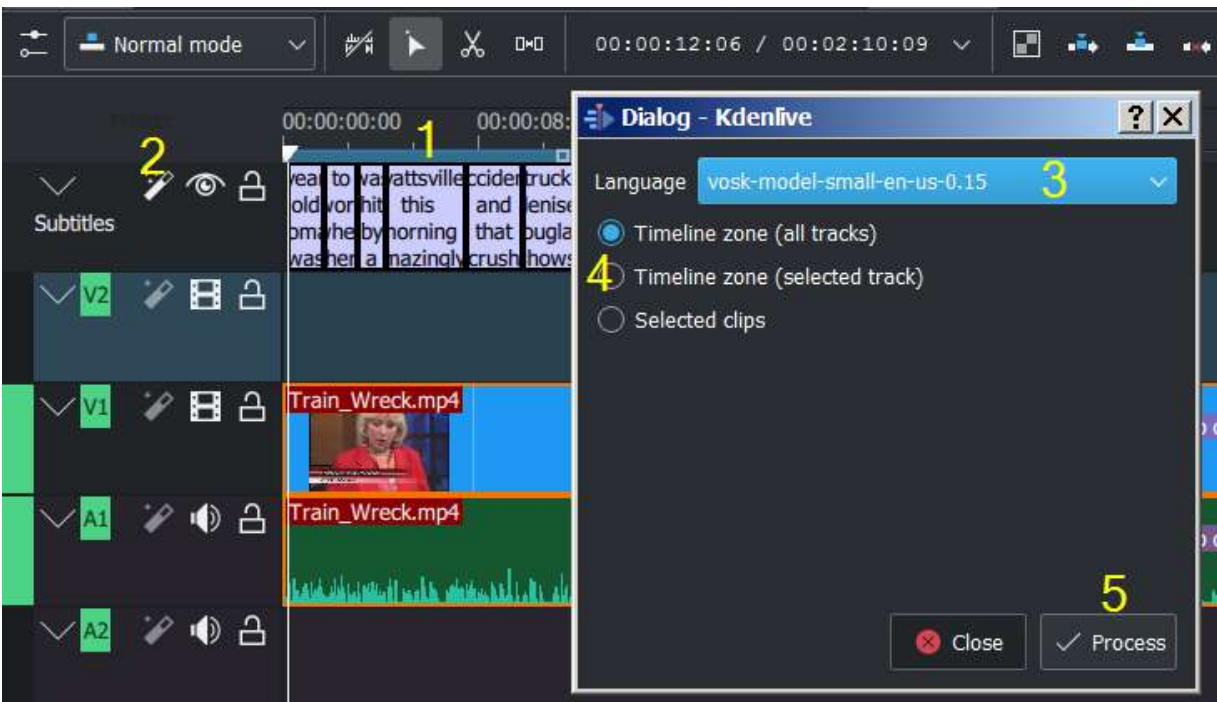
αcephei

Spanish		
vosk-model-small-es-0.3	33M	TBD
Portuguese		
vosk-model-small-pt-0.3	31M	TBD

If you have problems press on the *Check configuration* button.

Speech recognition

Creating subtitle by speech recognition



1. Mark the timeline zone you want to recognize (adjust the blue line).
2. Click on the *Speech recognition* icon.
3. Choose the language.

4. Choose how the selected zone should be applied.
5. Press on the *Process* button.

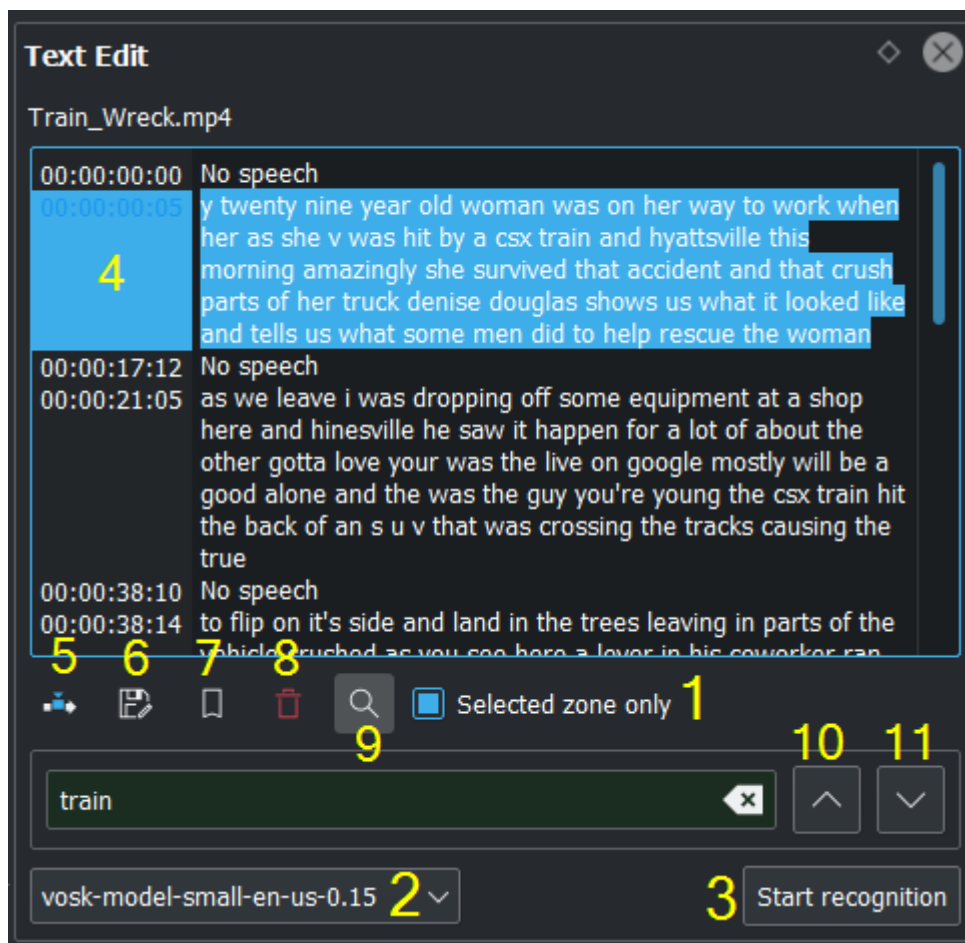
The subtitle gets created and inserted automatically.

Remark: Only timeline zone is implemented for now in automatic subtitles.

Remark to 4: The default is to analyze only the *timeline zone (all tracks)* (the blue bar in the timeline ruler). Set the zone in the timeline to what you want to analyze (use \sqcap and \circ to set in and out points). *Selected clips* option analyses the selected clip only.

Creating clips by speech recognition

This is useful for interviews and other speech-related footage. Enable the *View* \triangleright *Text Edit* menu item.



Select a clip in the project bin.

1. If needed set in/out point in the clip monitor and enable *Selected zone only* selection box. This will only recognize the text inside the zone.
2. Choose the correct language.
3. Press the *Start Recognition* button.
4. Selecting the text you want to either.
5. Put into the timeline.
6. *Save* edited text as a new playlist.
7. Add a Bookmark. You can jump to these bookmarks in the timeline with the `Alt + arrow` shortcut or edit the bookmark by double click.
8. Delete the selection.
9. Here you can search in the text.
10. And navigate up or down in the text.

Silence detection

Open the clip in the clip monitor and open the speech editor window (*View ▶ Speech Editor*) .

Select your language or [Install a language](#) and download the model for it.

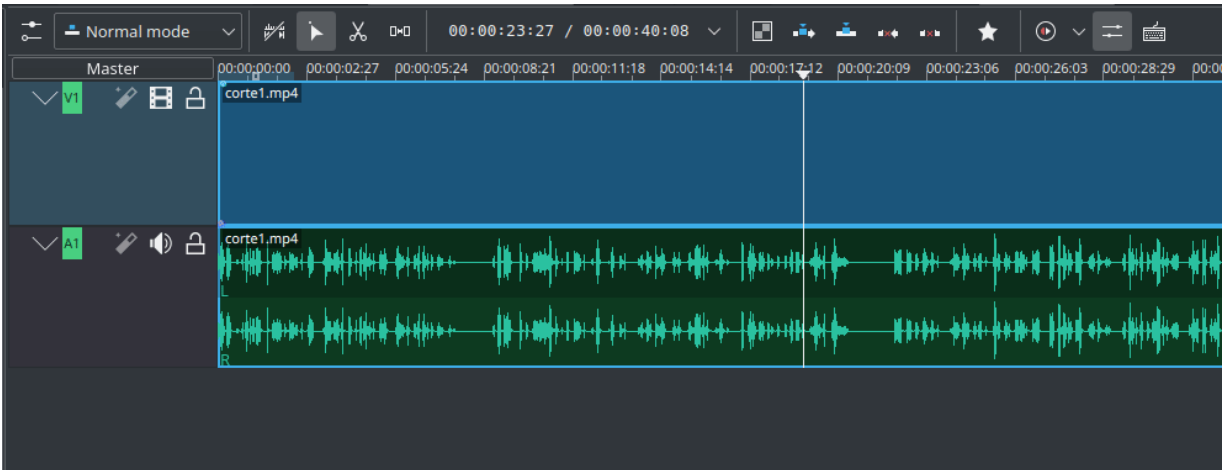
Then click *Start Recognition* button.

Once this is done, click on the time-code where no-speech is indicated and just hit the `delete` key. Repeat the operation for all the parts you want to remove, including where someone says what you don't want to listen in your final edit.

Once finished, make sure *Selected zone only* is disabled, click on the *Save* button on the lower left part of the speech editor window and after few seconds a new playlist is added in the project bin without silence and without the text you don't want.

Subtitle

New in version 20.12.0.



The subtitling tool allows you to add and edit subtitles directly in the timeline on a special subtitle track or by using the new subtitle window. You can also import (**SRT/ASS**) and export (**SRT**) subtitles.

There are 3 ways to add subtitle:

- **Menu**
 - *Project* ▸ *Subtitle* ▸ *Add Subtitle*
- **Keyboard**
 - `Shift + S` adds a subtitle.
- **Icon and Mouse**
 - Click *Add Subtitle* icon in the [timeline toolbar](#) to open the subtitle track in the timeline.
 - Double-click in the subtitle track to add a subtitle.

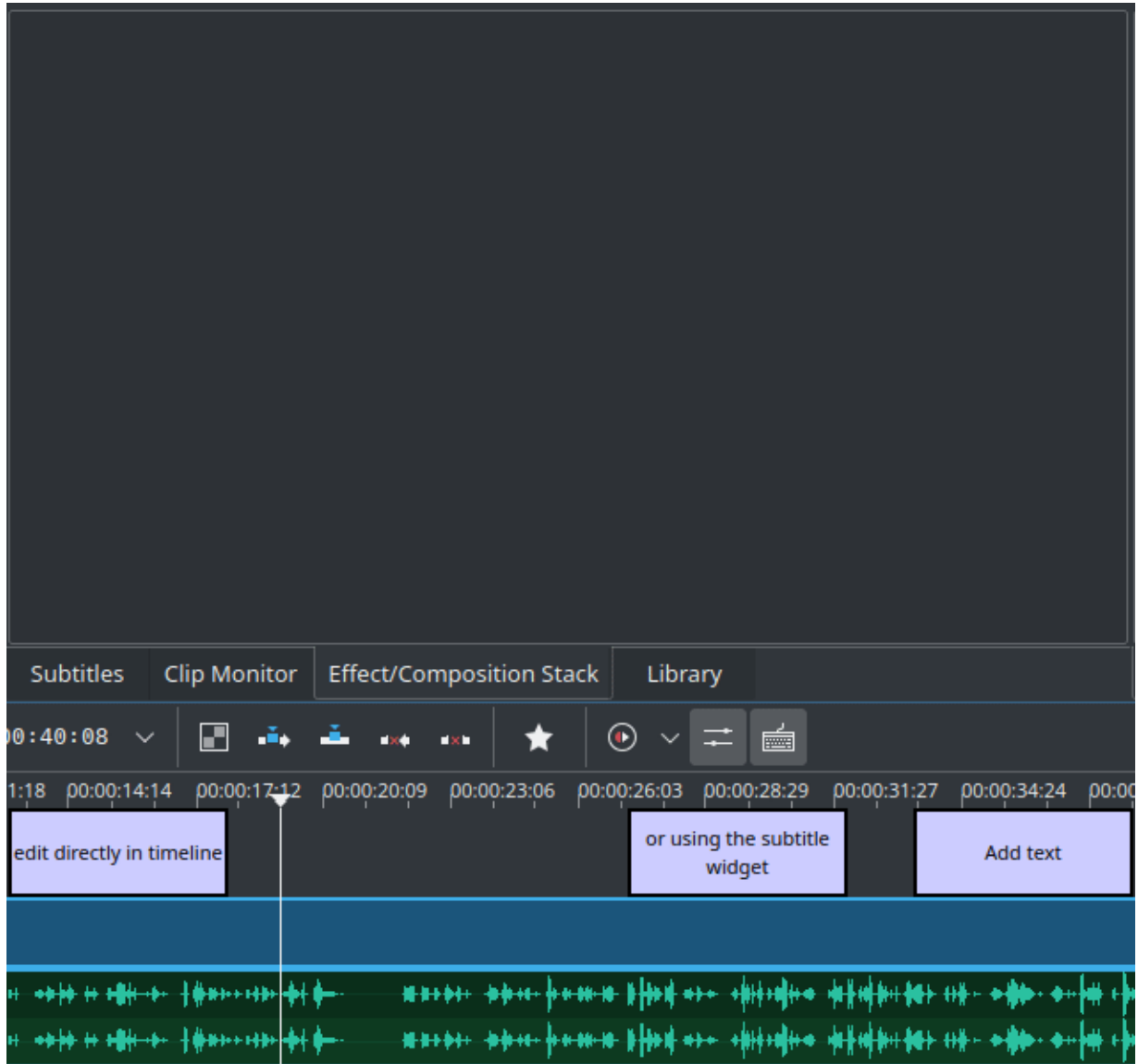
Adding and editing text

Add or editing text either directly into the subtitle clip or in the subtitle window.

Adjust the length of subtitle

Grab the end of a subtitle with the mouse and lengthen or shorten it as needed. Set subtitle in/out can be achieved with the same shortcut as to set clip in/out (left/right parenthesis shortcut).

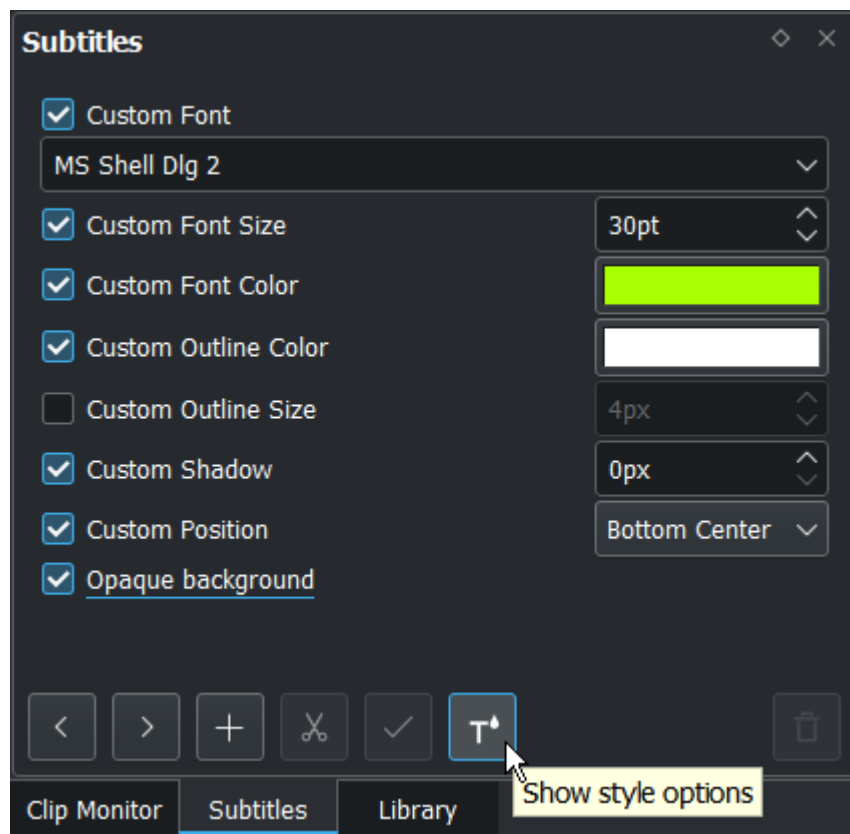
Subtitle window



- The subtitles window allows easier editing and also makes it possible to easily navigate between subtitles with the *Left* and *Right* buttons.
- With the plus sign button, you can add subtitles.

- The scissors are mostly here for divide subtitles: let's say your subtitle text is too long and you want to make it 2 different subtitles. Put the cursor in the text widget where you want to cut and click the scissors, it will split the text between 2 different subtitle items. The scissors are only working when the playhead is over the subtitle itself.
- The tick button adds the text to the subtitle.

New in version 22.08.



This is a global, simple subtitle styling possibility. It only allows one style for all subtitles of the project. Accessible through the “T drop” icon in the subtitle edit widget.

Import and export subtitle

New in version 22.08: Allows importing .vtt (Web Video Text Tracks) and .sbv (YouTube) files.

Importing **SRT**, **ASS**, **VTT** and **SBV** subtitle file: *Project ▸ Subtitles ▸ Import Subtitle File*

Exporting **SRT** subtitles only: *Project ▸ Subtitles ▸ Export Subtitle File*

Tip

SRT supports markup for: bold, italic, underline, text color and line break.

- `text in boldface`
- `<i>text in italics</i>`
- `<u>text underlined</u>`
- ` text in green` you can use the font tag only to change color.
- **And all combined:** `<i><u>All combined</u></i>`
- **Line break:** Add on the end of each line a `
` (for break). Now the .srt file is stored correct and reopened with the line break. The subtitle in the subtitle window will be all in 1 line after several save but the breaks is working.

Alt + arrow jumps from subtitle to subtitle.

New in version 21.04.0.

Spelling check

Spelling check for subtitle is integrated and shows incorrect words by a red wiggly line. Right-click on the word and you get a list of possible words you can choose by click on it.

refactred code

refactored

refracted

retracted

barefaced

redacted

prefaced



Ignorieren



Zum Wörterbuch hinzufügen

00:03:02:24

Titles

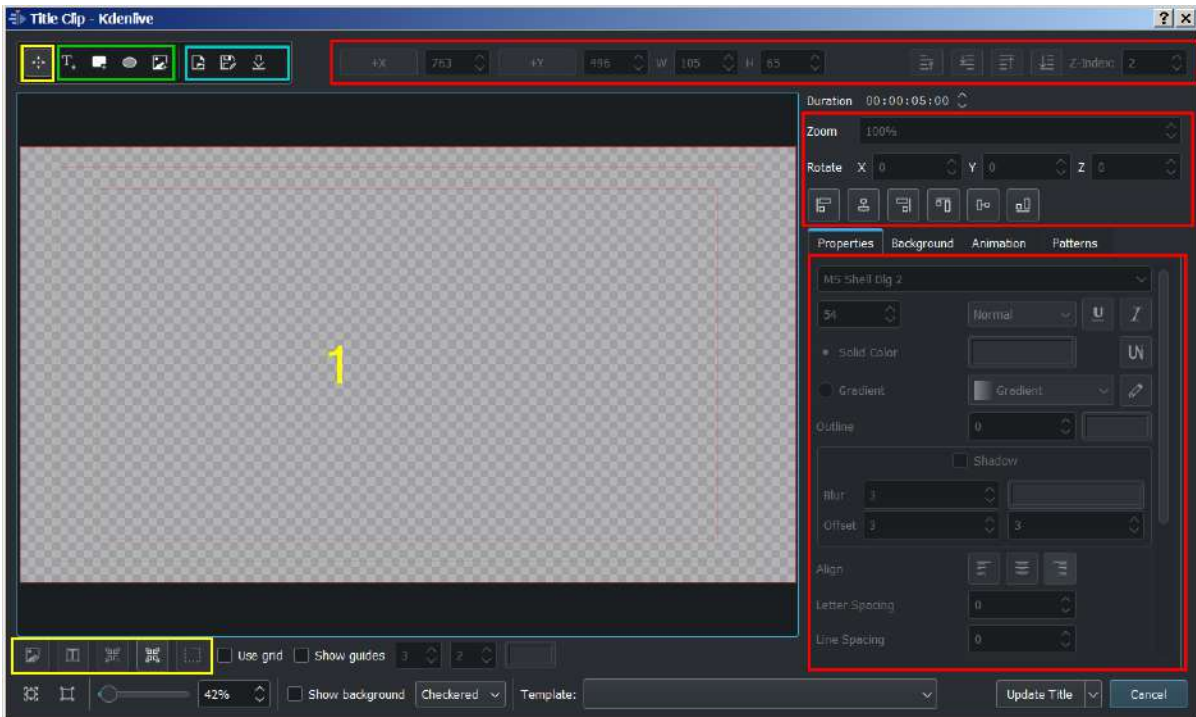
Contents

- [Titles](#)
 - [Create and Edit Title](#)
 - [Add Items](#)
 - [Select Items](#)
 - [Adjust Items](#)
 - [Typewriter](#)
 - [Scroll Title Vertically](#)
 - [Scroll Title Horizontally](#)
 - [Save a Title](#)
 - [Load a Title](#)
 - [Title Template](#)
 - [Built In](#)
 - [Download new title template](#)
 - [Template Titles - User-Defined](#)
 - [Create a Template Title](#)
 - [Use the Template Title](#)
 - [How to fade titles in and/or out](#)
 - [How to fade in more than one title sequentially](#)
 - [FAQ](#)

Titles are text elements that can be added to the timeline and appear over the top of other clips. Titles are created in the [The Project Bin](#) and then dragged to the timeline like other video clips.

If you want titles to overlay other footage, you put title clips above (on video track 2 for example) and have the other footage below (on video track 1 for example). You also need to retain the affine transition that is automatically added to the title clips if you want the footage visible underneath.

Create and Edit Title



Create a Title: Choose *Project* ▶ *Add Title Clip* or right-click in an empty area in [The Project Bin](#) and choose *Add Title Clip*.

Edit a Title: Double click the title clip either in the project bin or in the timeline. Or right-click the title clip in the project bin and select *Edit Clip*.

In the title window (1):

Select an item by clicking on it.

Edit text by double-clicking.

Once your edit is done click *Update Title* (bottom right).

Add Items



From the toolbar (green marked area) choose:

Text $\text{Alt}+\text{T}$ and click into the title window (1)

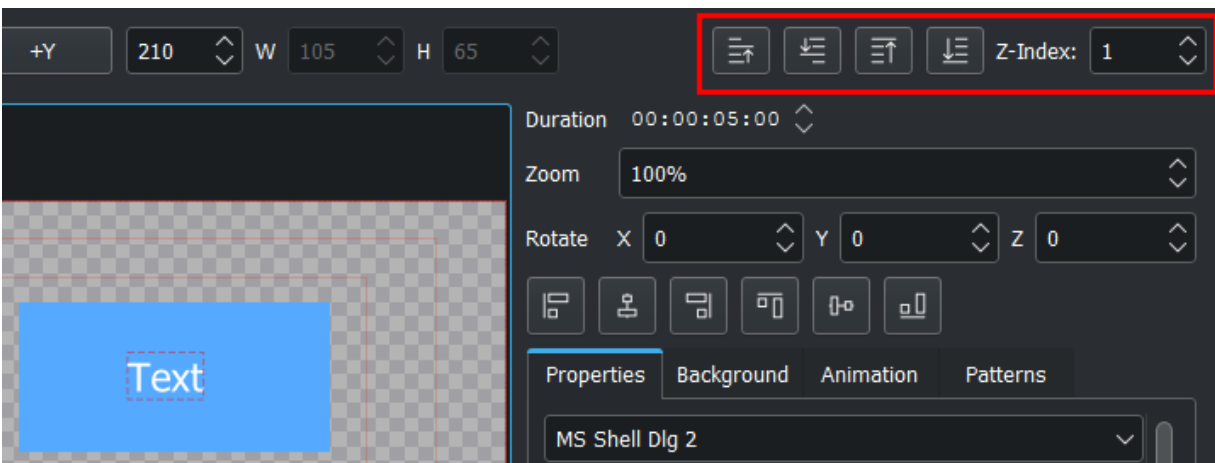
Rectangle $\text{Alt}+\text{R}$ and in the title window (1) drag the mouse to draw a rectangle

Ellipse $\text{Alt}+\text{E}$ and in the title window (1) drag the mouse to draw a ellipse.

Image $\text{Alt}+\text{I}$ brings up a file chooser where you can choose an image to be inserted into your title (1).

Default selection is *Text* for a new title clip.

$\text{Alt} + \text{S}$ brings you back to *Selection Tool* (icon with the 4 arrows, yellow marked)



Items can be placed behind each other by selecting them and changing the *Z-index*: (top right corner) to a lower value or with the 4 icons left to the *Z-index*

Select Items

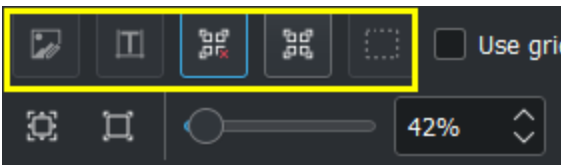


Yellow marked area. Make sure *Selection Tool* is selected or press `Alt + S`.

In the title window (1) clicking on an item.

Holding `Shift` to select several items by clicking on it.

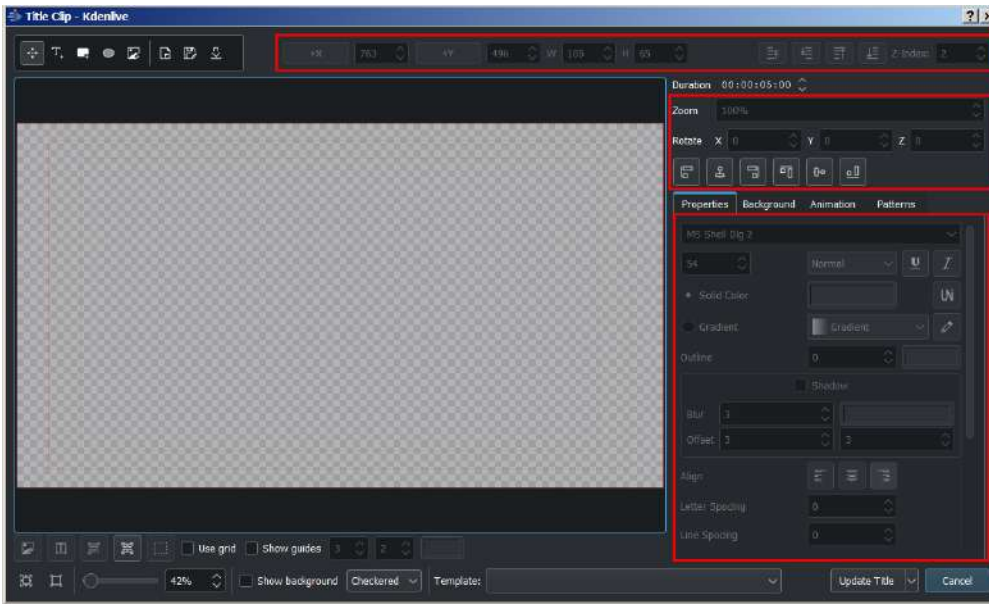
`Ctrl + A` selects all items.



You can select items with one of the 5 selection possibilities (yellow marked area, bottom left), from left to right:

1. If you have a selection: Keep only images selected
2. If you have a selection: Keep only text items selected
3. Deselect everything
4. Select All
5. If you have a selection: Keep only rect items selected

[Adjust Items](#)



Red marked areas: All items can be adjusted in position, size, level, alignment and properties either with the mouse or by entering values.

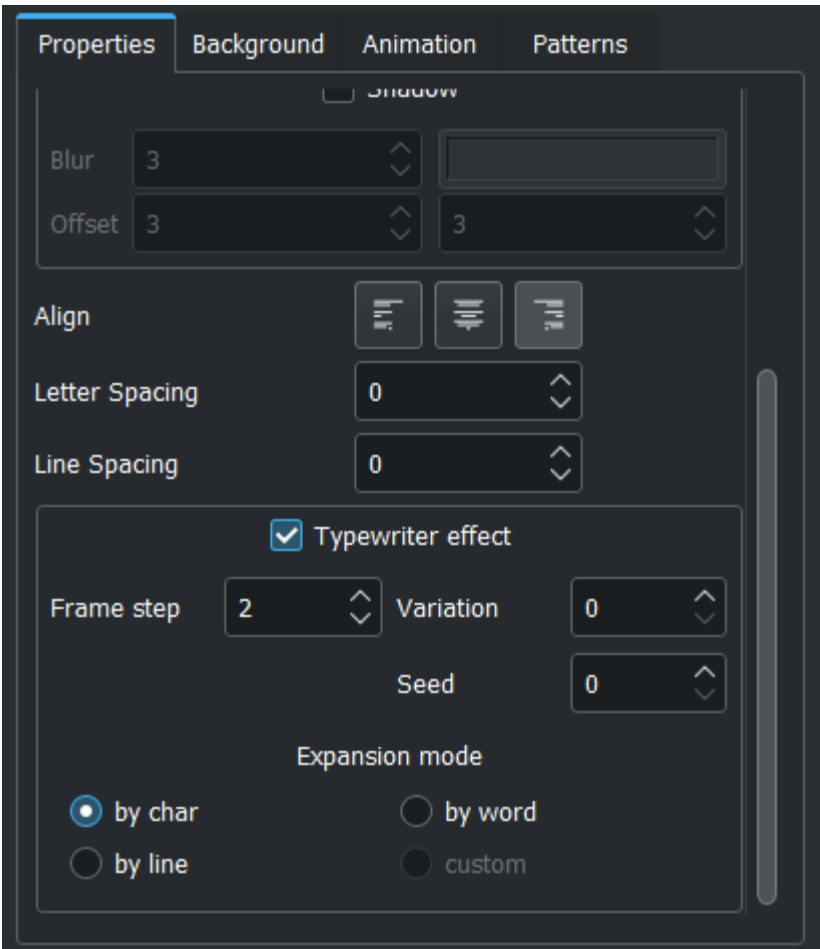
Holding `Shift` move selected items vertical only.

Holding `Shift` + `Alt` move selected items horizontally only.

Once done click *Create Title* (bottom right) or *Update Title*.

Typewriter

New in version 21.04.0.



The beloved typewriter effect is back. By default it expands text by characters, but other modes like expansion by words and lines are also available.

- **Frame step**
Tells how fast next element will be displayed. The speed is constant over the whole clip and effect period.
Values: 1-240, default: 25
- **Variation / Sigma**
Allows for introducing small fluctuation to the step length.
Values 0-20, default: 0
- **Seed**

The random generator for fluctuations is initialized with constant seed to assure predictable pattern. The seed parameter changes the initial value of random generator.

Values: 0-100, default 0

- Expansion mode
 - By character: types character by character
 - By word: types word by word
 - By line: types line by line
 - Custom: custom macros (not implemented)

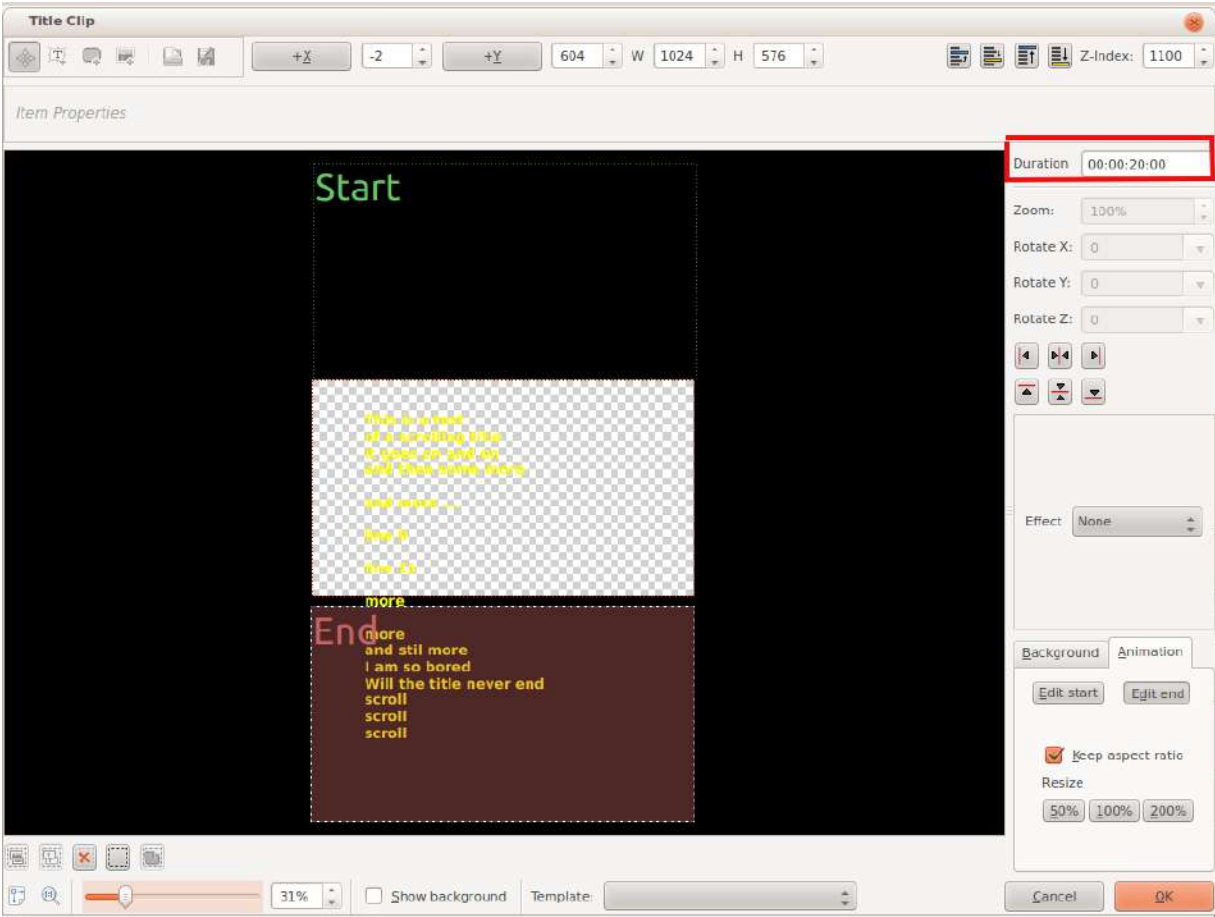
Scroll Title Vertically

Put a long title onto the title window. Zoom out so you can see it all. The text should run off the top (or bottom) of the viewable area.

Select the *Animation* tab and check the *Edit start viewport* option. Now drag the start rectangle to above the viewable area.

Check the *Edit end viewport* option and drag the end rectangle to below the viewable area.

Press the *OK* button and preview the scrolled title.



The text in the above title scrolls up the screen. It is as if the camera starts on the “start rectangle” and then pans down to the “end rectangle”.

To make the text scroll faster, set the *Duration*: field (highlighted in red in the image above) to a smaller value. To make the text scroll slower, set it to a larger value.

Note: changing the length of the title clip on the timeline does not change the scrolling speed. If the length of the clip on the timeline is longer than the duration specified in the title editor, the titles will pause on the screen between the time the title’s duration expires until the end of the clip.

If the length of the clip on the timeline is shorter than the duration specified in the title editor, the scrolling will not complete before the title clip finishes.

Note: the above description of title behaviour with respect to duration only applies to titles that don't get edited after they have been placed on the timeline. If you expand the length of a title clip on the timeline and then edit the title (by double-clicking it in the Project Bin), its apparent duration will become the length that it currently has on the timeline (i.e., the scrolling will not pause at the end anymore) but the duration displayed in the title editor will not have changed.

Scroll Title Horizontally

Use the instructions for vertical scrolling - just put the start and stop rectangles off to the sides of the screen rather than the top and bottom.

Save a Title



Blue marked area: Press the *Save As* button on the tool bar.

Title Editor toolbar when title editor is wide enough for the whole toolbar to display. The toolbar items are: **Selection Tool**, **Add Text**, **Add Rectangle**, **Add Ellipse**, **Add Image**, **Open Document** and **Save As**.

or select *Save as* from the toolbar overflow menu which can be found under the >> button on the toolbar - see picture.

Title Editor toolbar when title editor is not wide enough for the whole toolbar to display. The toolbar items that do not fit can be accessed from the >> button that appears at the end of the toolbar.

Choose a save location within your project.

The titles are saved as `.kdenlivetitle` type documents.

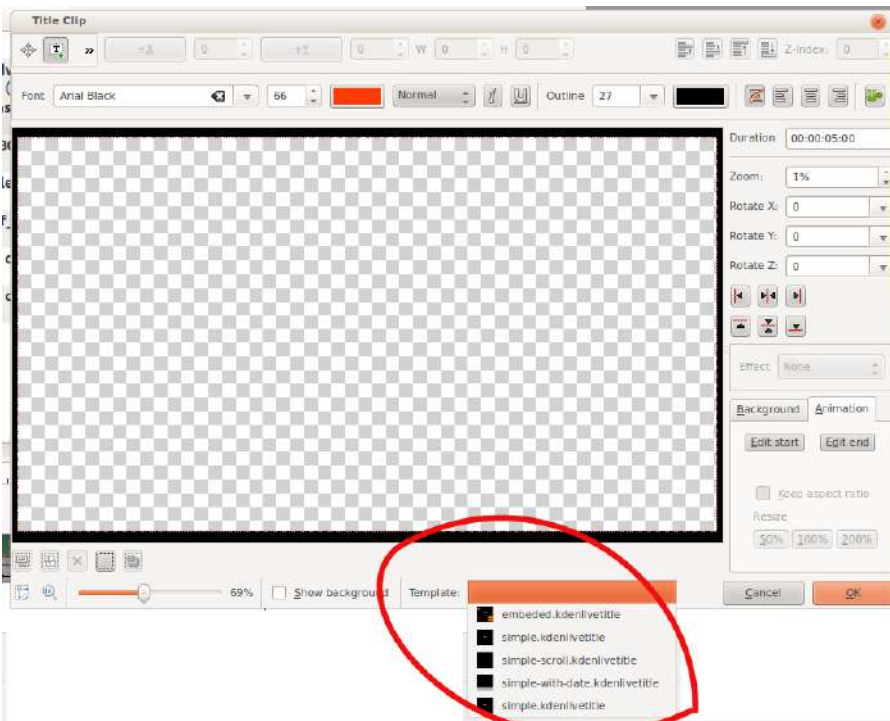
Load a Title



Blue marked area: Press the *Open Document* button on the Title Clip editor toolbar or choose *Open document* from the >> menu and load up a title saved earlier.

Title Template

Built In



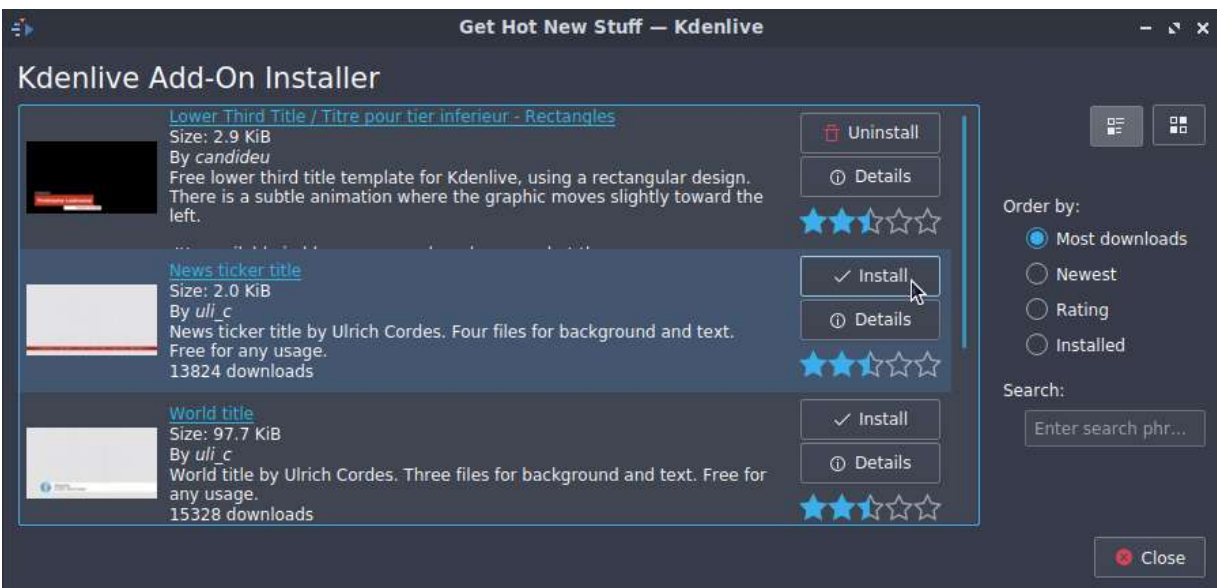
Kdenlive has some built-in title templates that can be accessed from the *Template:* drop-down list found on the bottom of the **Title Clip** window - see below.

Download new title template



Blue marked area: To install more title templates press the *Download New Title Templates...* icon on the tool bar when you are in the title editor.

If you have a good title template, you can post it [here](#) [https://store.kde.org/browse/cat/335/] so that other **Kdenlive** users can download it through *Download New Title Templates...* and use it.



Once these title templates are installed, they can be accessed via the drop down on the [template](#) dialog.

The `.kdenlivetitle` files that supply these templates are installed to:

Linux

```
$HOME/.local/share/kdenlive/titles
```

Flatpak

```
$HOME/.var/app/org.kde.kdenlive/data/kdenlive/titles
```

Windows

`%AppData%/kdenlive/titles`

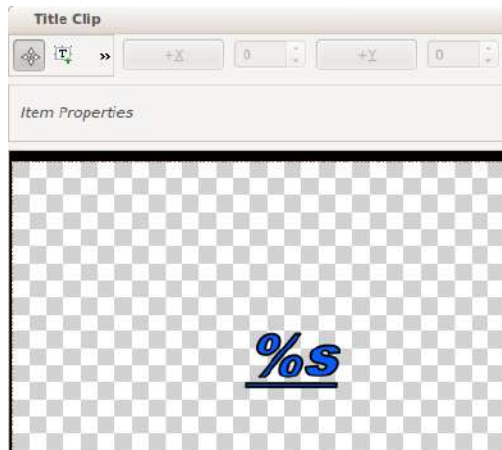
Press `Win + R` (Windows key and R key simultaneously) and copy **`%AppData%/kdenlive/`**.

Template Titles - User-Defined

Template Titles allow you to create a template for other titles in your project. You create the template title with the settings that all the titles in the project should have and then base subsequent titles on the template. If you decide to change the look of your titles, you only need change the template title and the titles based on this template will automatically update to reflect any formatting changes you made to the template title.

Create a Template Title

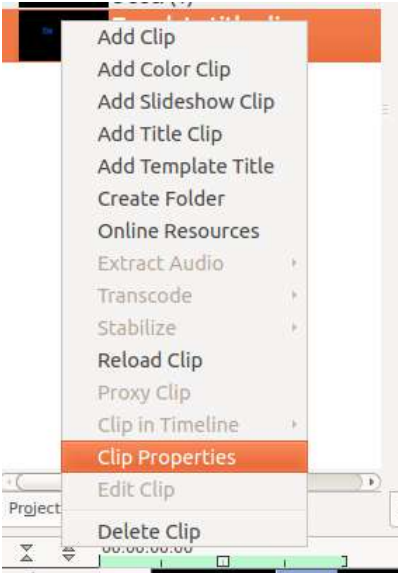
Choose the *Add Title Clip* item from the *Add Clip* drop down and create a title with the text `%s` in it and formatted how you desire it. Save this title as described above.



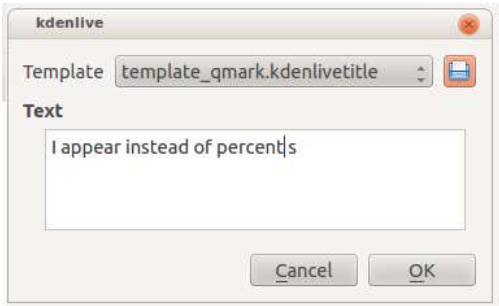
Use the Template Title

Choose the *Add Template Title* item from the *Add Clip* drop down and choose the title with the `%s` in it that you just saved.

Right-click this clip in the Project Bin and select *Clip Properties* item.

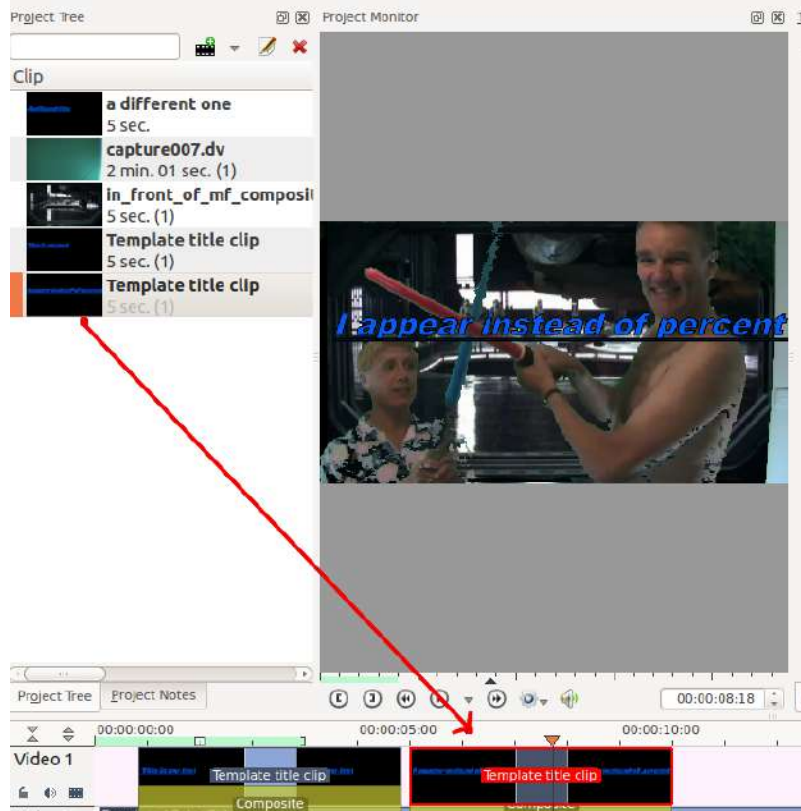


Enter the text that this title should display into the text field in the dialog that appears.



Drag the title to the timeline.

The %s in the template will be replaced with the text that you enter in the *Text:* field.

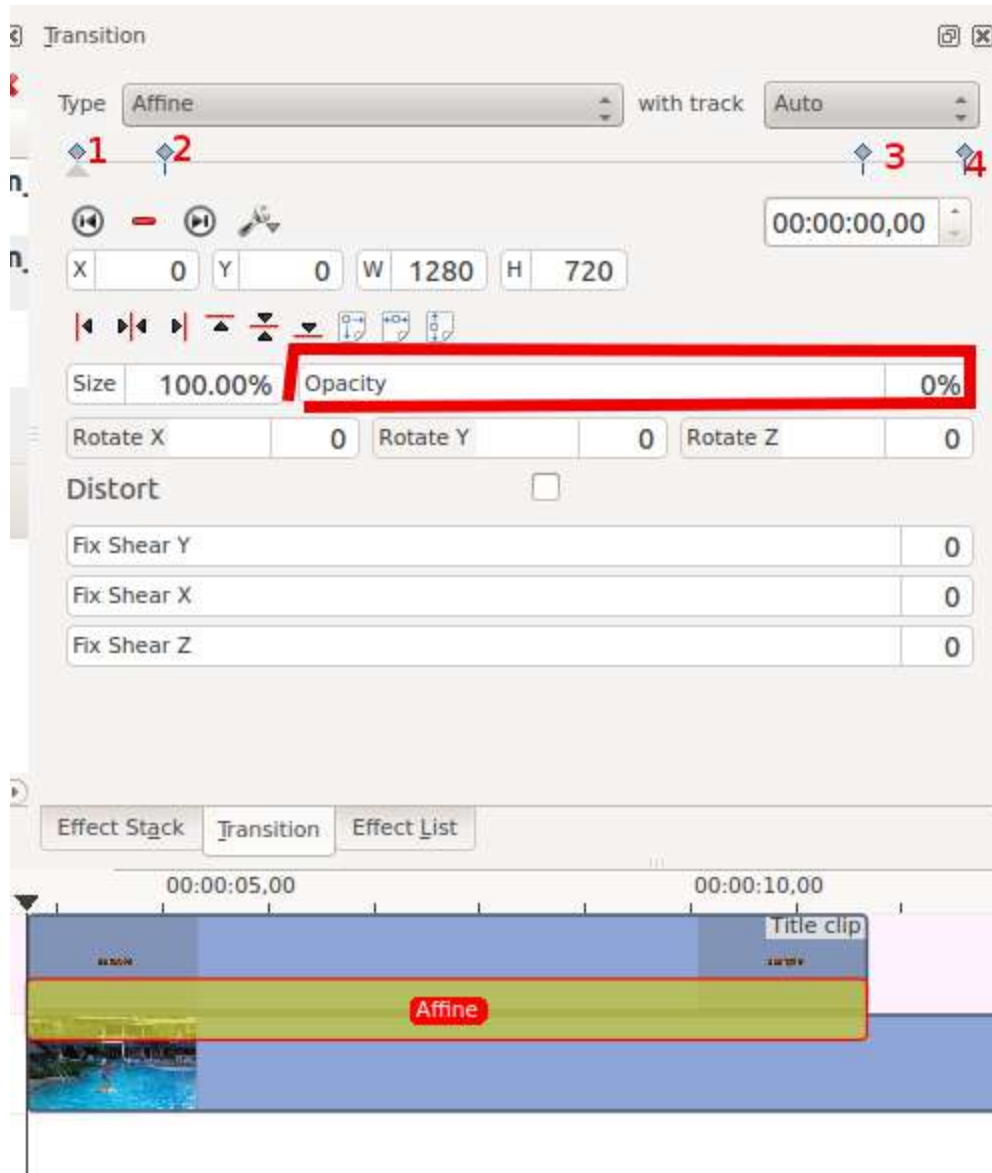


A known issue with template titles is that text centering does not work correctly for text replacing the %s.

[How to fade titles in and/or out](#)

To make titles fade in and out, you modify the transition which gets automatically added between the title and the track below. The modifications consist of adding keyframes into the transition and adjusting the opacity of the transitions at these keyframes. In version 0.9.3 it is an [Affine Transition](#) transition that is automatically added between the title and the track below. In ver 0.9.2 it is a [Composite Transition](#).

In the image below we have four keyframes (labeled 1 to 4). The first keyframe is the one currently displayed and we can see that the opacity on this keyframe is zero. The opacity at keyframes 2 and 3 is 100%. The opacity at the 4th keyframe is zero percent. The overall effect is that the title fades in between keyframe 1 and keyframe 2. And then it fades out between keyframe 3 and keyframe 4 .

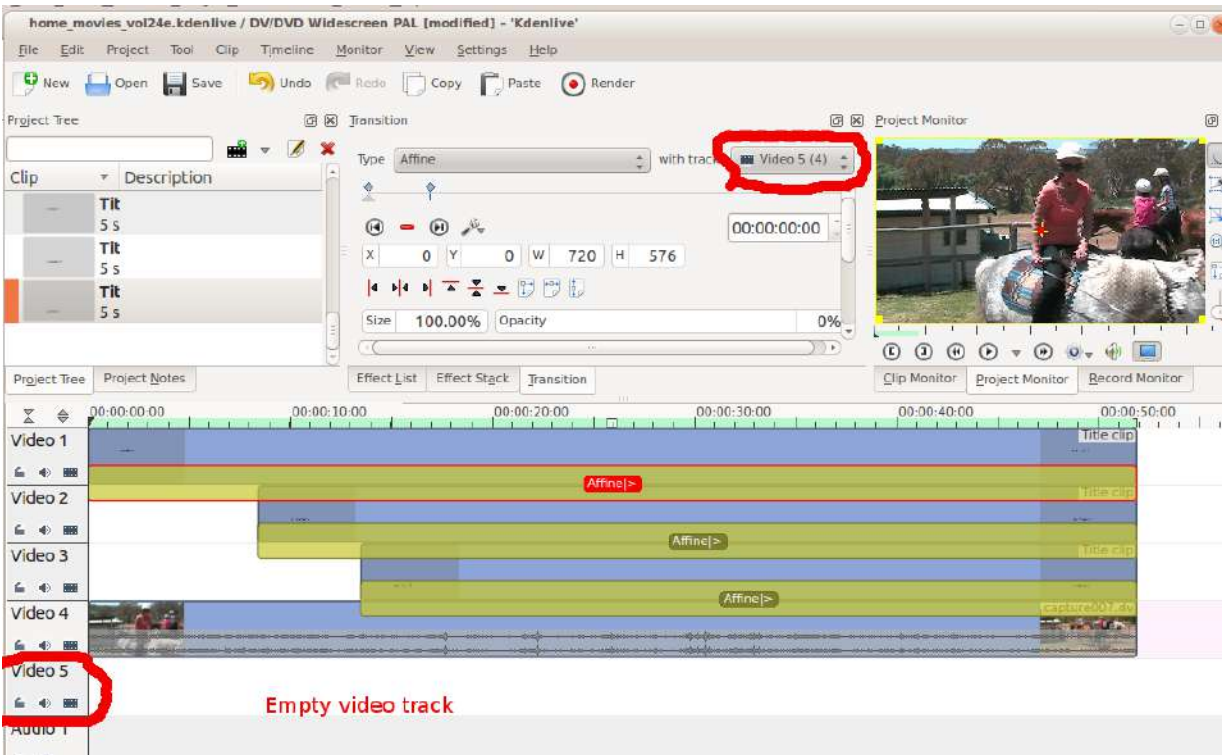


[How to fade in more than one title sequentially](#)

To create a title sequence like this ...

<https://youtu.be/IIV87bFjfo0>

You put three titles on three different tracks but you make all three affine transitions go to the same empty video track (instead of the tracks directly below them, which is the default). See timeline screenshot below.



FAQ

Q: How to duplicate a title clip to modify it slightly.

A: You can save a copy of the title (see [Titles](#)) and then create a new title based on that saved version as described [Titles](#). Or you could use the [Titles](#) functionality to base the two slightly different titles on the one template.

Transitions

Contents

- [Transitions](#)
 - [Mixes](#)
 - [Compositions](#)
 - [Available Transitions](#)

In **Kdenlive** a transition is a wipe or dissolve composition between two overlapping clips.

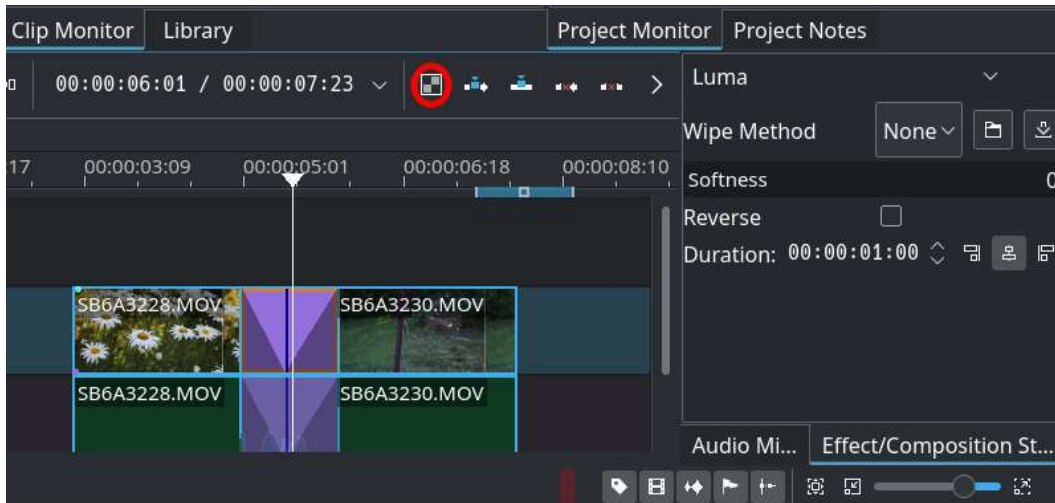
There are two ways of adding transitions in **Kdenlive**: **Mix clips**, aka same tracks transitions, and the legacy way, which is transitions between clips on different tracks.

Wipes are greyscale images in `.pgm` (Portable GreyMap) format, and during the transition the composition track will be displayed in the darkest areas of the wipe image first. If the wipe is inversed, the composition track will become visible in the brightest areas of the wipe image first instead. You can download more wipes (by clicking the download button in the wipe composition properties) or create your own and load them by clicking the folder button.

Mixes

New in version 20.12.

Mixes are transitions between clips on the same track.



Kdenlive with mixed clips in the timeline. The toolbar button is circled with red, and the transition properties are on the right.

To use it:

- Ensure that there is at least half a second worth of frames at the end of both clips (outside the timeline clip). Without that, Kdenlive will not apply the transition, but display an error message.
- Select either clip. If there are clips in both ends of the one selected, the transition will be added nearest the playhead.

Ready to add the transition:

- **Keyboard:** Press the `U` key.
- **Mouse:** double-click at the point where the clips meet. This does not require a clip to be selected.
- **Toolbar:** Press the *Mix Clips* button on the timeline toolbar.

The transition length defaults to one second equally distributed between the two clips. You can drag either end of the transition to adjust.

The default transition is dissolve, but you can select (click) the transition and edit the wipe method and properties as desired in the effect/transition stack window.

The composition method is set to Luma, and it does not make sense to change that, since there will not really be a transition. Other methods are meant for compositing two videos, not transitioning between them.

- Select the desired wipe from Wipe Method.
- The *Reverse* option reverses the transition.
- The *Softness*: slider will affect the edges of wipe transitions.
- Set the desired duration.
- Since 21.08: select the alignment of the transition, either left, centered (default) or right.

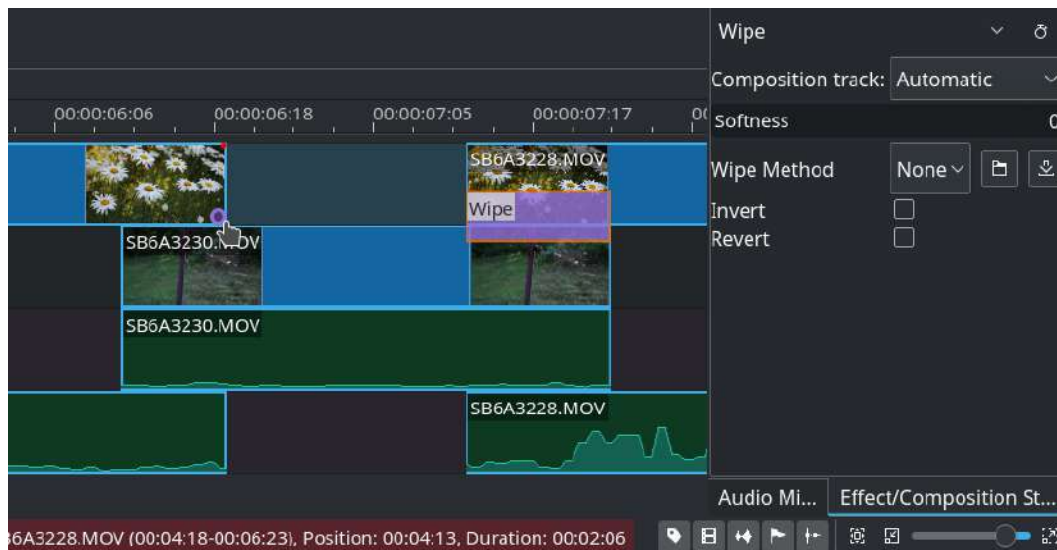
To delete the transition, select it and press the `Delete` key.

Tip

To apply only transitions on either the video or audio track just lock the track on which you don't want a transition to be applied and add transitions by one of the above ways on the other track.

Compositions

Compositions are transitions between clips on different tracks. This is the legacy way of doing transitions in **Kdenlive**.



To the left the purple one-click circle to add a wipe composition. In the middle the composition bar, and on the right the properties.

To add a transition:

- Adjust your clips so that they overlap.
- Hold the mouse wheel over the top clip bottom corner, and click the purple circle appearing (the [Status Bar](#) will say “Click to add a composition”), or alternatively right-click either clip and select *Insert a composition...* ▸ *Wipe*.

The default transition is a dissolve, to change that select (click) the composition bar to show the effect/composition stack window.

The transition, when added this way, will cover the overlapping area between the clips.

You can:

- Select a composition track. The default is “Automatic” which is likely the correct choice in this case.
- Select a wipe.
- Enable *Inverse* to inverse the wipe.
- Enable *Revert* to revert the order of the videos in the transition (which you probably do not want).

If you move or adjust your clips after adding the transition, you need to refit it manually if desired. You can drag the entire transition with the select tool, and adjust its duration by dragging either end.

[Available Transitions](#)

- [addition transition](#)
- [Addition_alpha transition](#)
- [Affine Transition](#)
- [Alpha operation transitions](#)
- [alphaatop transition](#)

- [alphain transition](#)
- [alphaout transition](#)
- [alphaover transition](#)
- [alphaxor transition](#)
- [Composite Transition](#)
- [Hue](#)
- [Transitions - Screen](#)
- [Composition - Wipe](#)

addition transition

Contents

- [addition transition](#)

This is the [Frei0r addition](https://www.mltframework.org/plugins/TransitionFrei0r-addition/) [https://www.mltframework.org/plugins/TransitionFrei0r-addition/] MLT transition.

Perform an RGB[A] addition operation of the pixel sources.

Addition_alpha transition

Contents

- [Addition_alpha transition](#)

This is the [Frei0r addition_alpha](https://www.mltframework.org/plugins/TransitionFrei0r-addition_alpha/) [https://www.mltframework.org/plugins/TransitionFrei0r-addition_alpha/] MLT transition.

Perform an RGB[A] addition_alpha operation of the pixel sources.

Affine Transition

Contents

- [Affine Transition](#)
 - [Example 1](#)
 - [Dissolve using Affine Transition](#)
 - [Rotation using Affine Transition](#)
 - [Example 2 - Rotate Y](#)

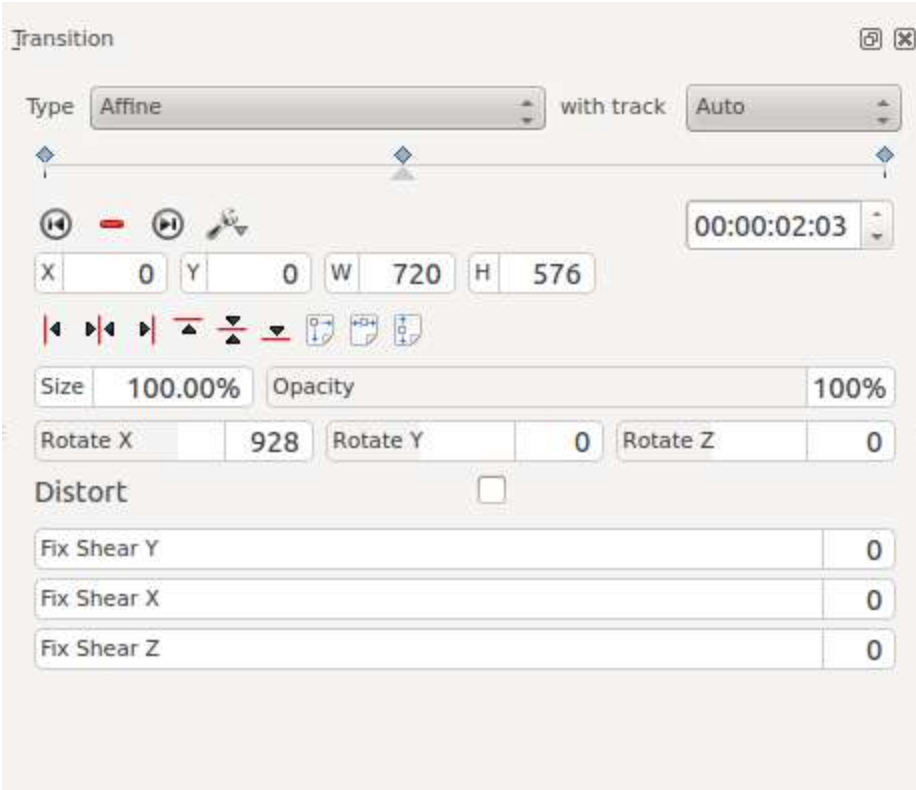
Generates image rotation in 3D space, skew and distortion.

Provides keyframable animated affine transformations with dissolve functionality.

In many applications, this transition can be used instead of a [Composite Transition](#) and this provides a workaround to the composite transition “green tinge” bug reported by some. (Mentioned in legacy Mantis bug tracker ID 2759.

Example 1

<https://youtu.be/hylowKurZaw>



[Dissolve using Affine Transition](#)

To add a Dissolve, change the opacity to zero percent.

[Rotation using Affine Transition](#)

To rotate the image, add a keyframe and enter values for rotation. The units are 10ths of degrees. (e.g. 900 = 90 degree rotation).

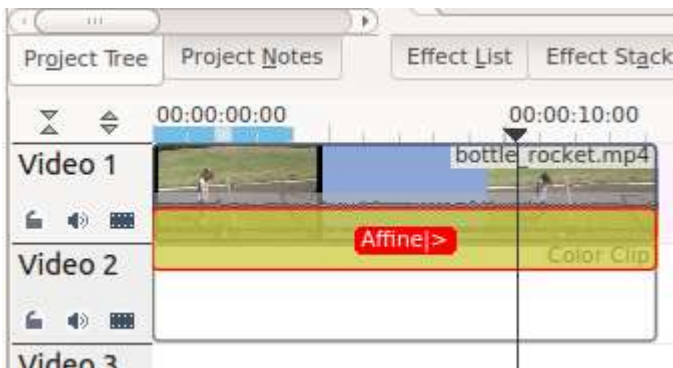
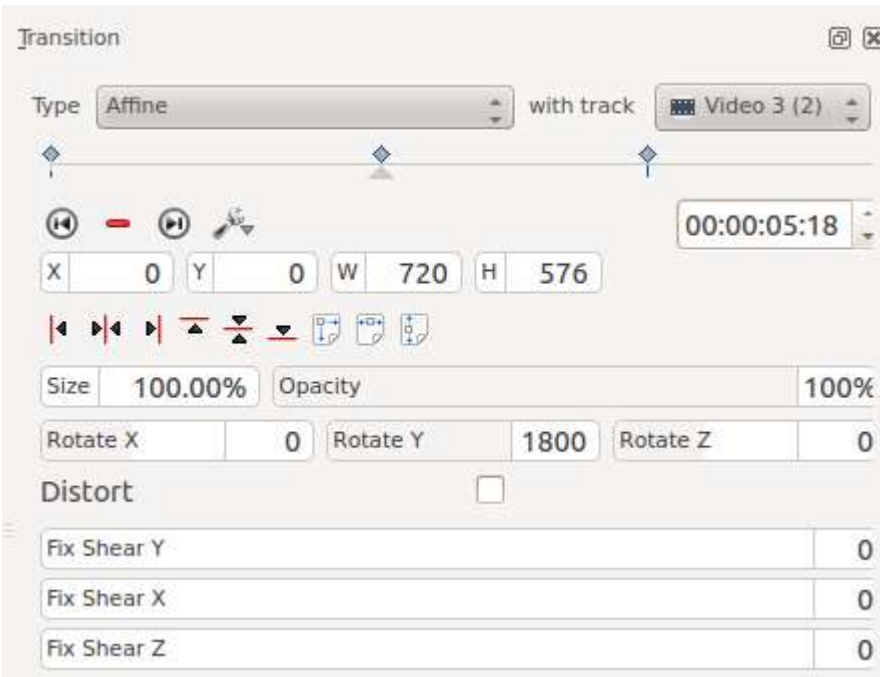
Rotate X rotates the frame in the plane of the screen. **Rotate Y** and **Rotate Z** create the illusion of 3D rotation when used dynamically with keyframes - see example below.

You can create a similar effect using the [Rotate](#) effect from the Crop and Transform group.

[Example 2 - Rotate Y](#)

<https://youtu.be/IAWMIL7c9K4>

This example is created using 3 keyframes. The second keyframe is shown below with a **Rotate Y** value of 1800 (=180 degrees). Keyframe one and keyframe three both have **Rotate Y** values of zero.



The difference between **Rotate Y** and **Rotate Z** is that the apparent rotation in **Rotate Y** appears to be around a horizontal axis. The rotation in **Rotate Z** appears to be around a vertical axis.

Alpha operation transitions

Contents

- [Alpha operation transitions](#)

The following transitions all perform alpha operations between the two video tracks:

- [Addition alpha transition](#)
- [addition transition](#)
- [alphaatop transition](#)
- [alphain transition](#)
- [alphaout transition](#)
- [alphaover transition](#)
- [alphaxor transition](#)

These transitions only have an effect if the videos on the tracks have alpha channel information in them.

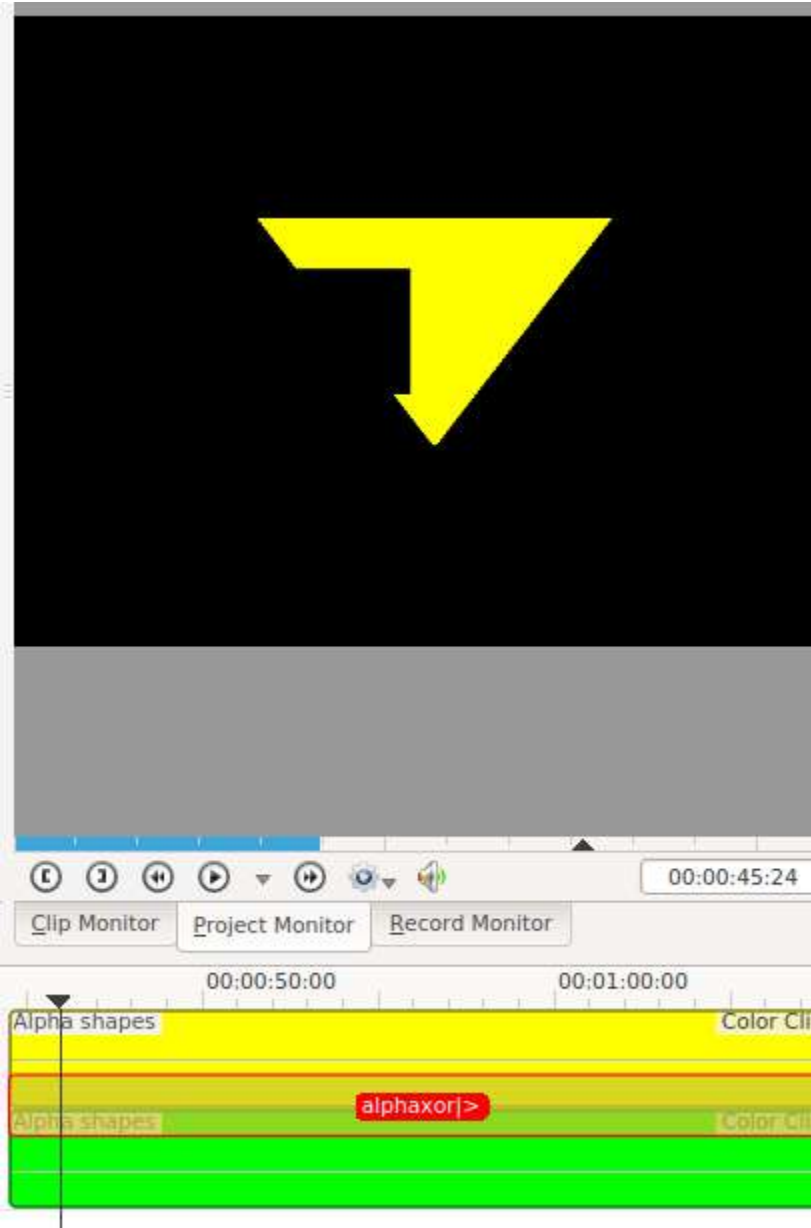
The Alpha Channel information is supplied by one of the [Alpha manipulation](#). This Alpha Channel data describes which regions of the video track is transparent and how transparent it should be. Until you define some alpha channel data using an [Alpha manipulation](#) changes in the alpha operation transition settings will have no visible effect.

The alpha operation transitions define how the two different alpha channel information should be combined to produce the final image. These operations are implementing the operations described at Wikipedia page on [Alpha Compositing](#) [https://en.wikipedia.org/wiki/Alpha_compositing].

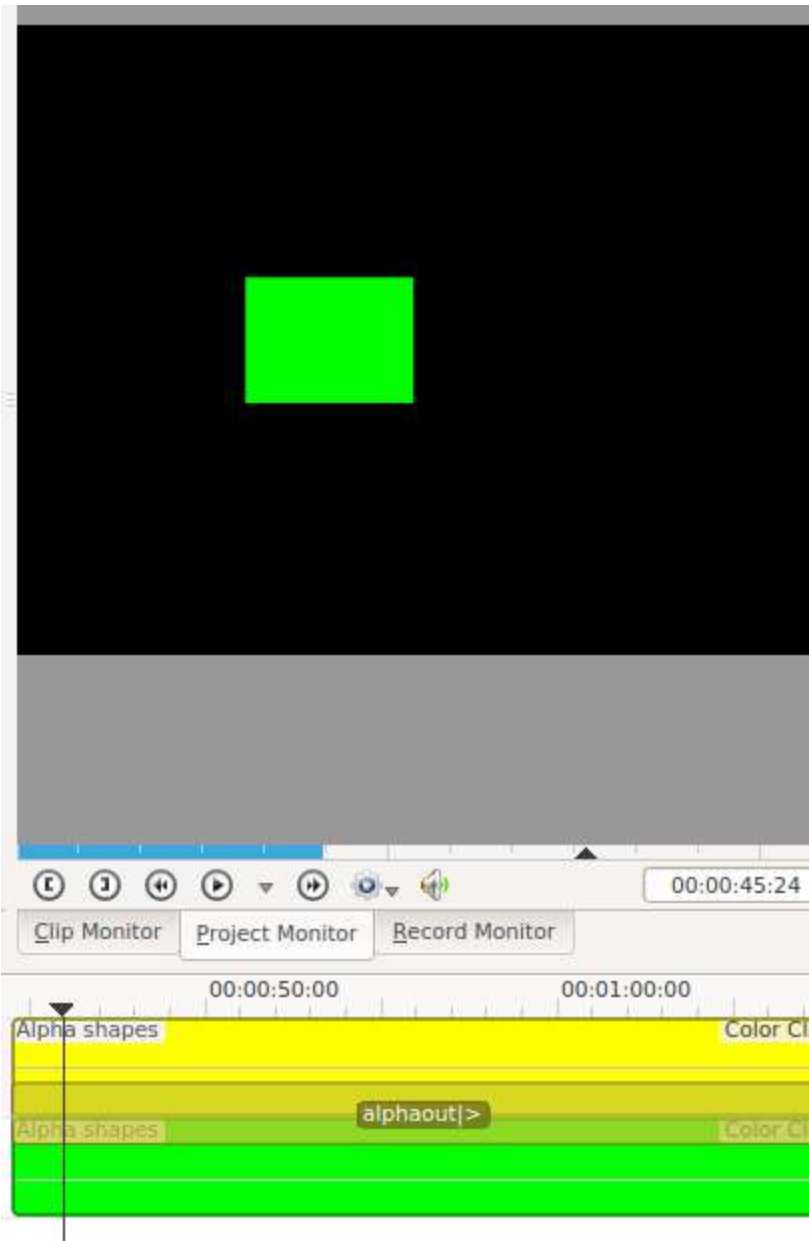
In the examples below the yellow clip has a triangle alpha shape with min=0 and max=618. This translates to 0% opacity outside the triangle and 61.8% opacity inside the triangle. Ie the alpha channel in the yellow track say show

all the track underneath outside the triangle and show 38.2% of the underneath track inside the triangle.

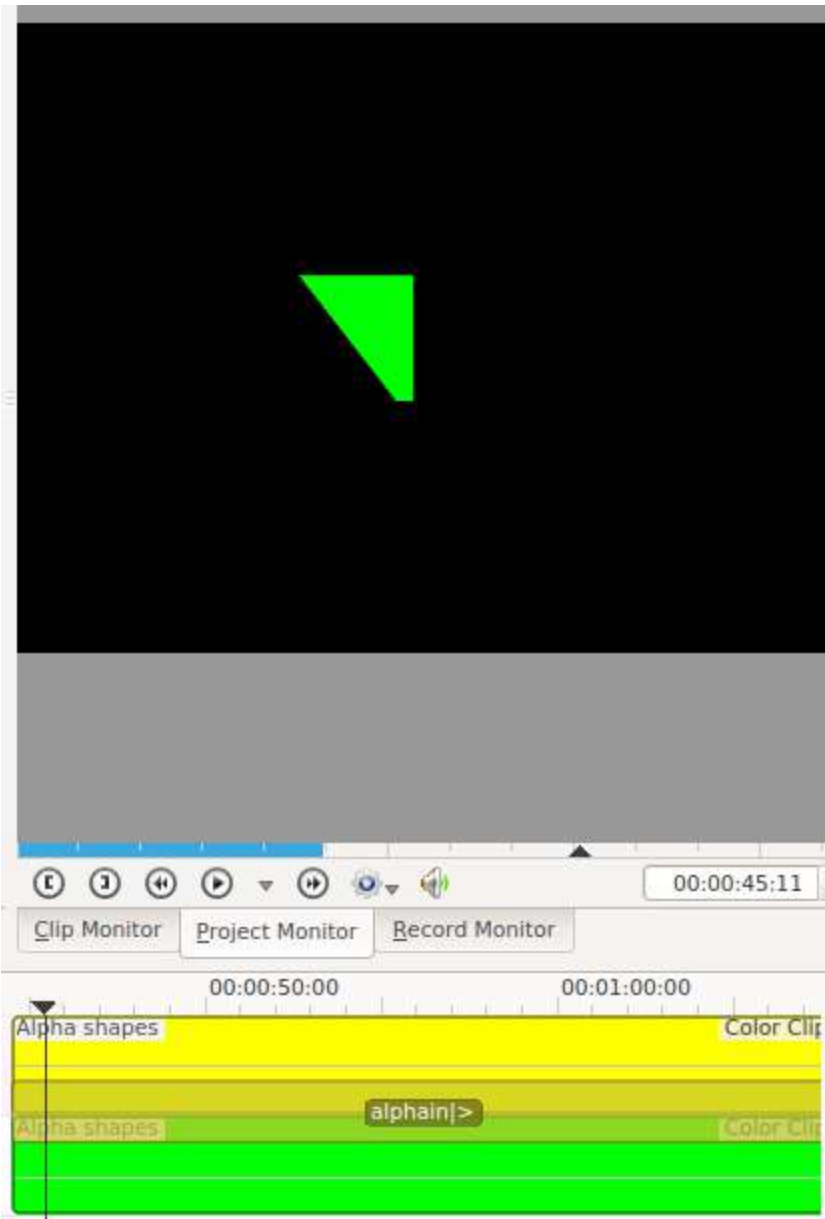
The Green clip has a rectangle alpha shape with min=0 and max=1000. This translates to make the clip 100% transparent outside the rectangle and 0% transparent inside the rectangle.



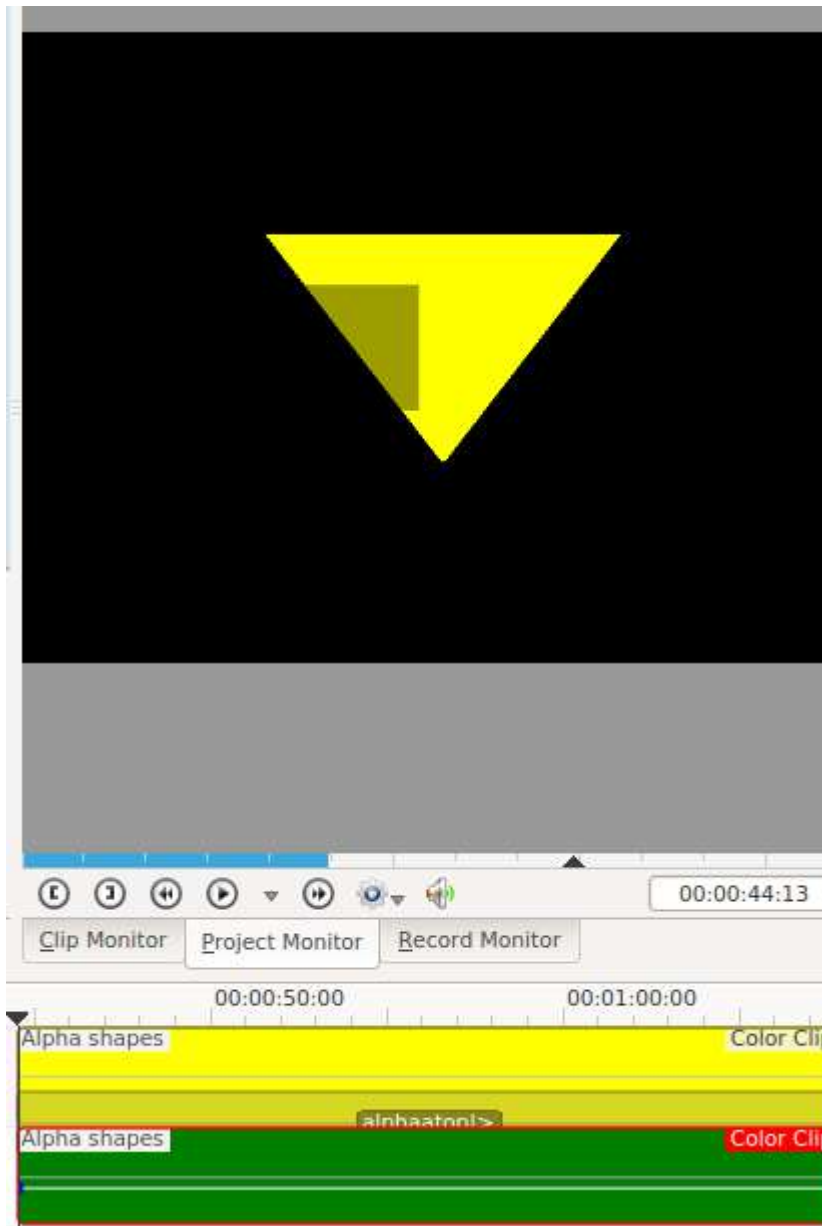
[alphaxor transition](#)



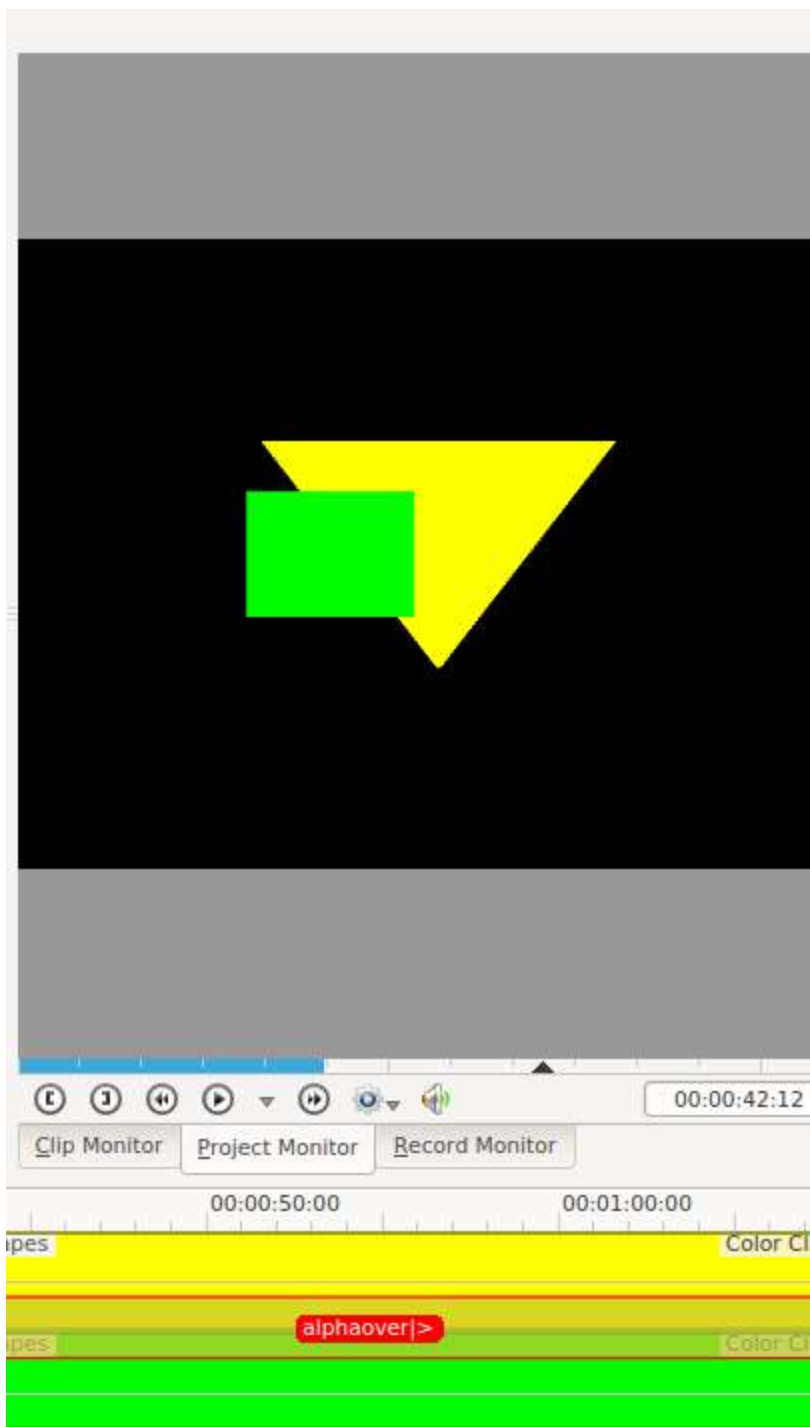
[alphaout transition](#)



[alpha transition](#)



[alphaatop transition](#)



[alphaover transition](#)

alphaatop transition

Contents

- [alphaatop transition](#)

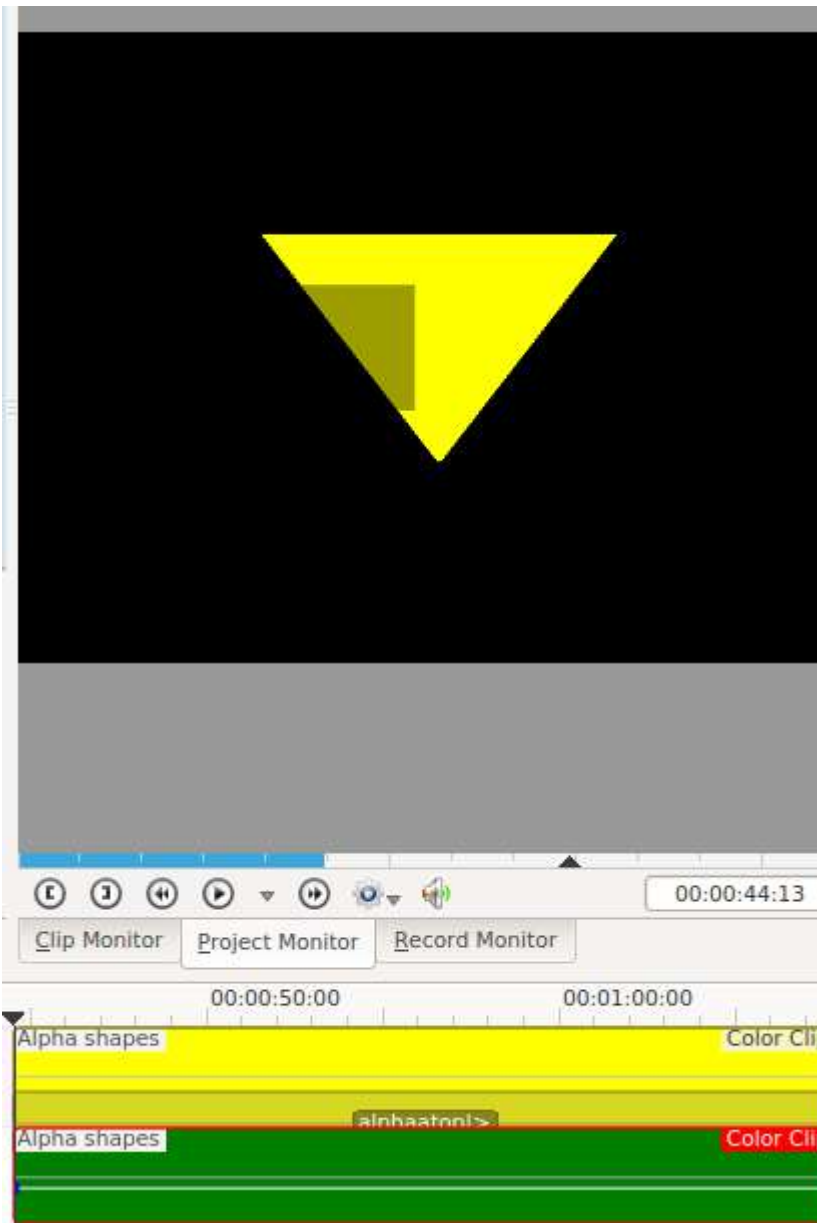
This is the [Frei0r alphaatop](https://www.mltframework.org/plugins/TransitionFrei0r-alphaatop) [https://www.mltframework.org/plugins/TransitionFrei0r-alphaatop] MLT transition.

The alpha ATOP operation.

Yellow clip has a triangle alpha shape with min=0 and max=618.

Green clip has rectangle alpha shape with min=0 and max=1000.

alphaatop is the transition in between.



alphain transition

Contents

- [alphain transition](#)

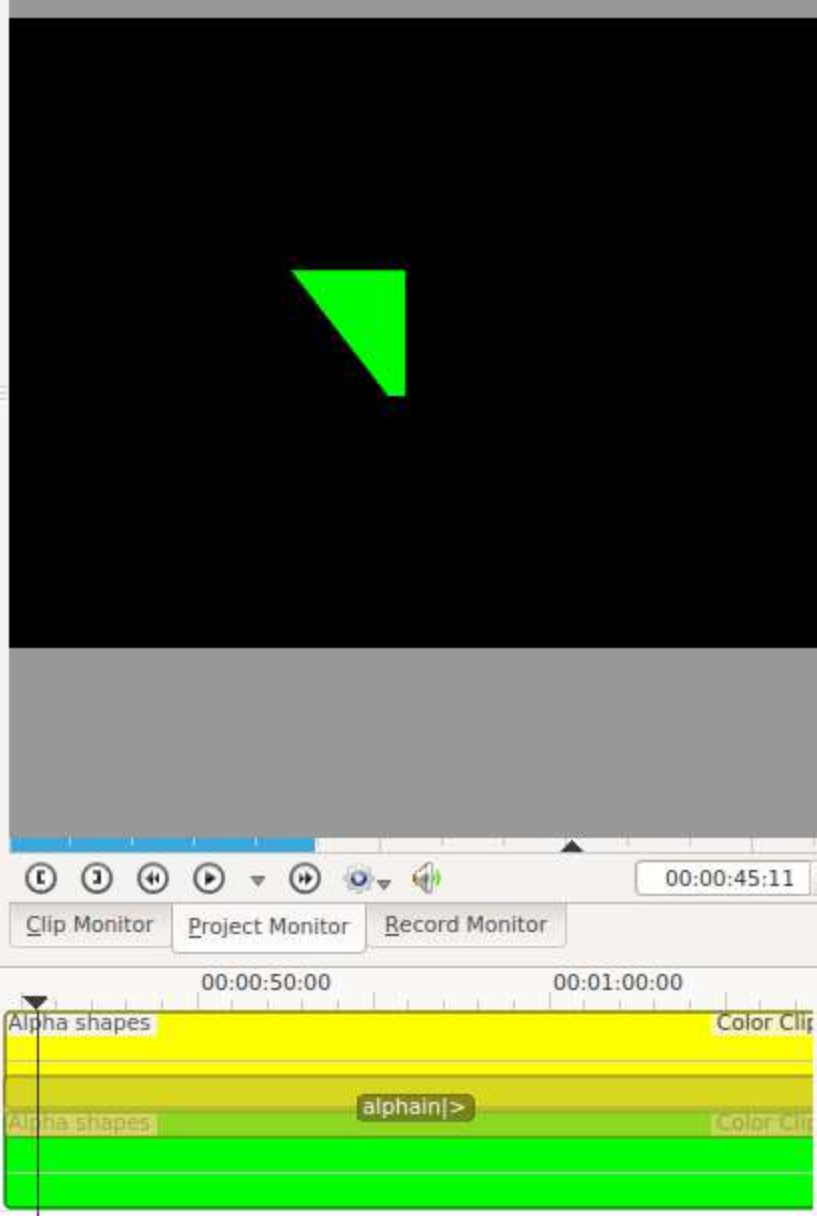
This is the [Frei0r alphain](https://www.mltframework.org/plugins/TransitionFrei0r-alphain/) [https://www.mltframework.org/plugins/TransitionFrei0r-alphain/] MLT transition.

The alpha IN operation.

Yellow clip has a triangle alpha shape with min=0 and max=618.

Green clip has rectangle alpha shape with min=0 and max=1000.

alphain is the transition in between.



alphaout transition

Contents

- [alphaout transition](#)

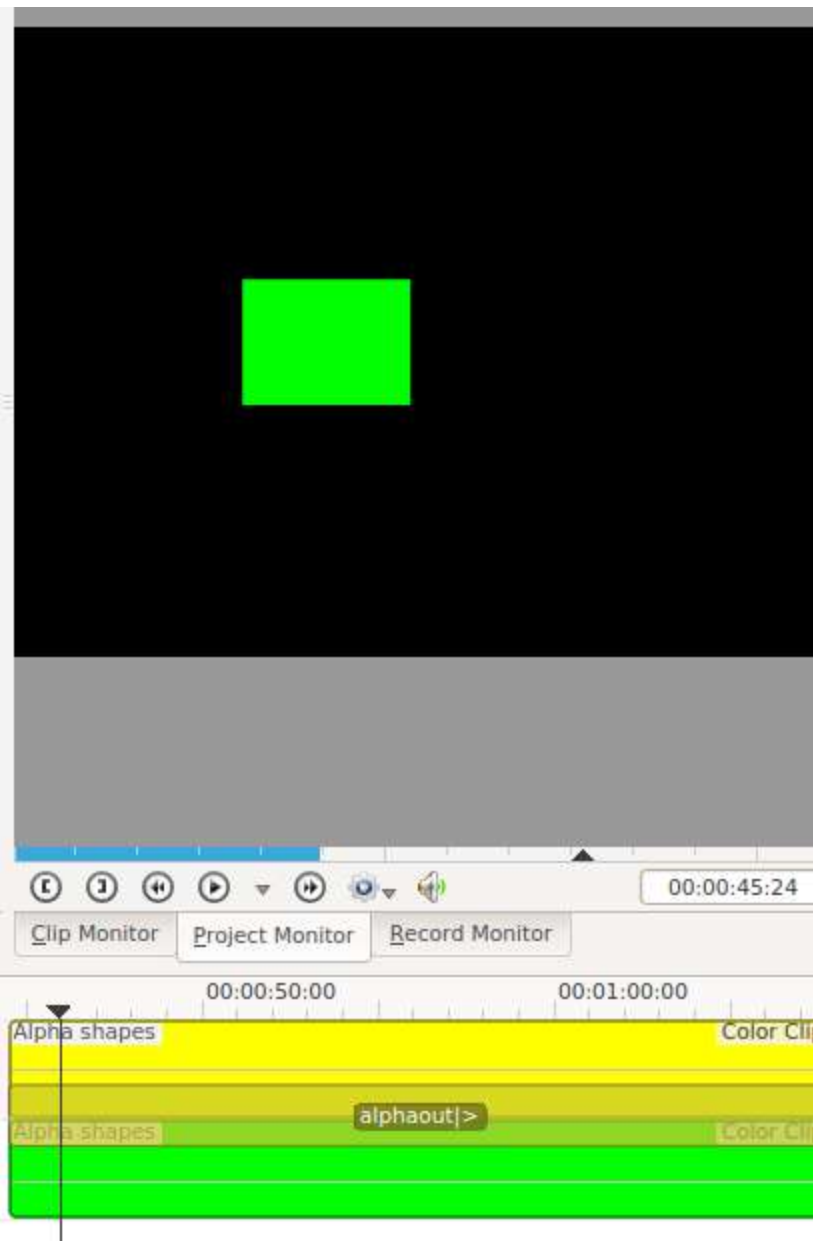
This is the [Frei0r alphaout](https://www.mltframework.org/plugins/TransitionFrei0r-alphaout/) [https://www.mltframework.org/plugins/TransitionFrei0r-alphaout/] MLT transition.

The alpha OUT operation.

Yellow clip has a triangle alpha shape with min=0 and max=618.

Green clip has rectangle alpha shape with min=0 and max=1000.

alphaout is the transition in between.



alphaover transition

Contents

- [alphaover transition](#)

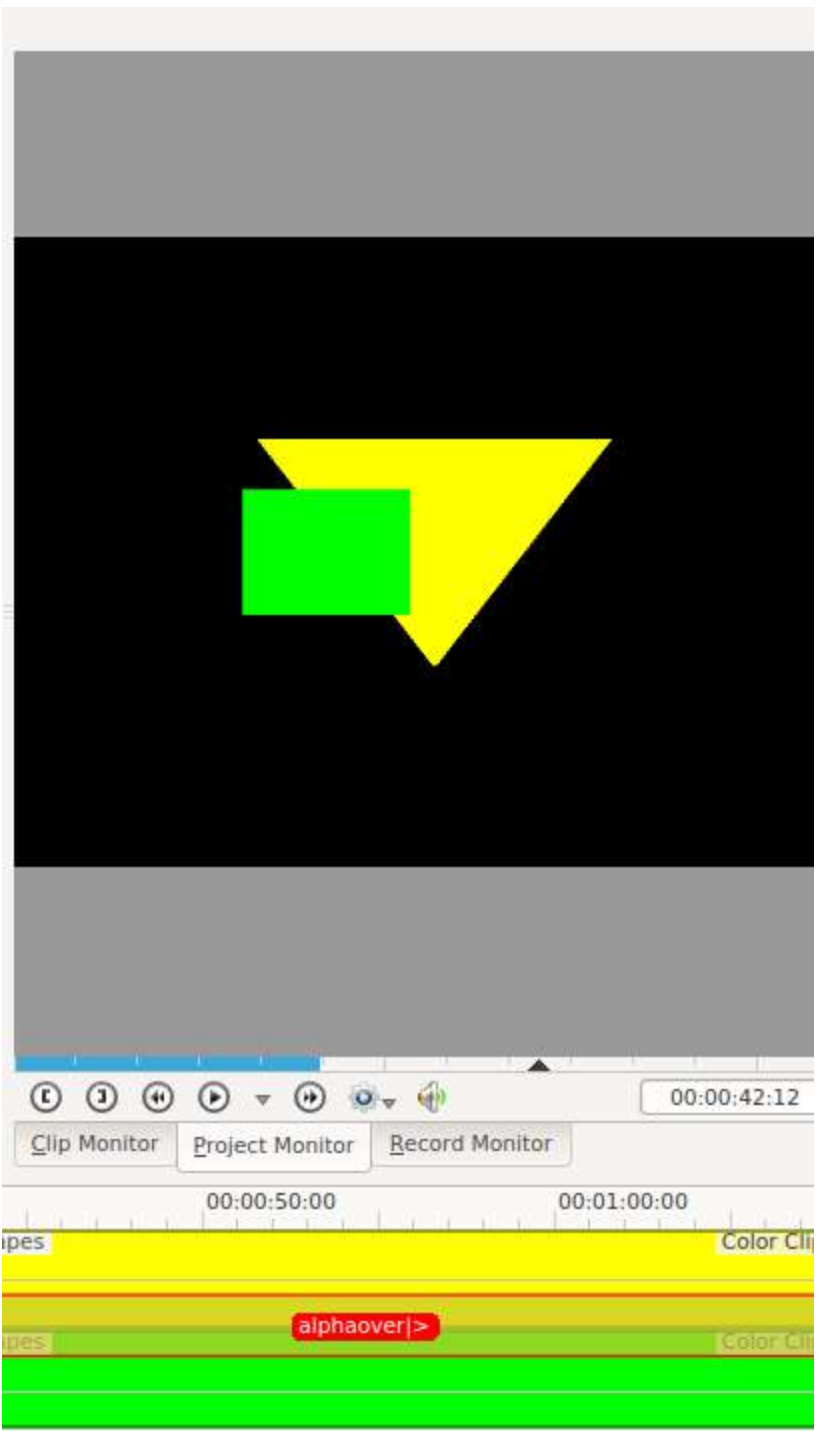
This is the [Frei0r alphaover](https://www.mltframework.org/plugins/TransitionFrei0r-alphaover/) [https://www.mltframework.org/plugins/TransitionFrei0r-alphaover/] MLT transition.

The alpha OVER operation.

Yellow clip has a triangle alpha shape with min = 0 and max =618.

Green clip has rectangle alpha shape with min=0 and max =1000.

alphaover is the transition in between.



alphaxor transition

Contents

- [alphaxor transition](#)

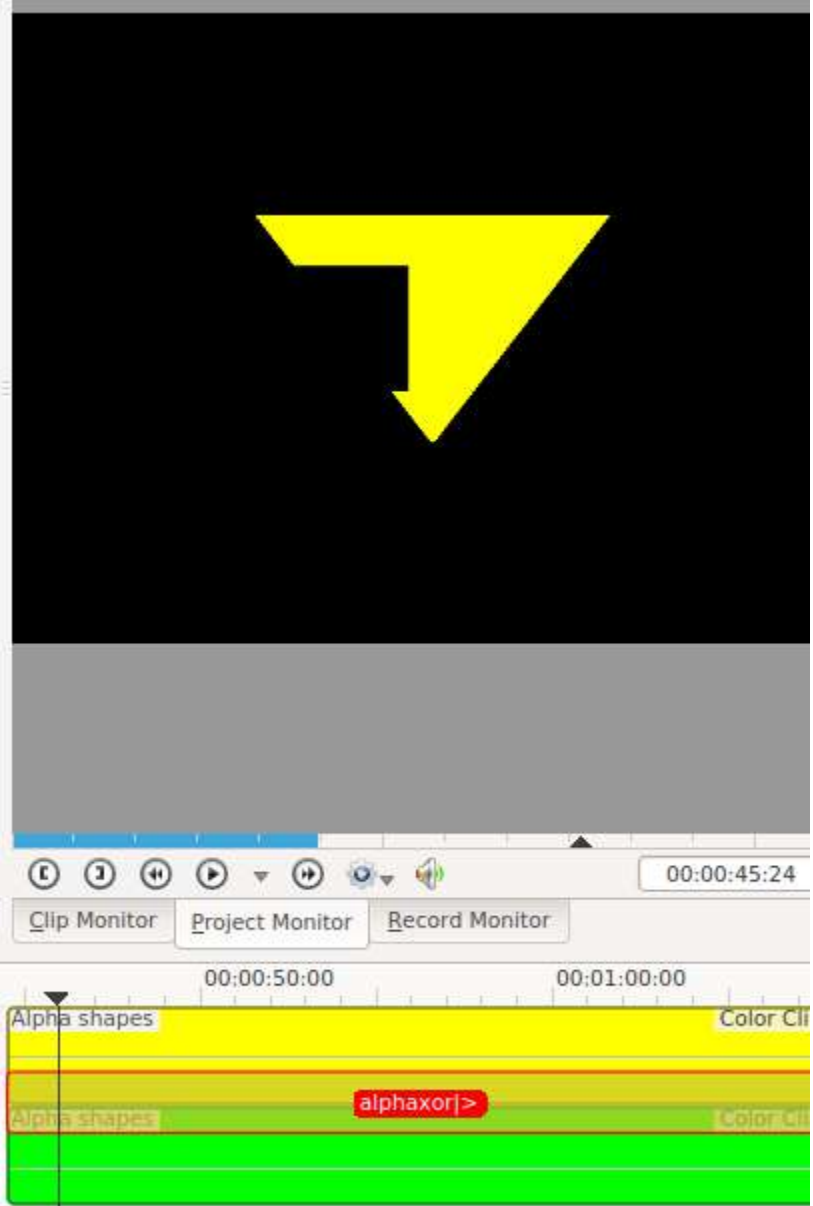
This is the [Frei0r alphaxor](https://www.mltframework.org/plugins/TransitionFrei0r-alphaxor/) [https://www.mltframework.org/plugins/TransitionFrei0r-alphaxor/] MLT transition.

The alpha XOR operation.

Yellow clip has a triangle alpha shape with min=0 and max=618.

Green clip has rectangle alpha shape with min=0 and max=1000.

alphaxor is the transition in between.



Composite Transition

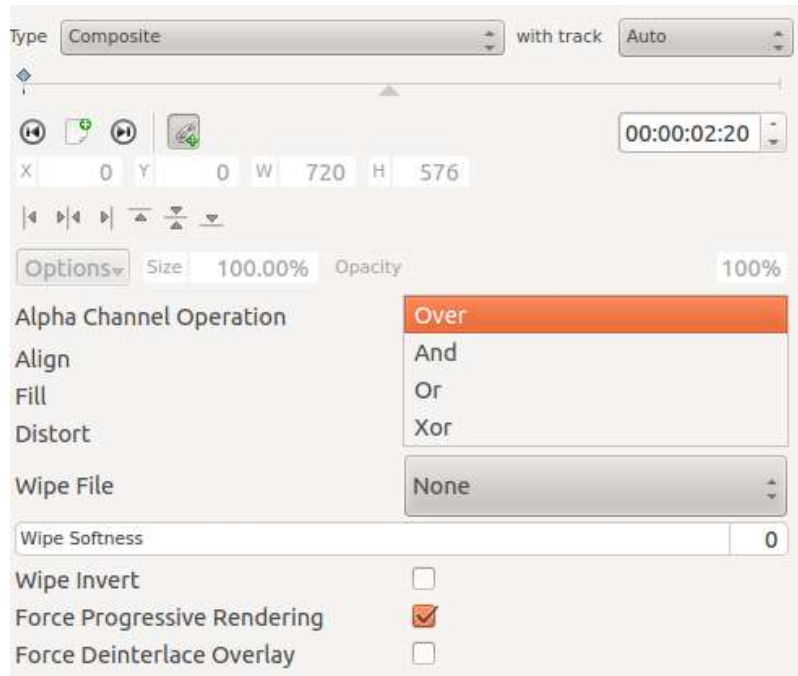
Contents

- [Composite Transition](#)
 - [Alpha operations](#)
 - [Tutorial 1](#)
 - [Tutorial 2 - composite transition and Blue Screen](#)
 - [Tutorial 3 - Video Masks](#)

The Composite transition combines the video data from two video tracks into one. This transition is used in combination with Alpha Channel information supplied by one of the [Alpha manipulation](#) or by the use of a [Composite Transition](#). This Alpha Channel data describes how the data from the two video tracks should be combined. Until you define some alpha channel data using an [Alpha manipulation](#) or a Wipe File, changes in the Composite transition settings will have no visible effect.

Note: The disadvantages of the **Composite** transition are: luma bleed, and less precise position control. When compared to **Affine**, the **Composite** transition, it does not support rotation or skewing but it is much faster, albeit at the cost of luma bleed.

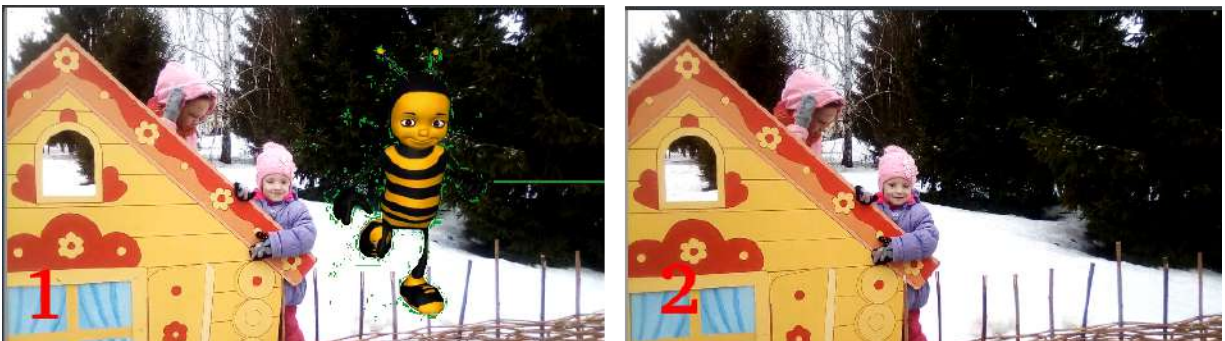
Alpha operations



Alpha operation options are *Over*, *And*, *Or* and *Xor*:

Operation **Over**

- The clip with alpha information is located on the top track: the selected color acquires transparency.
- The clip with alpha information is located on the bottom track: we see only the top clip.



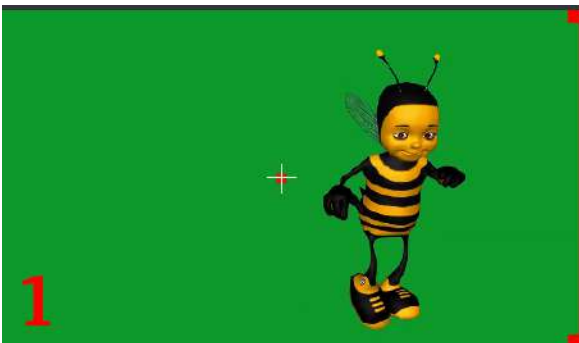
Operation **And**

- The clip with alpha information is located on the top track: the selected color becomes transparent.

- The clip with alpha information is located on the bottom track: everything in the image becomes transparent, except for the selected color.



Operation **Or** clears any alpha information



Operation **Xor**

- The clip with alpha information is located on the top track: everything in the image becomes transparent, except for the selected color.
- The clip with alpha information is located on the bottom track: the selected color acquires transparency.



Tutorial 1

See this [Chroma Key](#) that describes how to use:

- Alpha Manipulation -> [Chroma Key](#)
- [Rotoscoping](#)
- Composite Transition.
- Crop and Transform -> [Position and Zoom](#)
- Enhancement -> [Sharpen](#)
- Alpha Manipulation -> [Alpha operations](#)

Tutorial 2 - composite transition and Blue Screen

Tutorial showing how to use the “Blue screen” function, composite transition and [Effects](#) to animate one image moving over another in the **Kdenlive** video editor.

<https://youtu.be/M8hC5FbIzdE>

Tutorial 3 - Video Masks

This tutorial uses the Composite transition and a custom video mask (a.k.a. a Wipe File or [matte](https://en.wikipedia.org/wiki/Matte_(filmmaking)) [https://en.wikipedia.org/wiki/Matte_(filmmaking)]) to create an effect where you can make it appear that one video is playing on the screen of a still of a computer monitor.

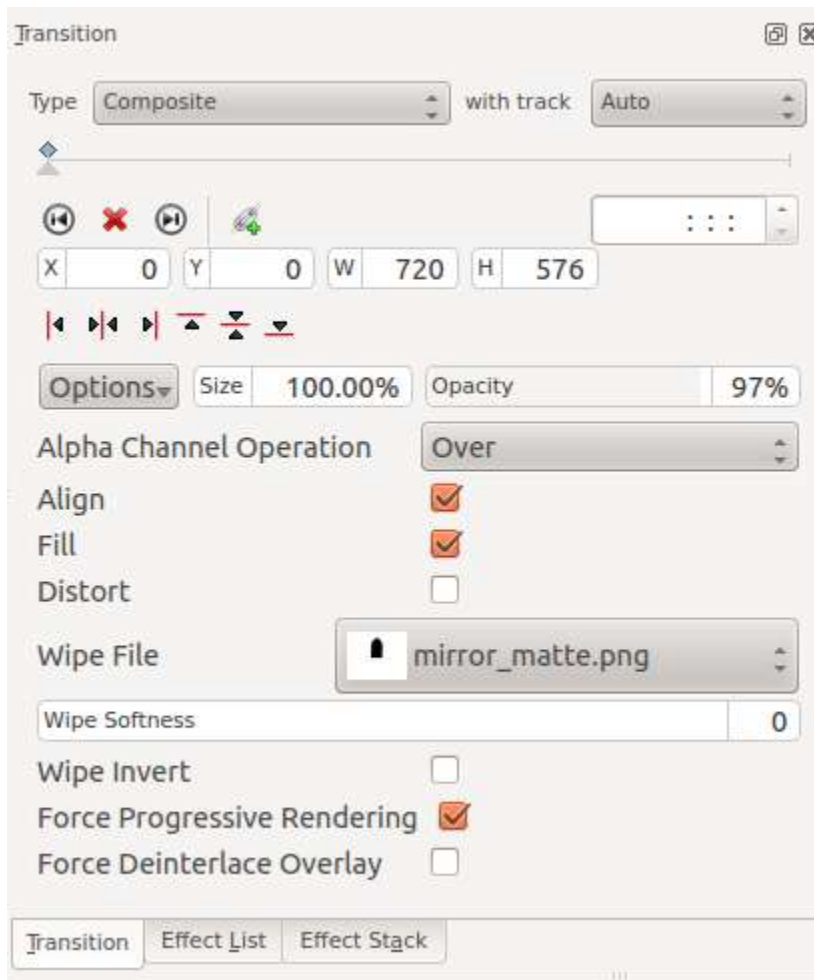
The mask/matte is created with **GIMP**.

Save your mattes to `/usr/share/kdenlive/lumas`.

It would appear that you need to stop and restart **Kdenlive** in order for it to pick up new matte/wipe files saved in the above folder.

There appears to be a defect in this functionality which means that when the composite is on 100% Opacity, the wipe file does not work. You need to change it to 99% to make the effect kick in.

<https://youtu.be/FIpnGIRY27U>



Screenshot of Composite transition using a custom wipe file to mask out a section of video - as described in Tutorial 3.

Aspirational goal - a compositing experiment made using detonation films free sample effects.

Warning: video below may be inappropriate for some users.

<https://youtu.be/vo-xntF1bns>

Hue

Contents

- [Hue](#)

This is the [Frei0r hue](https://www.mltframework.org/plugins/TransitionFrei0r-hue/) [https://www.mltframework.org/plugins/TransitionFrei0r-hue/] MLT transition.

Perform a conversion to hue only of the source input1 using the hue of input2.



A screenshot of a video editing software interface. The main preview window shows a clip with a rainbow effect. The rainbow is a horizontal band of colors (red, orange, yellow, green, blue, purple) that appears to be projected onto a dark surface. Below the preview window, there is a timeline with a timecode from 00:00:13:00 to 00:00:20:00. The timeline shows a clip labeled 'IMG 4156.MOV' and a track labeled 'hue' with a red bar indicating the adjustment. Below the 'hue' track, there is an audio waveform. The interface includes standard video editing controls like play, stop, and zoom, and tabs for 'Project Monitor', 'Clip Monitor', and 'Record Monitor'.

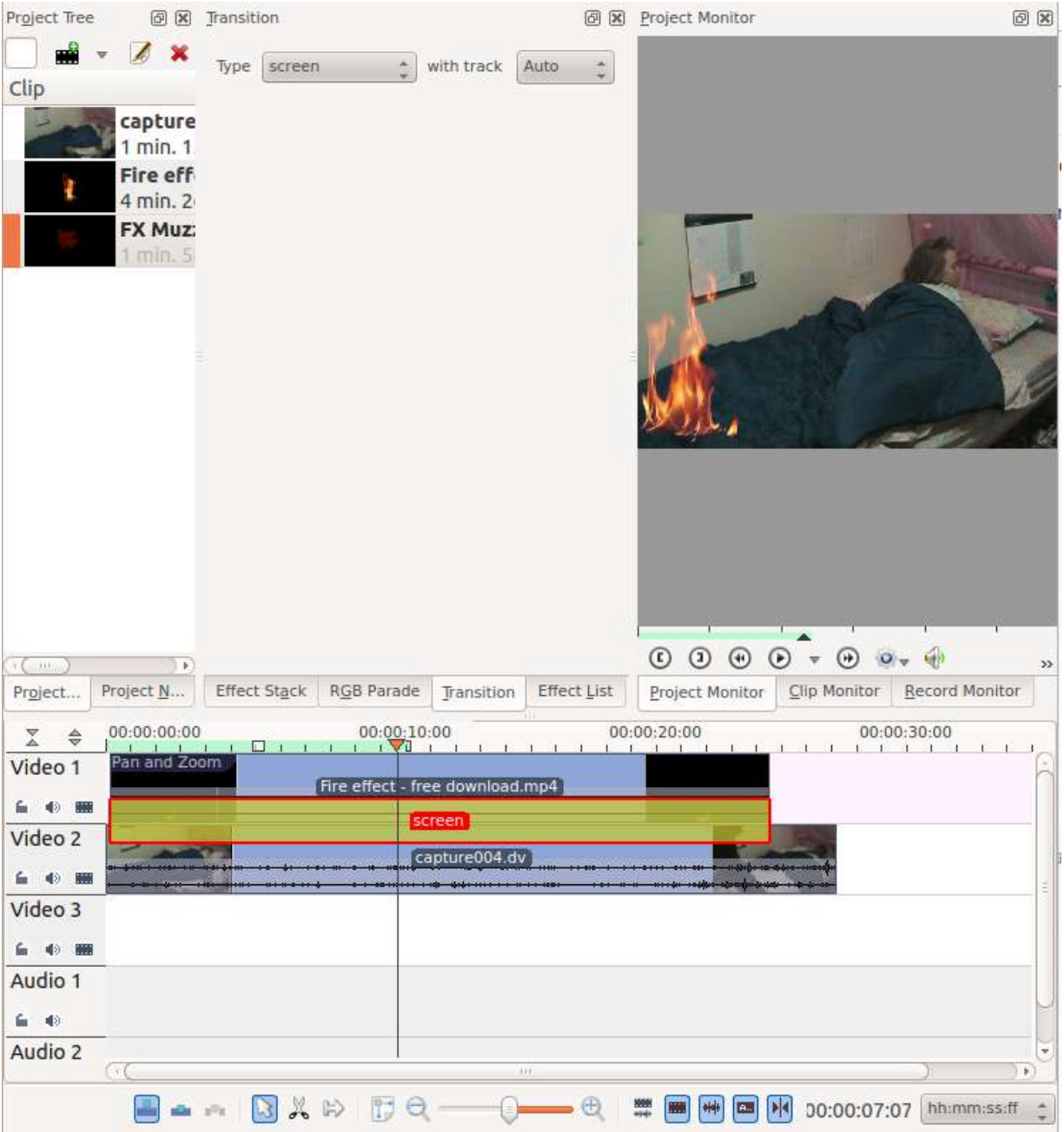
Transitions - Screen

Contents

- [Transitions - Screen](#)

This is very much like [Chroma Key](#) but it works with footage filmed against a black background.

Timeline showing how to apply the “Screen” transition.



This video composites a video of fire filmed on a black background into another bit of footage using the *Screen* transition.

<https://youtu.be/GkFdHcf9jbY>

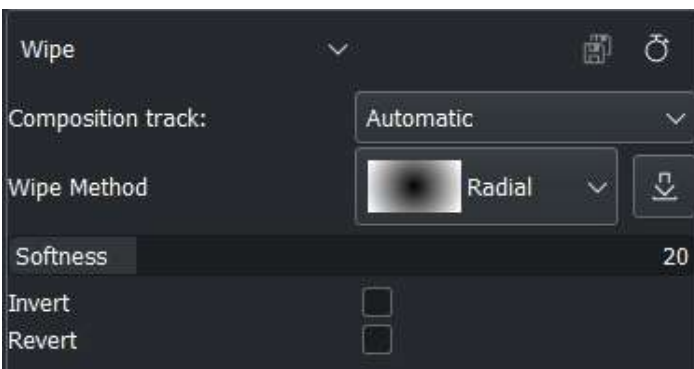
Composition - Wipe

Contents

- [Composition - Wipe](#)

In this composition one shot replaces another by traveling from one side of the frame to another or with a special shape.

The Wipe composition contains the following parameters:



- **Softness:** Determines the softness of the transition between the top and bottom clips.



- **Wipe Method:** Selecting a luma file allows you to shape the composition in different shapes.
- **Invert:** changes the direction of motion of the luma file. That is, if the file `radial.pgm` is selected in the “Wipe Method” parameter and the image of the clip of the upper track disappears in a gradually decreasing circle until it is replaced by the clip of the lower track. And if the parameter is selected, on the contrary, the clip image on the lower track will appear in a growing circle until it fills the entire monitor.
- **Revert:** If there is a sharp transition (without the correct effect) between the clips and only then the luma file, turn on the “Revert” parameter so that the composition works correctly.



You can [Download New Wipes](#) from the KDE server.

There was a defect with the download new wipe files - it did not download them to where they are needed. They should go here

`~/.local/share/kdenlive/lumas/HD/`, but were going here

`~/.local/share/kdenlive/lumas/`.

To fix manually create a HD folder and move the `.pgm` files there.

See also [Composite Transition](#).

Exporting

Contents:


- [Rendering](#)
 - [Rendering Dialog](#)
 - [Rendering Preset Categories](#)
 - [Full Project](#)
 - [Selected Zone](#)
 - [Guide Zone](#)
 - [Guide Multi-Export](#)
 - [More Option](#)
 - [Render Overlay](#)
 - [Export Metadata](#)
 - [Export Audio Checkbox](#)
 - [Encoder Threads](#)
 - [Create Custom Render Presets](#)
 - [Rendering In Batch mode](#)
 - [Variable Bit Rate - earlier Versions](#)
 - [Constant Bit Rate - earlier Versions](#)
- [Render Profile Parameters](#)
 - [Render Profile Parameters - How to read them](#)
 - [Scanning Dropdown](#)
 - [Render Profile Parameters - How to read them](#)
- [Rendering Using Guides and Rendering Scripts](#)
 - [Purpose](#)
 - [Picking Sections with Guides](#)
 - [Generating Rendering Scripts](#)
 - [Starting Your Rendering Scripts](#)
 - [Starting Your Rendering Scripts in a Command Line Terminal](#)
 - [Summary](#)

Rendering

Contents

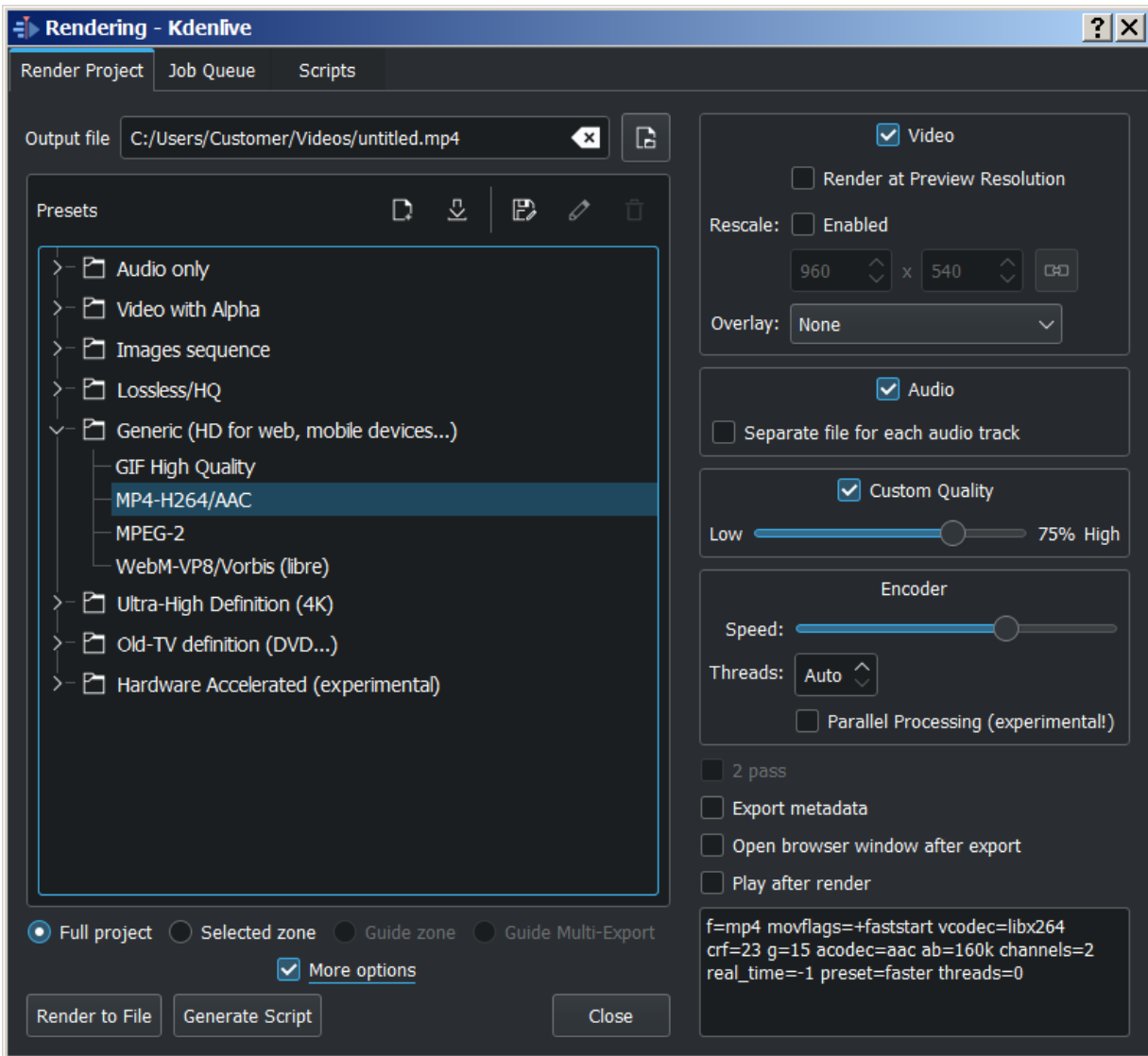
- [Rendering](#)
 - [Rendering Dialog](#)
 - [Rendering Preset Categories](#)
 - [Full Project](#)
 - [Selected Zone](#)
 - [Guide Zone](#)
 - [Guide Multi-Export](#)
 - [More Option](#)
 - [Render Overlay](#)
 - [Export Metadata](#)
 - [Export Audio Checkbox](#)
 - [Encoder Threads](#)
 - [Create Custom Render Presets](#)
 - [Rendering In Batch mode](#)
 - [Variable Bit Rate - earlier Versions](#)
 - [Constant Bit Rate - earlier Versions](#)

Rendering is the process where the edited clips are saved into a single complete video clip. During the rendering process the video can be compressed and converted to a number of different video formats (aka codecs).

The rendering dialog is brought up from the render button  from selecting *Project* ▸ *Render* menu item or by the `Ctrl + Enter` shortcut.

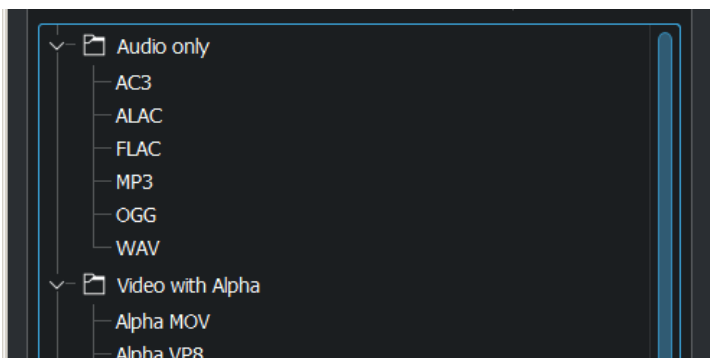
Rendering Dialog

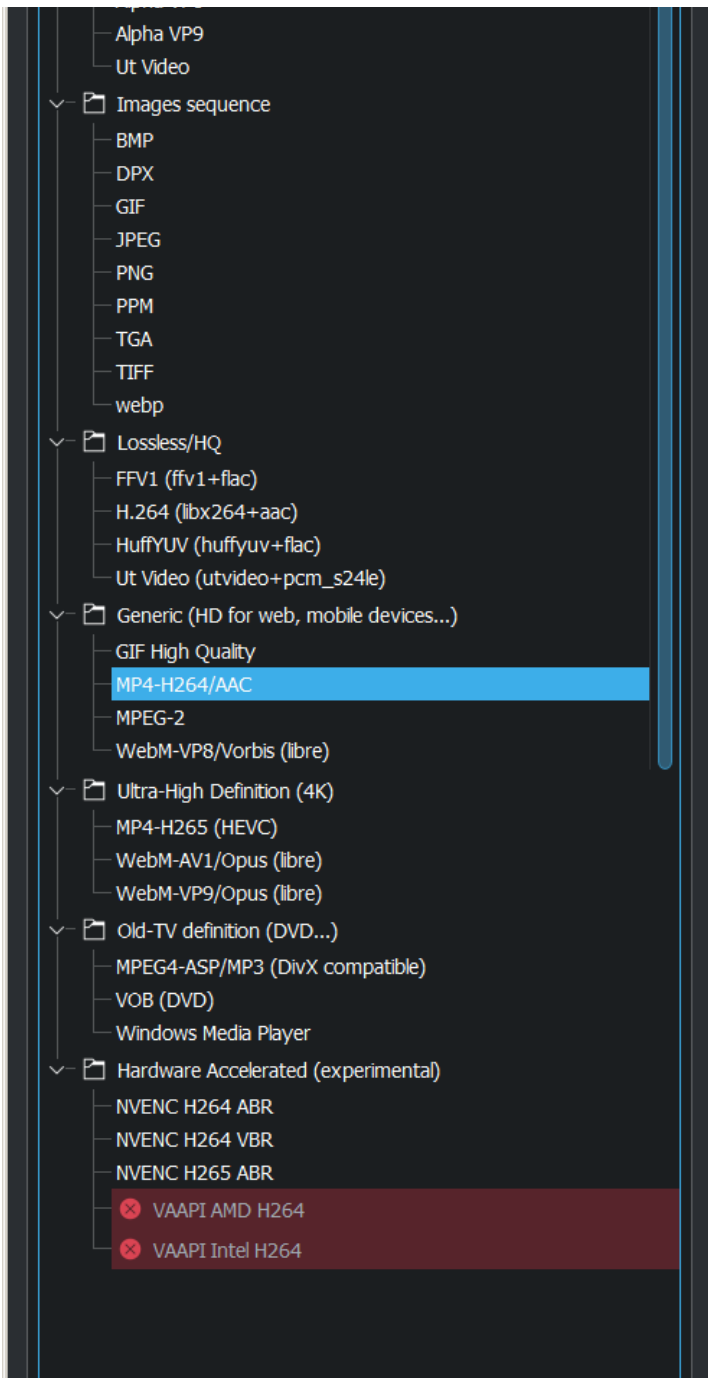
Changed in version 22.04.



[Download New Render Profiles](#)

[Rendering Preset Categories](#)





Kdenlive offers many different rendering presets to choose from. The rendering presets are grouped into categories. See picture Above.

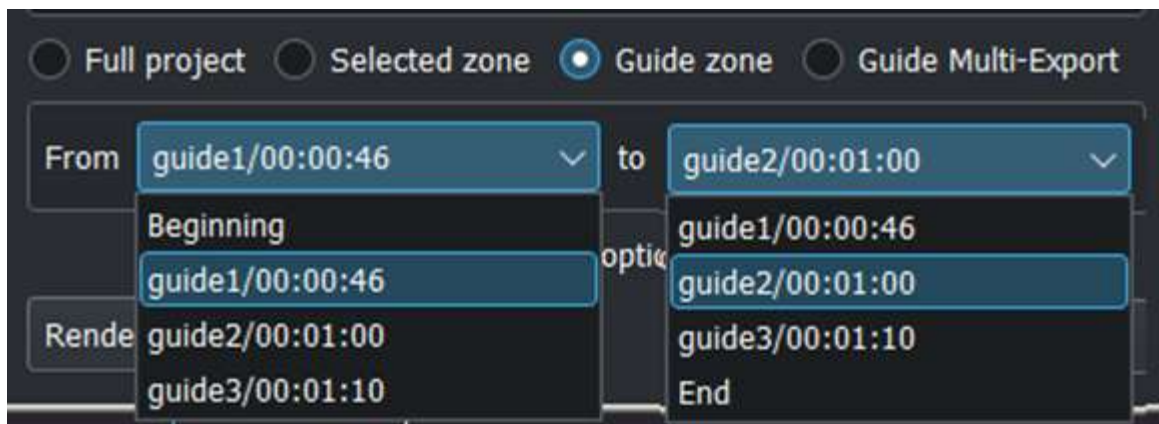
[Full Project](#)

Full Project radio button is the default setting. **Kdenlive** render from the first clip until the last clip in the timeline.

Selected Zone

Selected Zone radio button, **Kdenlive** will only render that portion of the project which has a selected zone created for it. See [Monitors](#).

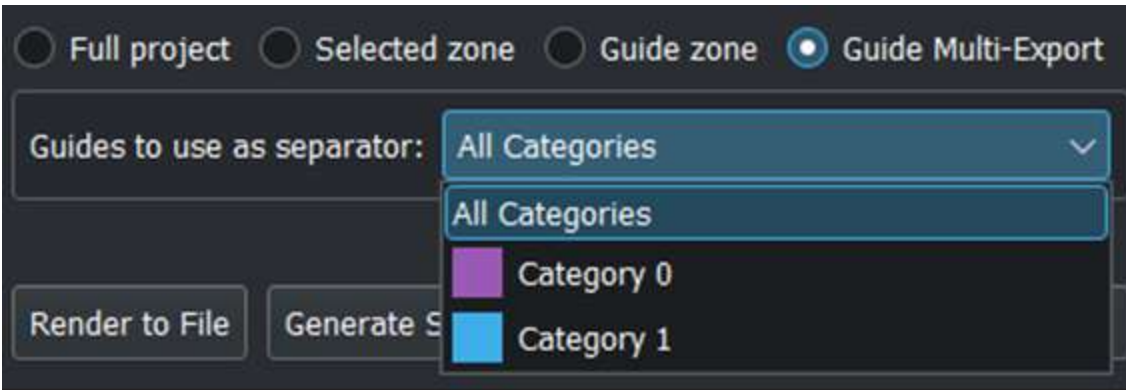
Guide Zone



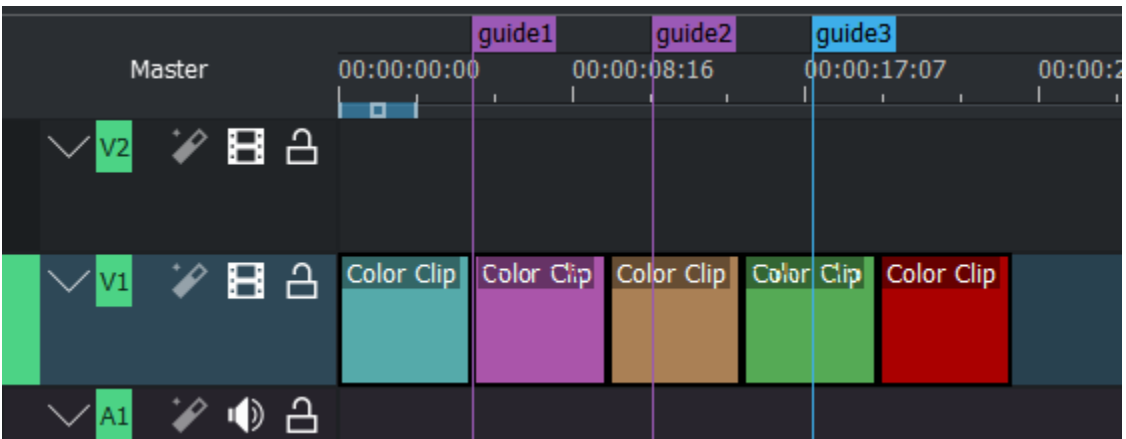
Guide zone radio button makes use of [Guides](#) to define a region of the project that is to be rendered. See [Rendering Using Guides and Rendering Scripts](#).

Guide Multi-Export

New in version 22.04.



Guide Multi-Export radio button makes use of [Guides](#) categories to be rendered.



The selection of guide categories indicates which guides categories will be considered for rendering. In the example above, there are the following options:

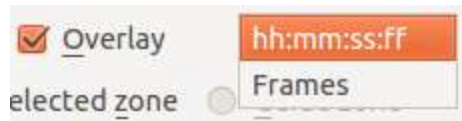
- “All Categories”: This leads to four files:
 - *projectname-begin.mp4* (from 00:00:00 to “guide1”)
 - *projectname-guide1.mp4* (from “guide1” to “guide2”)
 - *projectname-guide2.mp4* (from “guide2” to “guide3”)
 - *projectname-guide3.mp4* (from “guide3” to the end)
- “Category 0 (purple)”: This leads to three files:
 - *projectname-begin.mp4* (from 00:00:00 to “guide1”)
 - *projectname-guide1.mp4* (from “guide1” to “guide2”)

- *projectname-guide2.mp4* (from “guide2” to the end)
- “Category 1 (blue)”: This leads to two files:
 - *projectname-begin.mp4* (from 00:00:00 to “guide3”)
 - *projectname-guide3.mp4* (from “guide3” to the end)
- If guides are behind the last timeline clip, they are ignored.
- If a guide sits right at the beginning of the timeline, the name of that guide is used instead of “begin”.
- If two guides have the same name, an underscore and a number will be added to the file name.

More Option

More Option show you more options for rendering.

Render Overlay

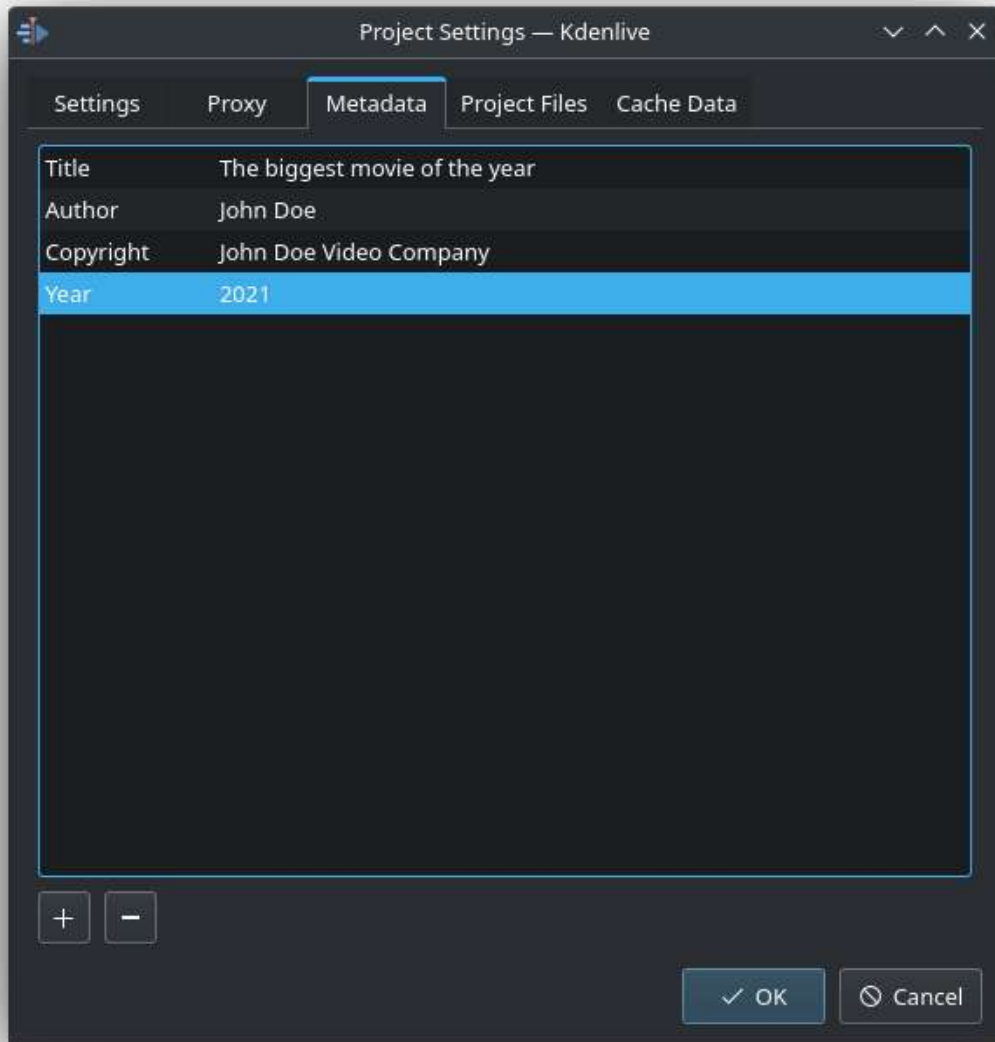


This option overlays a time code or frame count over the rendered video. This will put the overlay over the entire rendered project. Alternatively you can use the [Dynamic Text](#) effect to overlay selected regions of the video.

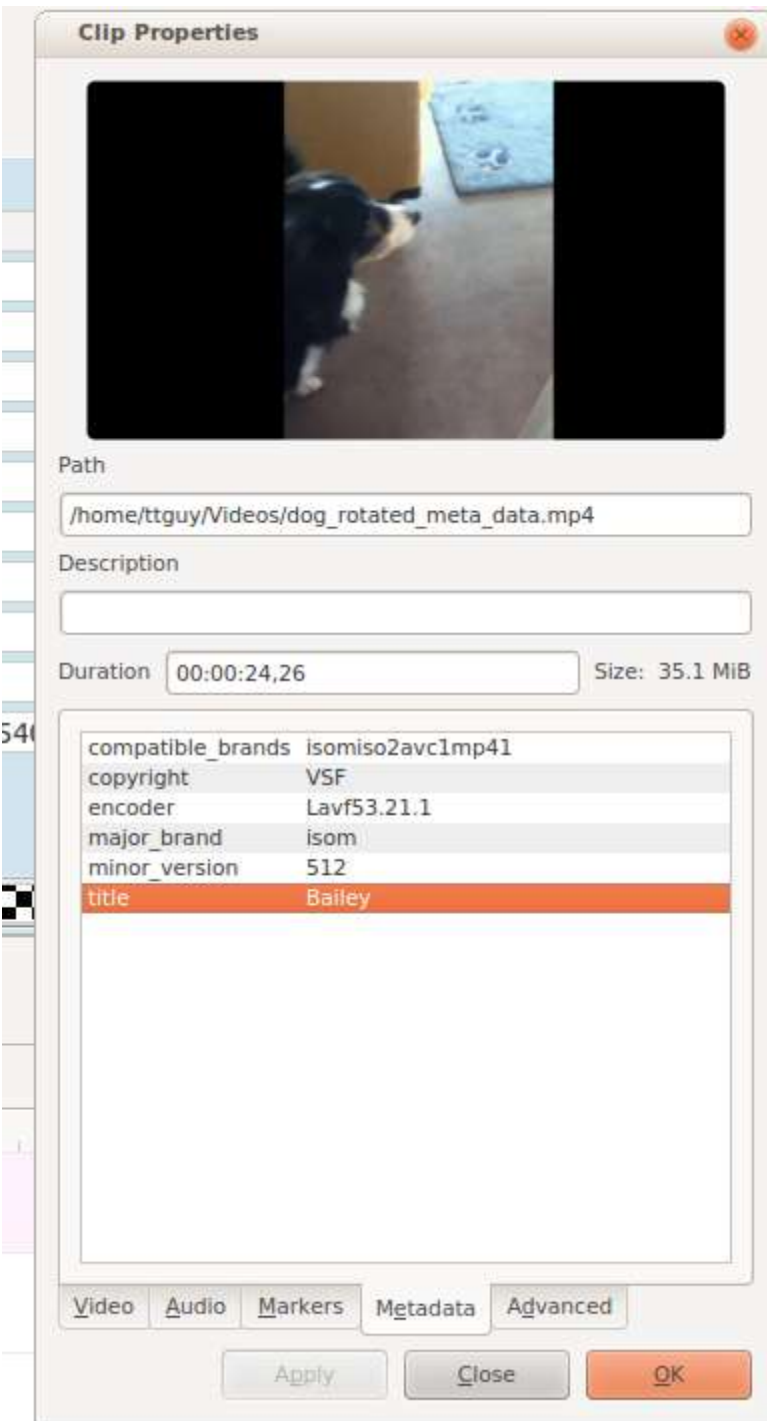


Export Metadata

Check this to have the metadata which has been entered under [Project Settings Dialog](#) placed into the metadata of the rendered file.



And this is the metadata on the resulting clip (rendered with *Export Metadata* checked).



```
$ ffprobe dog_rotated_meta_data.mp4
```

```
Metadata:  
major_brand      : isom  
minor_version    : 512  
compatible_brands: isomiso2avc1mp41
```

```
title           : Bailey
encoder         : Lavf53.21.1
copyright       : VSF
```

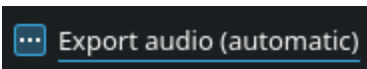
Export Audio Checkbox

This is an unusual one. Instead of a normal on/off checkbox toggle, the *Export Audio* checkbox cycles among three choices.

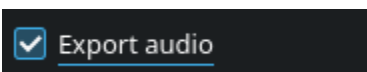
As if that weren't confusing enough, the *Export audio (automatic)* option may appear different depending on your combination of distribution, desktop environment and theme. See three examples below:

Regardless of how the checkbox on the *Export audio (automatic)* option may appear on your installation, rest assured that when that option is showing, it is enabled.

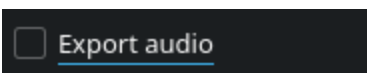
So what do the three options mean?



Export audio (automatic) means detect if an audio track is present and write the audio track if found



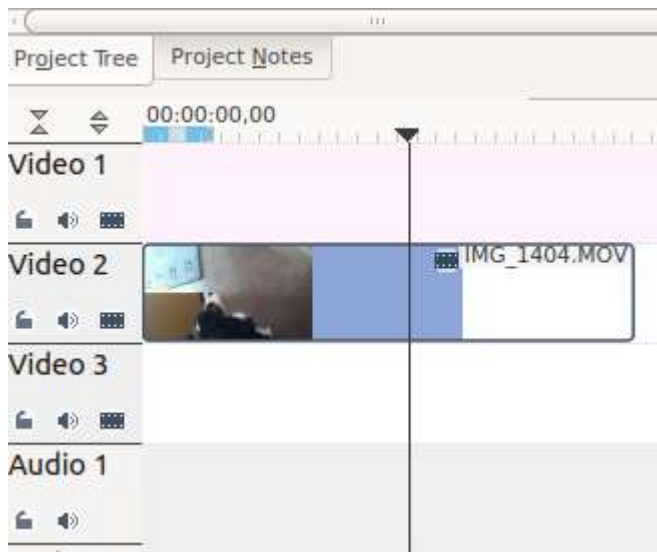
Export audio, when checked, means write an audio track in the rendered file even if there is no audio track to write.



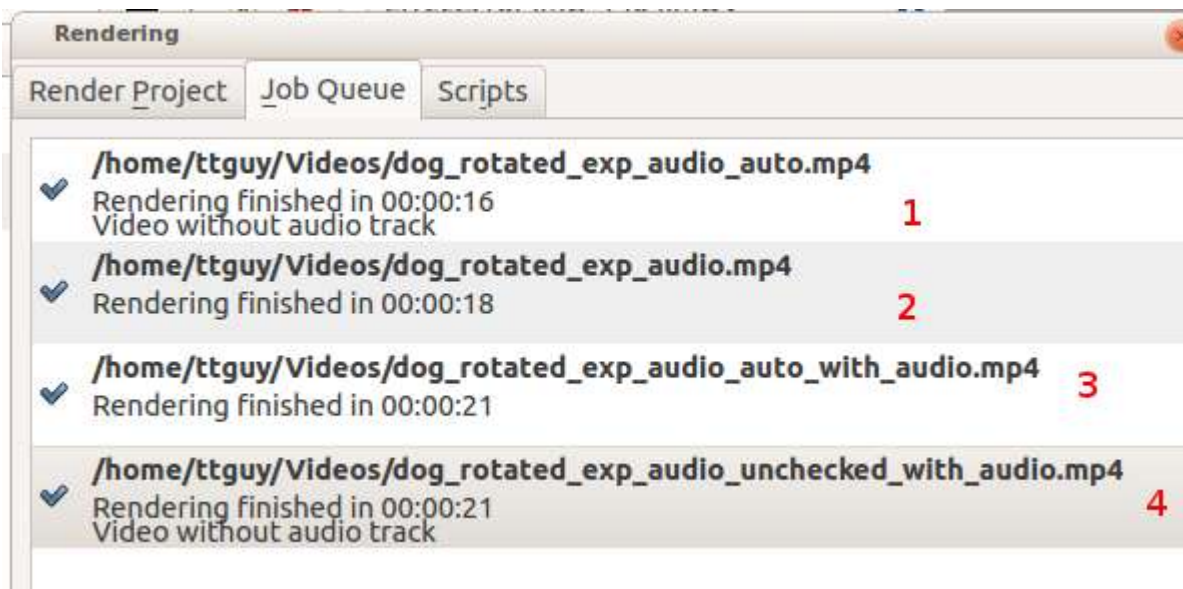
Export audio, when unchecked, means do not write an audio track in the rendered file.

The difference in behavior between enabling *Export audio* versus *Export audio (automatic)* can be seen in the situation where you have a video on the

timeline but there is no audio track on the timeline and the video in the video track also does not have an audio track. An example of such a situation is shown in the screenshot below.



In this situation, if you render with *Export audio (automatic)*, the rendered file will not have an audio track (Result 1 on screenshot below). But if you render with *Export Audio* checked, then the rendered file will contain an audio track – the track will however be empty (Result 2 on screenshot below).



FFprobe on file generated from an audio-less track using *Export audio (automatic)*. Note only one stream – Stream #0.0 – a video stream. **Kdenlive** automatically detected there was not an audio track and so it did not write one.

```
$ ffprobe dog_rotated_exp_audio_auto.mp4
```

```
Metadata:
  major_brand      : isom
  minor_version    : 512
  compatible_brands: isomiso2avc1mp41
  encoder          : Lavf53.21.1
Duration: 00:00:03.62, start: 0.000000, bitrate: 12592 kb/s
Stream #0.0(und): Video: h264 (High), yuv420p, 1280x720 [PAR
1:1 DAR 16:9], 12587 kb/s, 27.83 fps, 27.83 tbr, 30k tbn,
55.66 tbc
```

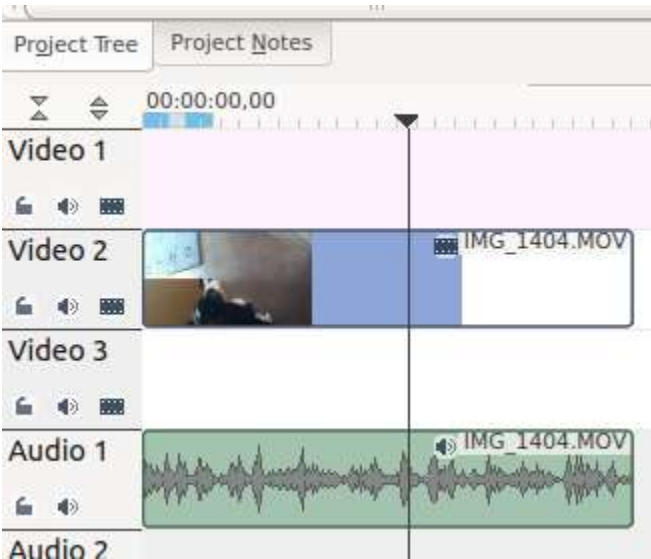
FFprobe on file generated from an audio-less track using *Export audio checked*. Note two streams – Stream #0.0 and Stream #0.1 – the latter being an aac audio track. We forced **Kdenlive** to write an audio track even though there was not any source audio to write.

```
$ ffprobe dog_rotated_exp_audio.mp4
```

```
Metadata:
  major_brand      : isom
  minor_version    : 512
  compatible_brands: isomiso2avc1mp41
  encoder          : Lavf53.21.1
Duration: 00:00:03.62, start: 0.000000, bitrate: 12598 kb/s

Stream #0.0(und): Video: h264 (High), yuv420p, 1280x720 [PAR
1:1 DAR 16:9], 12587 kb/s, 27.83 fps, 27.83 tbr, 30k tbn,
55.66 tbc
Stream #0.1(und): Audio: aac, 48000 Hz, stereo, s16, 2 kb/s
```

In cases where there is an audio track ...



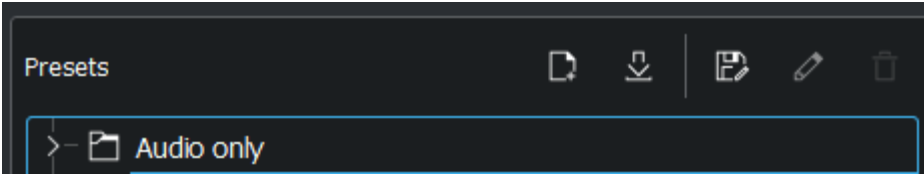
Rendering with *Export audio* unchecked will produce a file with no audio track – result 4 in the screenshot above. Rendering with *Export audio (automatic)* (result 3 in the screenshot above) or with *Export audio* checked will produce files with Audio tracks.


[Encoder Threads](#)



Determines the value of *Encoding threads* passed to melt. For encoding to certain codecs, namely MPEG-2, MPEG-4, H.264, and VP8, kdenlive can use more than one thread and thus make use of multiple cores. Increase this number to take advantage of this feature on multi-core machines. See [melt doco - threads](https://www.mltframework.org/plugins/ConsumerAvformat/#threads) [https://www.mltframework.org/plugins/ConsumerAvformat/#threads] and [melt FAQ](https://www.mltframework.org/faq/#does-mlt-take-advantage-of-multiple-cores-or-how-do-i-enable-parallel-processing) [https://www.mltframework.org/faq/#does-mlt-take-advantage-of-multiple-cores-or-how-do-i-enable-parallel-processing] on multi-threading.


[Create Custom Render Presets](#)









 Creates a new preset based on the project profile.

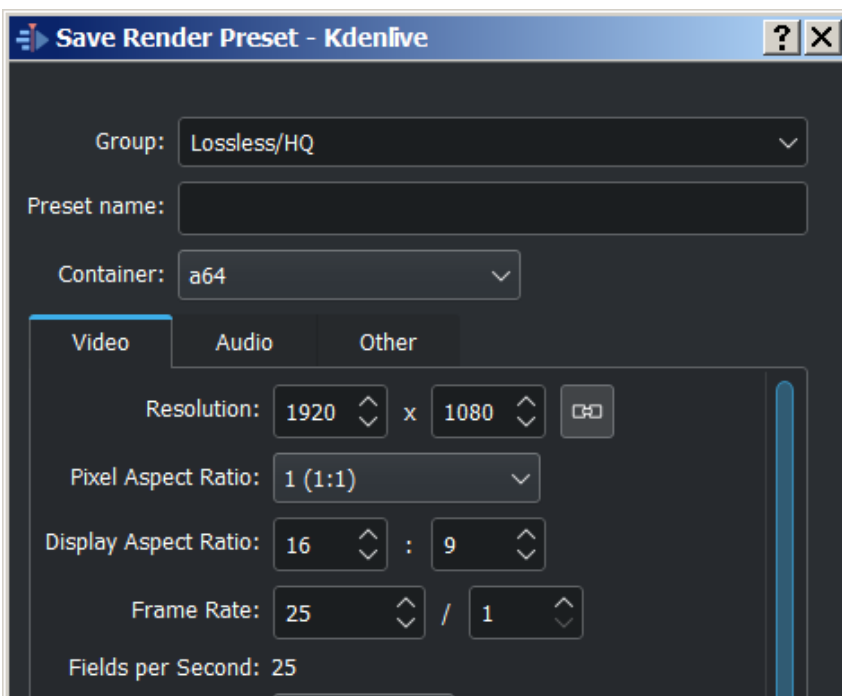
 Downloading additional user created presets.

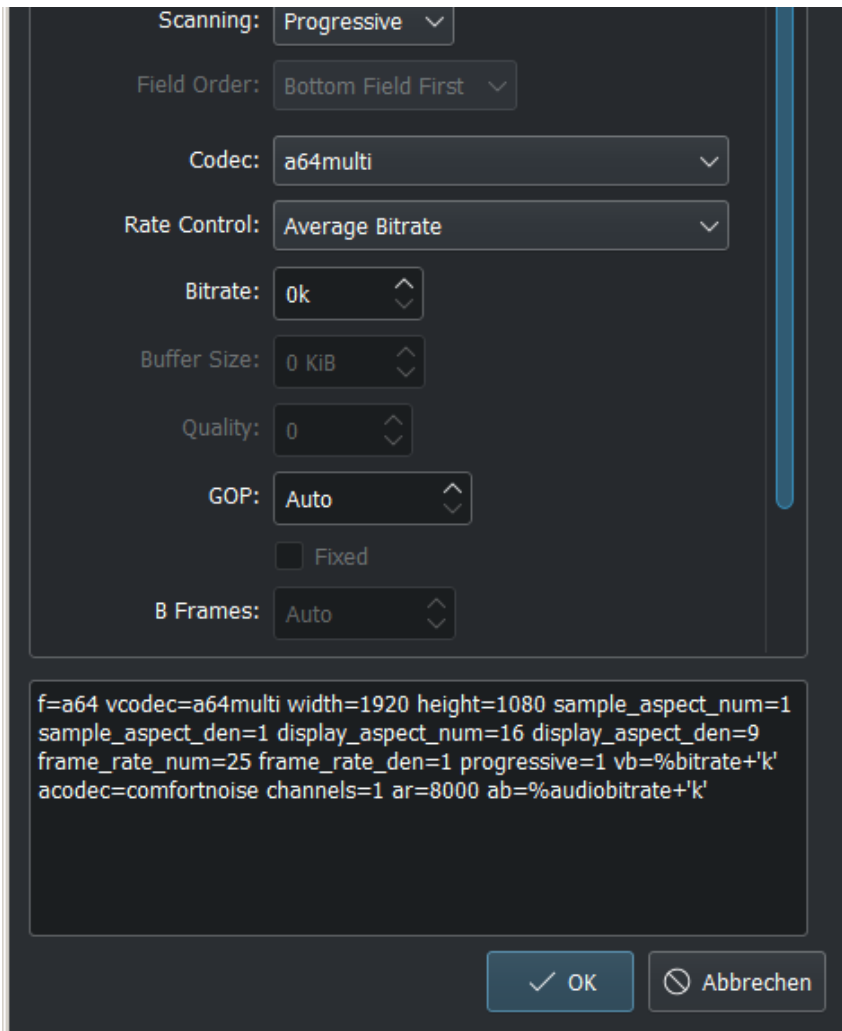
 Save the selected preset under a new name.

 Save the preset under the current name i.e. replace it.

   Will open the **Save Render Preset** dialog (also shown in the screenshot below) and the *Parameters* section will be filled in with the render parameters of the preset that you had selected when you clicked either of the  or  or  button. You can edit values in the parameters and save your own custom render preset.

Creating new groups: When you save a preset and enter a group name that does not yet exist, the group will be created.





The parameters are not limited by the UI, you can add custom parameters in the box *Additional Parameters* under the tab *Other*.

The parameters in the rendering presets are *melt* parameters. For an explanation of their meaning, check the *melt* [documentation](#) [<https://www.mltframework.org/docs/>] or type `melt -help` in a command prompt.

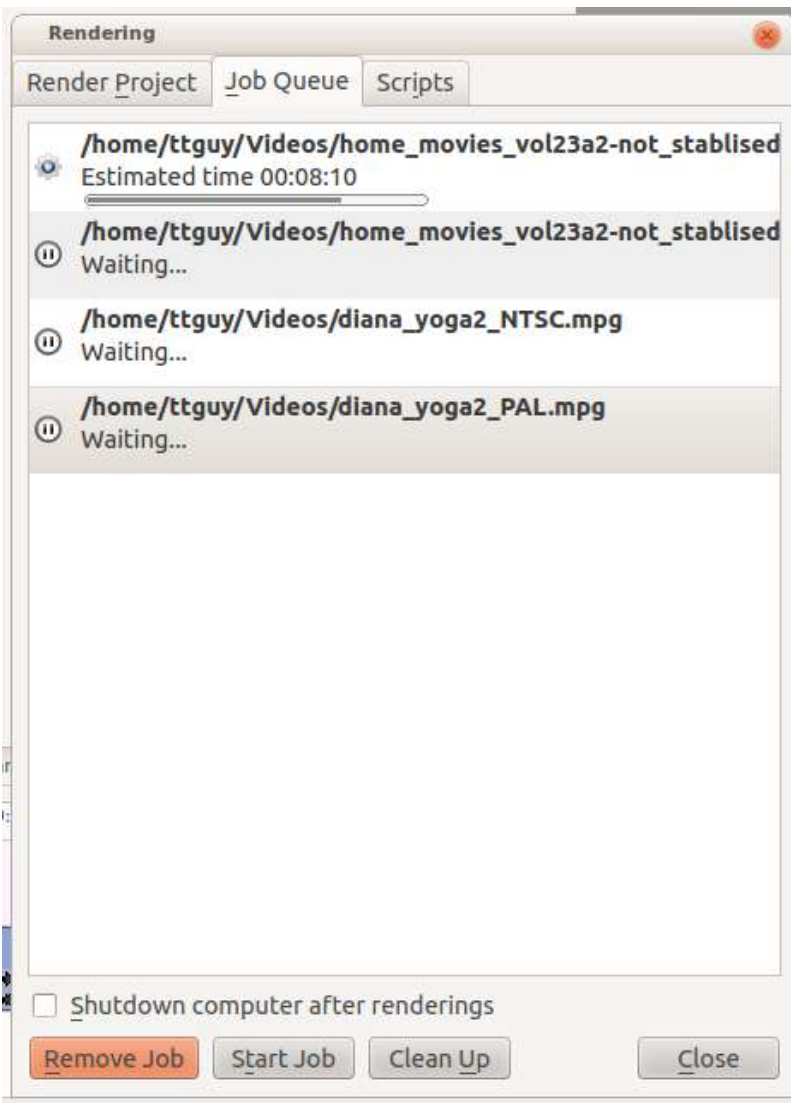
See also [Render Profile Parameters](#).

[Rendering In Batch mode](#)

If you have a lot of rendering jobs to do, you can use **Kdenlive** to create rendering scripts which you can accumulate and then execute in batch mode

overnight. See [Rendering Using Guides and Rendering Scripts](#).

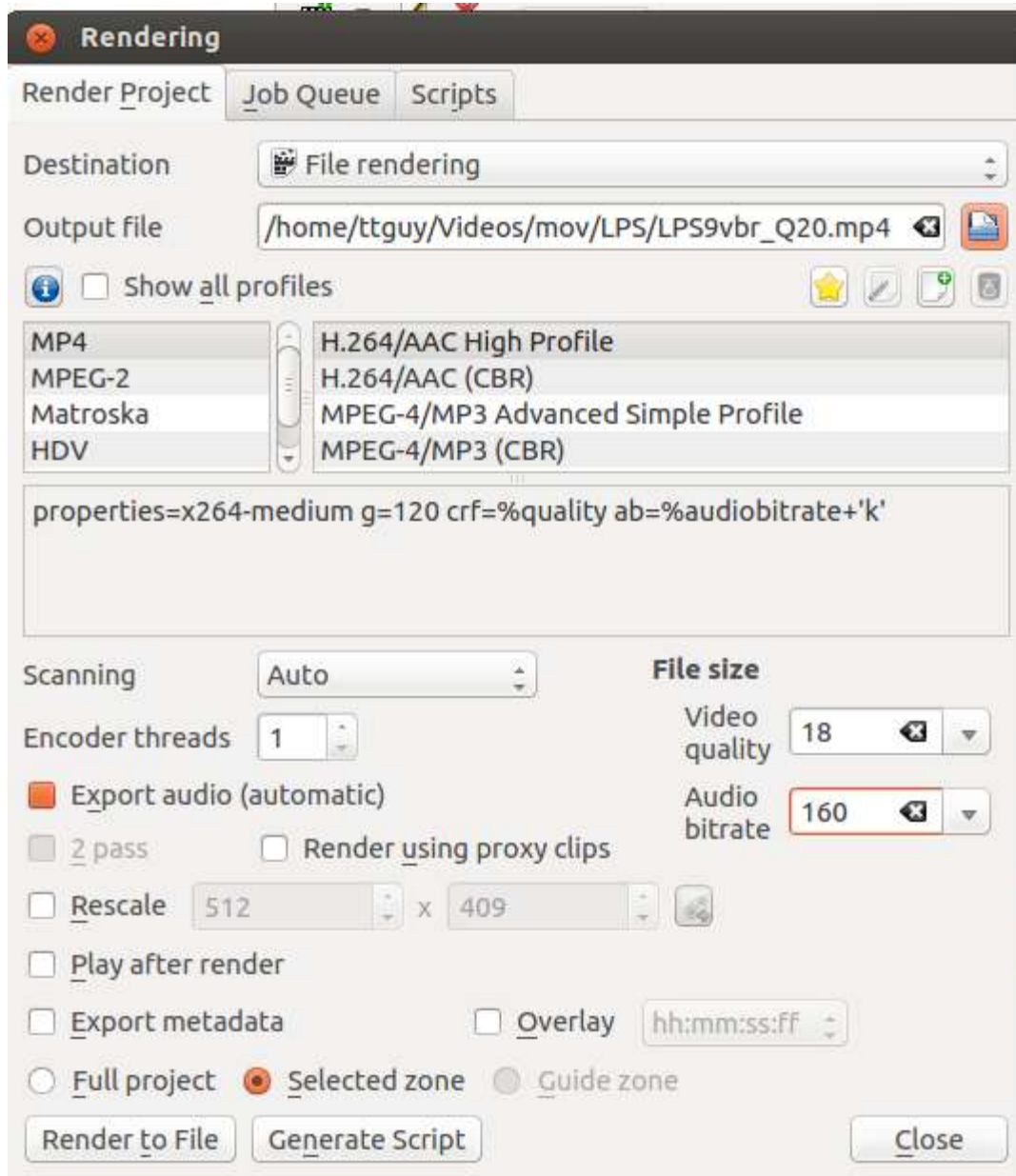
Alternatively, once you have submitted a rendering job on a project and it is up and running in the **Job Queue**, you can drag the render window out of the way and edit the project some more or load a new project and render that one too. The second render job submitted will go into the **Job Queue**. Editing the project after a render job is submitted will not change the settings on that job.



[Variable Bit Rate - earlier Versions](#)

Warning

The instructions of this section are probably out-dated please help us to improve the documentation! See [Get involved](#)



When a variable bitrate (VBR) profile is selected, the *File Size* section displays a drop down for choosing the **Video quality** you want. This quality figure is a codec-dependent number representing the quality of the video that

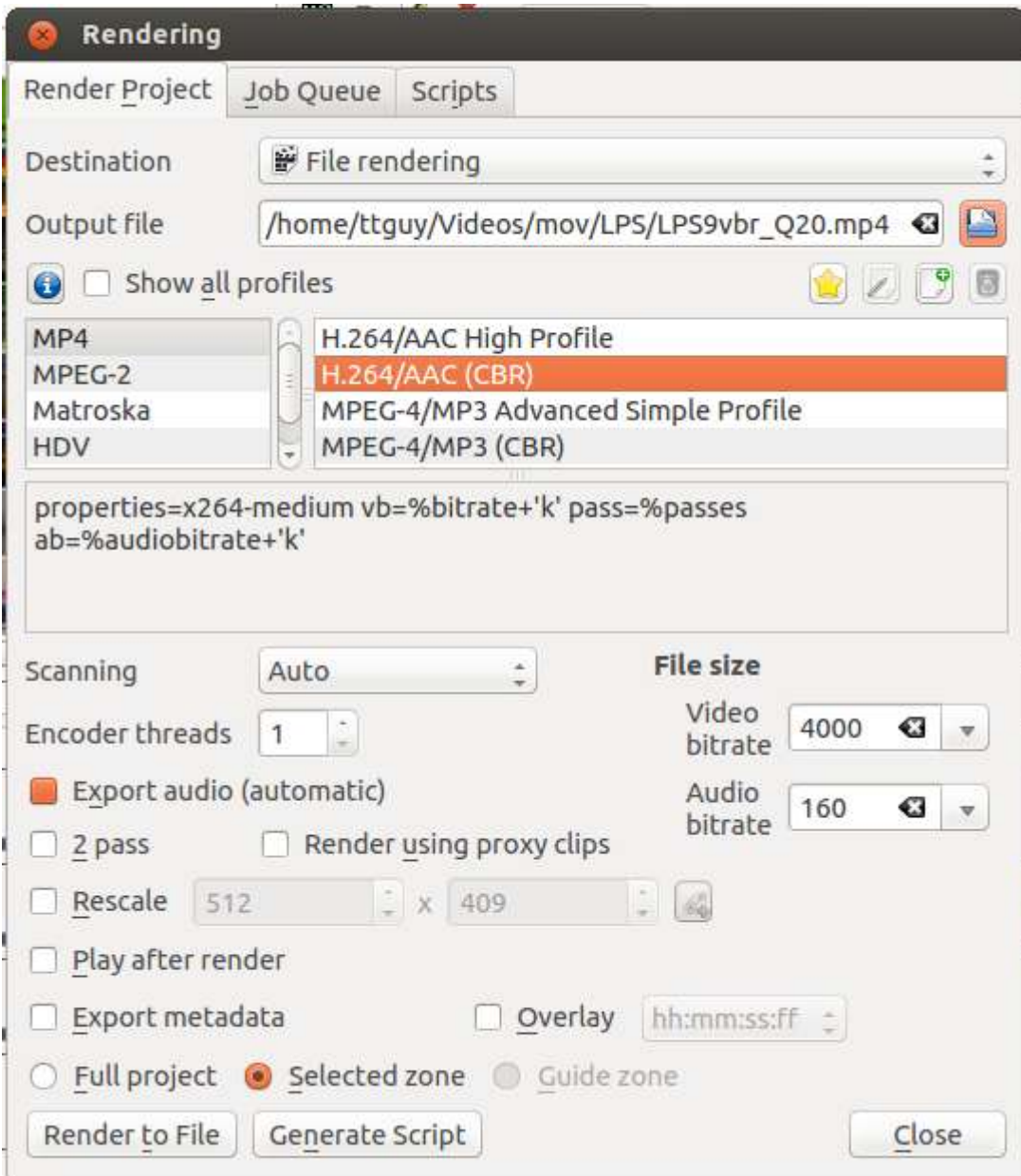
will be rendered. Generally, lower numbers mean higher quality video and larger file sizes (e.g. x264, MPEG2, VPx), but some codecs use opposite order (e.g. Theora). Profiles provided with **Kdenlive** offer these numbers ordered from best quality (almost lossless) to lower quality (still not degrading too much). The exact file size that is produced can not be predicted when using the VBR method. The idea behind this is that you specify a certain quality of video that you want through the entire video and the encoding optimizes bitrate to give you that constant quality, lowering data size for low action scenes and using more bits for high action scenes.

Example: 1min 55 seconds of 720 x 576 H.264 iPhone footage rendered at quality 15 with the H.264/AAC High Profile would produce a file size of 186 Mb. Whereas rendering the same footage at quality quality 20 produced an 83Mb file.

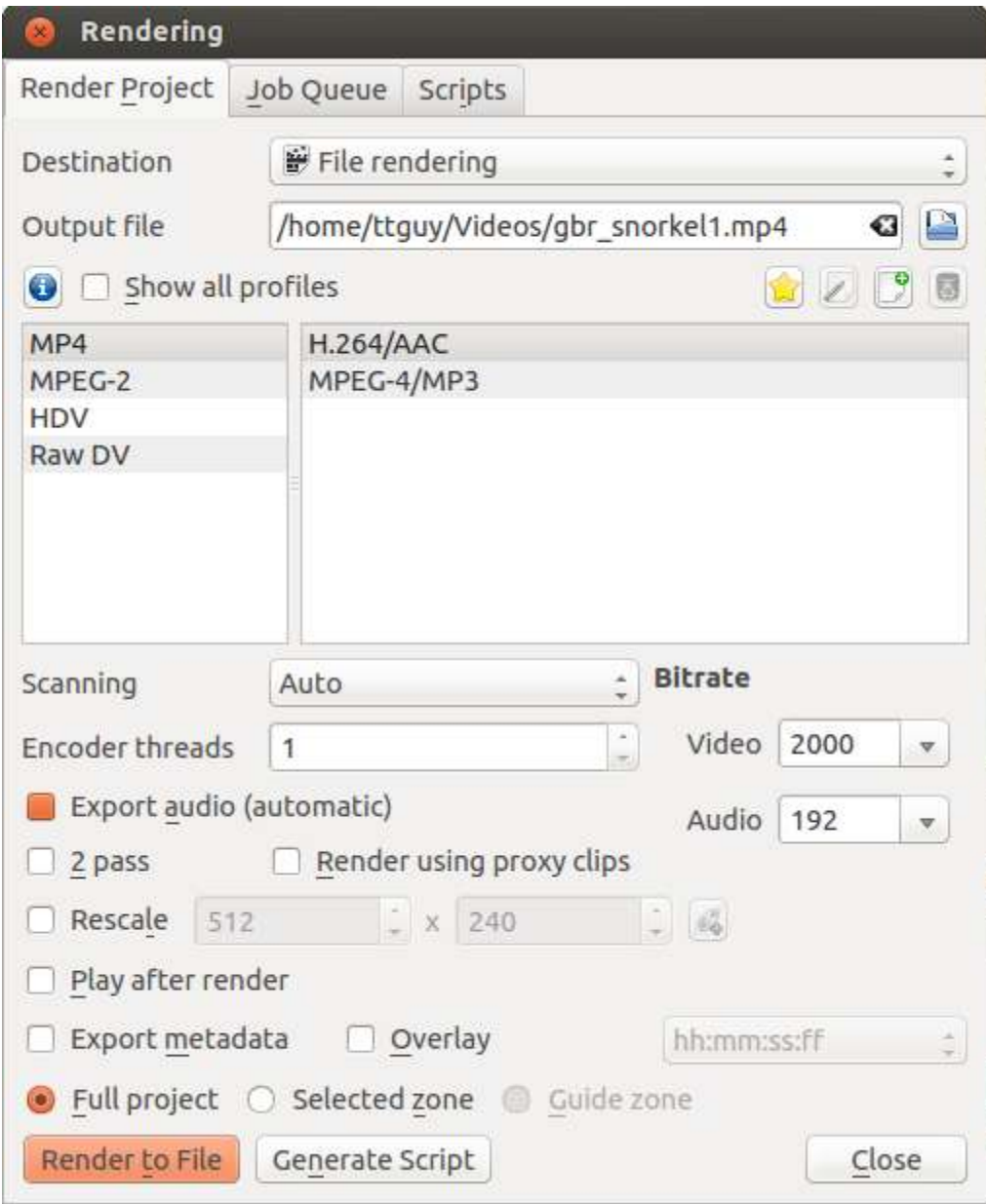
[Constant Bit Rate - earlier Versions](#)

Warning

The instructions of this section are probably out-dated please help us to improve the documentation! See [Get involved](#)



When a constant bitrate (CBR) profile is selected, the *File Size* section displays a drop down for choosing the **Video bitrate** you want. This is similar to the version $\leq 0.9.8$ behaviour of **Kdenlive**. You select the video bitrate you want and the video is encoded at that video bitrate across its entire length.



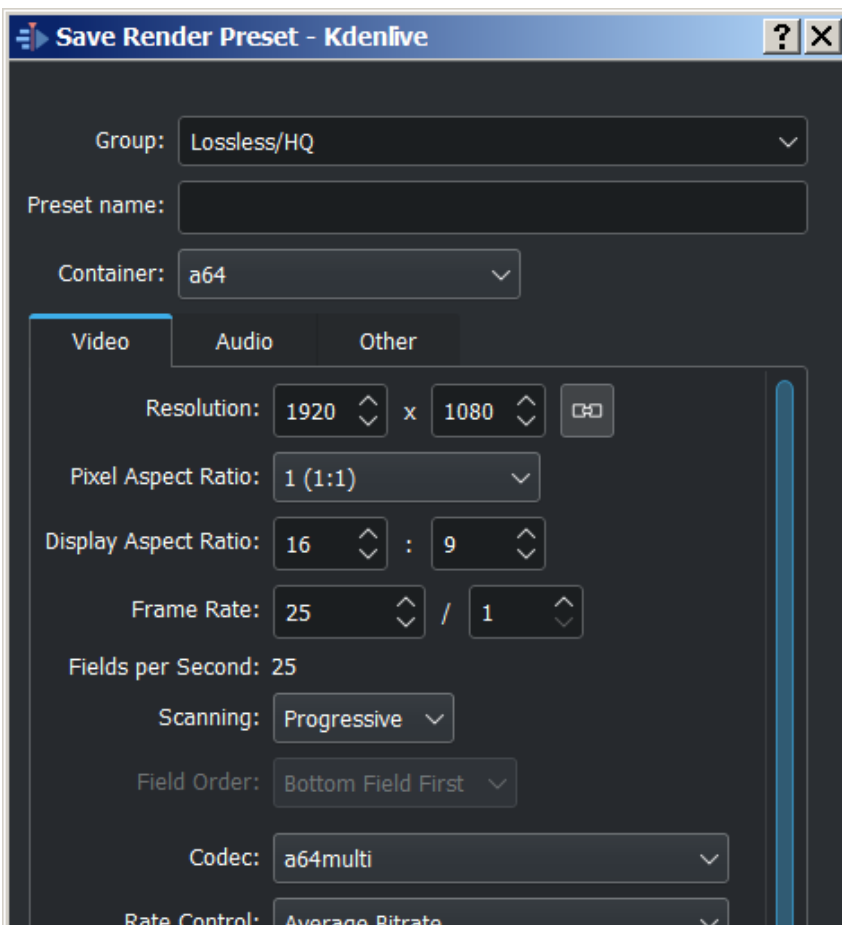
Render Profile Parameters

Contents

- [Render Profile Parameters](#)
 - [Render Profile Parameters - How to read them](#)
 - [Scanning Dropdown](#)
 - [Render Profile Parameters - How to read them](#)

Render Profile Parameters - How to read them

Changed in version 22.04.



Rate Control: Average Bitrate

Bitrate: 0k

Buffer Size: 0 KiB

Quality: 0

GOP: Auto

Fixed

B Frames: Auto

```
f=a64 vcodec=a64multi width=1920 height=1080 sample_aspect_num=1
sample_aspect_den=1 display_aspect_num=16 display_aspect_den=9
frame_rate_num=25 frame_rate_den=1 progressive=1 vb=%bitrate+'k'
acodec=comfortnoise channels=1 ar=8000 ab=%audiobitrate+'k'
```

✓ OK ⓧ Abbrechen

Video **Audio** Other

Channels: 1 (mono)

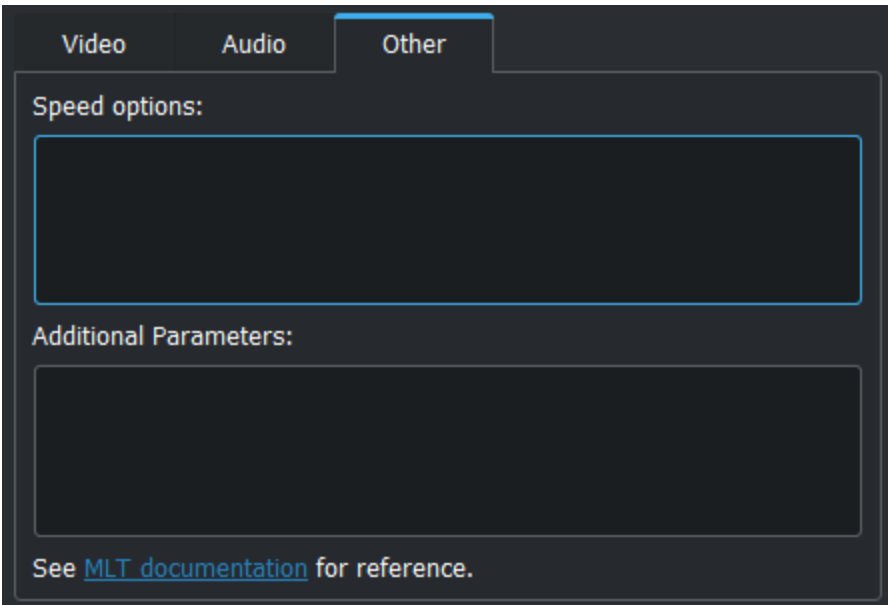
Codec: comfortnoise

Sample Rate: 8000 Hz

Rate Control: Average Bitrate

Bitrate: 0k

Quality: 0



Kdenlive now makes use of “property presets” delivered by the *melt* project (see [melt doco](https://www.mltframework.org/docs/presets/) [https://www.mltframework.org/docs/presets/]). These presets are referenced by the *properties=<preset>* syntax. In the example illustrated, the render profile is referencing *lossless/H.264*. This refers to a property preset found in file *H.264* found on the system at

```
/usr/share/mlt/presets/consumer/avformat/lossless.
```

All the *<presets>* referenced in the render settings in Kdenlive will be referring to presets found at

```
/usr/share/mlt/presets/consumer/avformat/ (on a default install).
```

Note that you reference presets found in subdirectories of this folder using a *<dirname>/<profile>* syntax as shown in the example above.

```
properties=lossless/H.264
g=120
crf=%quality
ab=%audiobitrate+'k'
```

The preset files found at */usr/share/mlt/presets/consumer/avformat/* are simple text files that contain the *melt* parameters that define the rendering. An example is shown below. These are the same parameters that were used in earlier versions of Kdenlive – see next section for how to read those.

Contents of lossless/H.264:

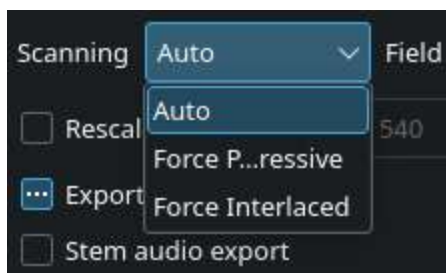
```
f=mp4
acodec=aac
ab=384k
vcodec=libx264
intra=1
vb=0
g=0
bf=0
preset=medium
qscale=1
qp=0
coder=ac
```

```
<!--T:28-->
```

```
meta.preset.extension=mp4
```

```
meta.preset.note=Intra-frame only, lossless compressed MPEG-4
AVC with AAC audio
```

Scanning Dropdown



This option controls the frame scanning setting the rendered file will have. Options are *Force Progressive*, *Force Interlaced* and *Auto*.

Auto causes the rendered file to take the scanning settings that are defined in the [Project Settings Dialog](#). Use the other options to override the setting defined in the project settings.

Render Profile Parameters - How to read them

Warning

The instructions of this section are probably out-dated please help us to improve the documentation! See [Get involved](#)

The parameters that go into a render profile derive from the **ffmpeg** program.

This is a worked example to show how you can understand what these parameters mean using the **ffmpeg** documentation.

In the example above the parameters are:

```
f=dvd
vcodec=mpeg2video
acodec=mp2
b=5000k
maxrate=8000k
minrate=0
bufsize=1835008
mux_packet_s=2048
mux_rate=10080000
ab=192k
ar=48000
s=720x576
g=15
me_range=63
trellis=1
profile=dv_pal_wide
pass=2
```

Looking up the [ffmpeg help](https://linux.die.net/man/1/ffmpeg) [https://linux.die.net/man/1/ffmpeg] translates these parameters as shown below.

Main option is:

```
-f fmt          force format
```

Video options are:

```
-vcodec codec      force video codec ('copy' to copy stream)
-pass n           select the pass number (1 or 2)
-b bitrate        set bitrate (in bits/s)
-vb bitrate       set bitrate (in bits/s)
-s size          set frame size (WxH or abbreviation)
-me_range         <int>    E.V.. limit motion vectors range
(1023 for DivX player)
-trellis         <int>    E.VA. rate-distortion optimal
quantization
```

Audio options are:

```
-acodec codec      force audio codec ('copy' to copy stream)
-ab bitrate        set bitrate (in bits/s)
-ar rate          set audio sampling rate (in Hz)
```

The AVCodecContext AVOptions include:

```
-b                <int>    E.V.. set bitrate (in bits/s)
-maxrate          <int>    E.V.. set max video bitrate
tolerance (in bits/s)
-minrate         <int>    E.V.. set min video bitrate
tolerance (in bits/s)
-g              <int>    E.V.. set the group of picture size
```

So all the render profile options are documented here in the **ffmpeg** documentation.

See also [MLT doco](https://www.mltframework.org/docs/presets/) [https://www.mltframework.org/docs/presets/] on ConsumerAvFormat.

See also [HOWTO Produce 4k and 2K videos, YouTube compatible](https://forum.kde.org/viewtopic.php?f=272&t=124869#p329129) [https://forum.kde.org/viewtopic.php?f=272&t=124869#p329129].

Rendering Using Guides and Rendering Scripts

Contents

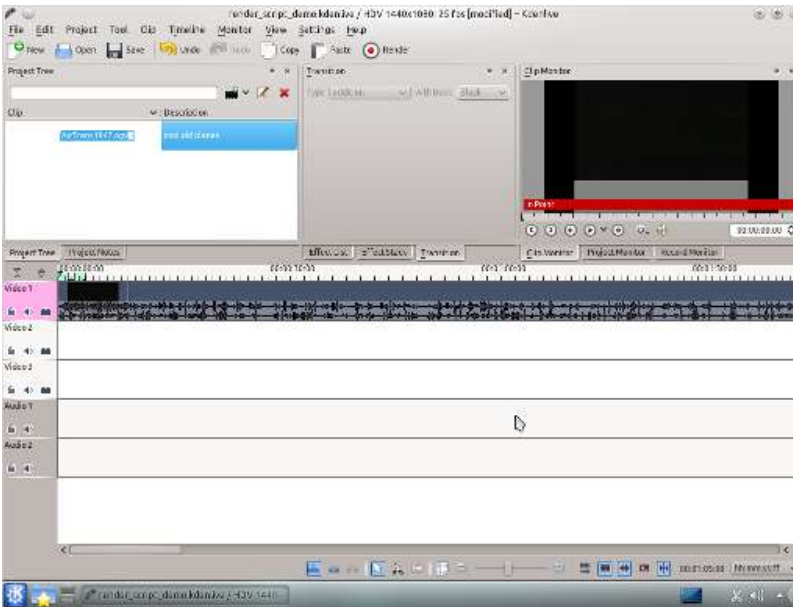
- [Rendering Using Guides and Rendering Scripts](#)
 - [Purpose](#)
 - [Picking Sections with Guides](#)
 - [Generating Rendering Scripts](#)
 - [Starting Your Rendering Scripts](#)
 - [Starting Your Rendering Scripts in a Command Line Terminal](#)
 - [Summary](#)

Purpose

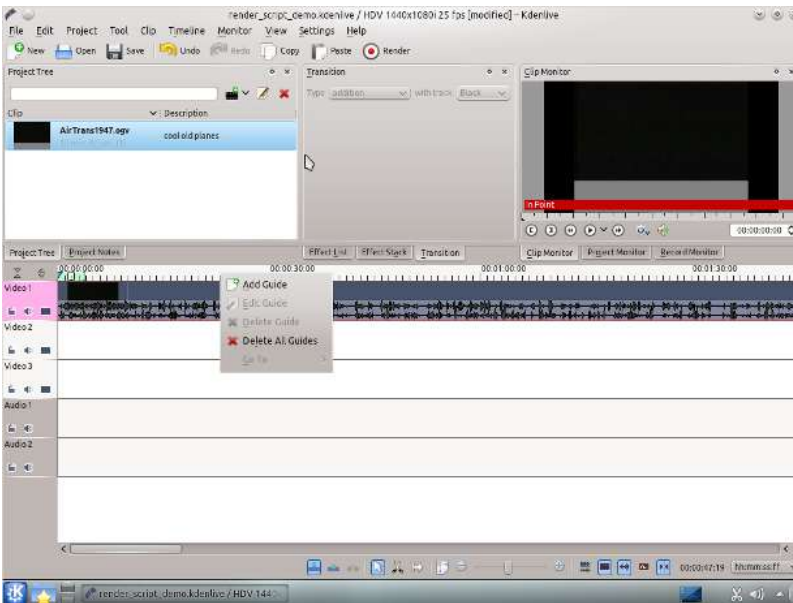
When editing video, time means everything. Especially how long it takes you to edit the clips, project, or footage you are working on. If you ever need to export sequences of your timeline separately, **Kdenlive** offers a great way to do this. You can set guides in your project that establish zones. You then can generate rendering scripts that will export these zones at a later date, during your sleep, or while you hunt and find food. Let's check out how to do this.

Picking Sections with Guides

Start by adding a clip into the timeline. I've added some retro footage about airplanes. Cool.

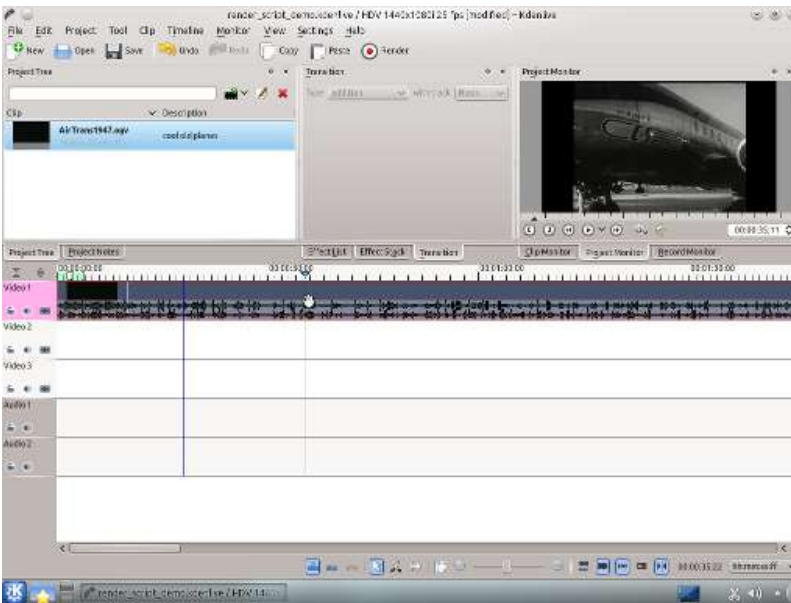


Next we want to add a guide for a specific section of the clip on the timeline. You can add a guide by selecting *Timeline* in the menu and then slide down to *Guides* and select *Add Guide* from the menu. Right clicking the top of the timeline also gives you the option *Add Guide*. If you want to, you can also edit the guides you have set by right clicking on the timeline.

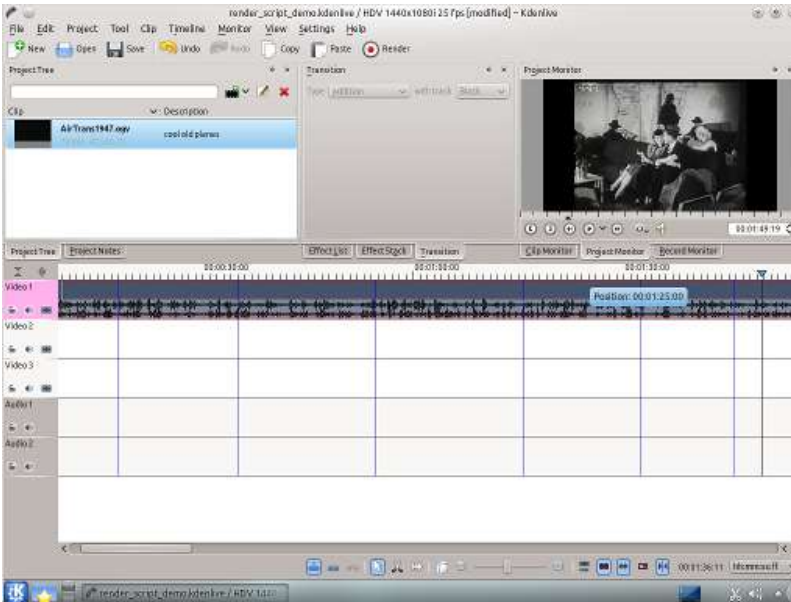


After selecting this option, a window appears giving you the *Position* of the guide and a field to add a comment. Labeling the guide won't hurt anyone, so

I'll name my first guide the extraordinary *Section 1*. A dark blue line appears vertically down through the tracks on your timeline.



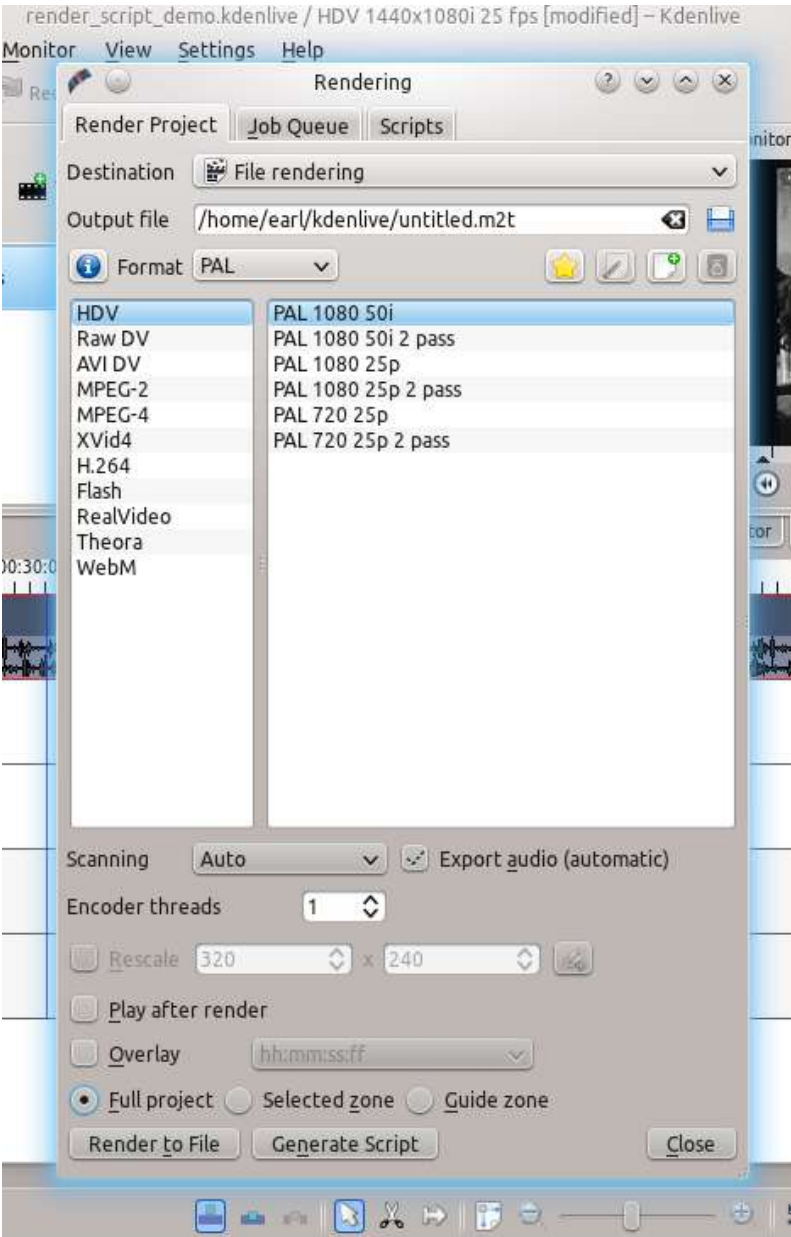
I'll add a few more guides and then we'll start rendering.



The screenshot shows the 6 guides I have put in my project. They chop up the existing clip as I want for my project (that hopefully will become the first hit retro-experimental film...). Now we can export scripts that, when executed, will render these guide zones.

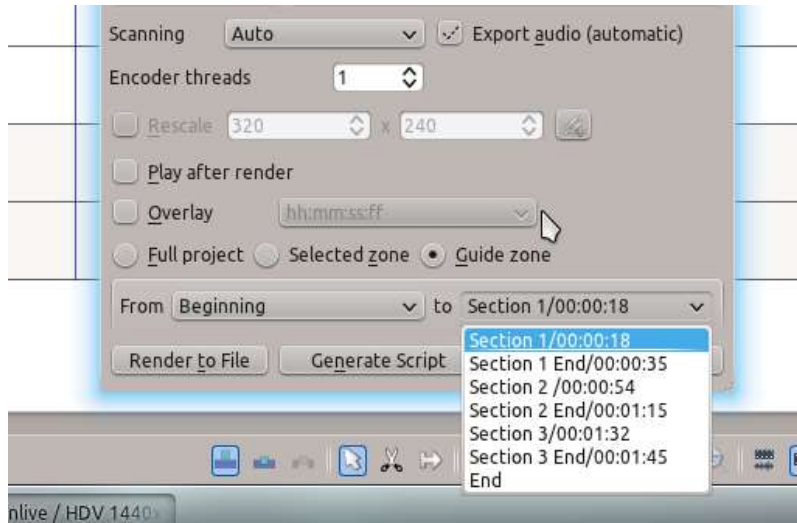
Generating Rendering Scripts

Start by clicking on the *Render* button in your toolbar, the one with the red circle surrounded by a white and black ring. You can also select this by going to the *Project* ▸ *Render* menu item (Ctrl + Return).



The new window gives us many choices about how to render our video. Look at the bottom of the window. We need to select the *Guide zone* option. Selecting this will allow us to render our project using the guides we made

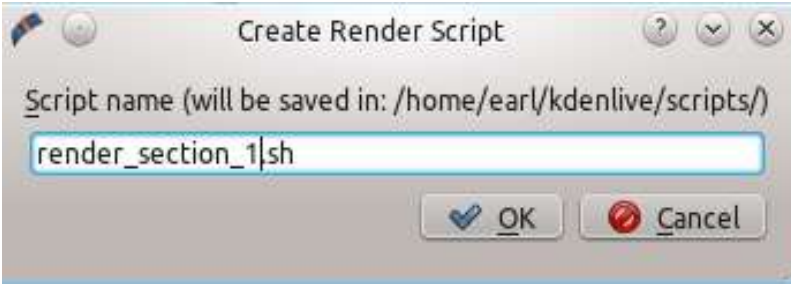
earlier. Be sure and name the output file to a unique name for each script we will create. Otherwise the scripts will overwrite the different guide zones and not do what you wanted.



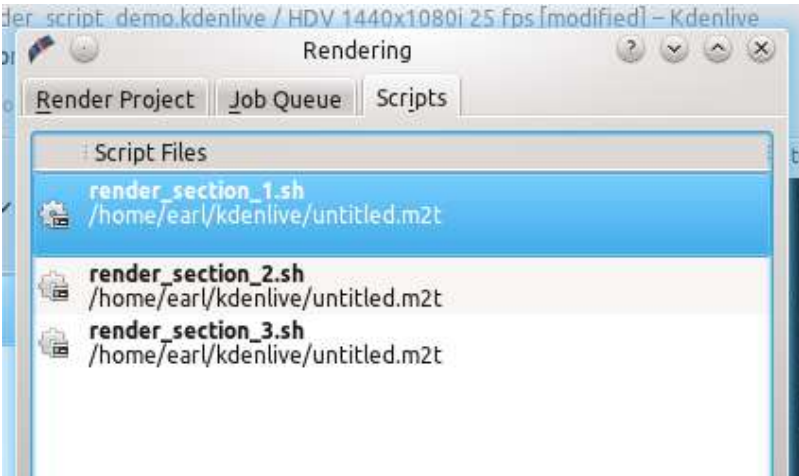
We now can choose which guides will establish the regions of video we want to export using the pull down menus next to *From* and *to*. I'll cut out the *Beginning* and instead use *section 1* to *Section 1 End*, the guide names I defined earlier.



Now I can render this to a file or generate a script that will render this guide zone to a file. Click *Generate Script* and a dialog appears asking you to name the script. **Kdenlive** stores the clips in `/yourhomedirectory/kdenlive/scripts`



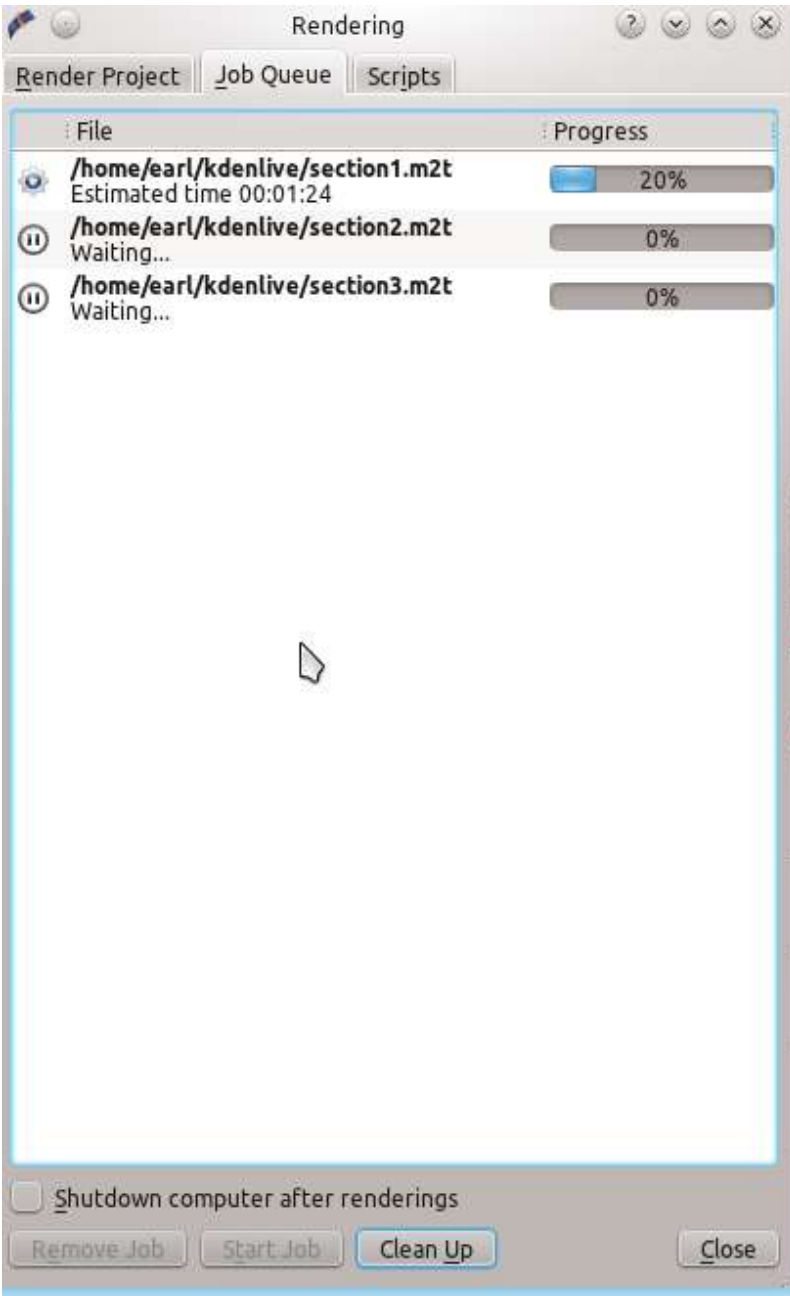
After saving the script, the top tab in the window switches to *Scripts*. This lists all the scripts you have generated for the current project.



I went ahead and generated 3 scripts based on the guide zones I set up in my timeline. Be sure and keep the `.sh` extension otherwise the rendering script will not be generated.

[Starting Your Rendering Scripts](#)

Once each script is generated, you need to start each one. You should be in the script tab and see your scripts listed. Start the process by selecting the script and clicking the *Start Script* button. Do this for each script.



After clicking each script, you are switched to the *Job Queue* tab. Here you will see what script is being run and how many more are waiting to be run. If you have a large queue, you can take advantage of the nifty checkbox in the bottom left: *Shutdown computer after renderings*

[Starting Your Rendering Scripts in a Command Line Terminal](#)

For troubleshooting purposes there could be times that you want to run the render script in a terminal prompt. Rendering in the terminal can produce error logging information that can assist in debugging rendering issues.

To render the video in the terminal ...

- Note the location where **Kdenlive** has saved the `.sh` script (see Figure 8)
- Open a terminal and change directories to the location of the `.sh` script
- execute the `.sh` script

```
$ cd /home/earl/kdenlive/scripts
```

```
$ sh render_section_1.sh
```

or

```
$ ./render_section_1.sh
```

Summary

Creating guides can help organize your project while you work on it and when you share it with the world. You can use guides to keep track of areas or to generate rendering scripts that will do the mundane task for you. This feature makes exporting sections of your project quite easy. There are also other ways to take advantage of rendering sections and guide zones using guides. Have fun. Explore!

Troubleshooting

Contents:

- [Frequently Asked Questions](#)
 - [What components does Kdenlive use?](#)
 - [How do I fix Audio Sync Issues?](#)
- [Installation Troubleshooting](#)
 - [Your MLT installation cannot be found or Cannot start MLT backend](#)
 - [Missing package](#)
 - [Missing MLT module](#)
 - [The following codecs were not found on your system...](#)
- [Windows issue with scopes](#)
- [Troubleshooting and Common Problems](#)
 - [Kdenlive warns me about missing codecs, I cannot render in some formats](#)
 - [Kdenlive is too large on my screen. I cannot make it smaller.](#)
 - [I want to trim videos without re-encoding them. How can I do this?](#)
 - [I want to apply an effect, for example a watermark, to the whole project. What is the best way to do this?](#)
 - [My monitor plays distorted images, or generally something it really should not.](#)
 - [I want to back out to a previous release.](#)
- [Windows issues](#)
 - [Title tool, display real background not working in “DirectX” backend](#)
 - [Render problems](#)
 - [Scopes doesn't show anything](#)
 - [Audio crackling while playback](#)
 - [This application failed to start because no Qt platform plugin could be initialized](#)
 - [First time use of Kdenlive](#)
 - [Intel graphic card driver](#)

- [Timeline: right-click menu close immediately after releasing mouse button](#)
- [Icons are missing](#)
- [Cannot open projects made with previous version, timeline snaps back, cannot import clip](#)
- [Windows 10: timeline stuttering or Kdenlive hangs.](#)
- [“Clip is invalid, will be removed”](#)
- [Any critical bug](#)
- [JPG files appear as white picture after rendering](#)
- [Play/Pause Issue](#)
- [Qt rendering crash](#)
- [Kdenlive cannot be deleted, running process on exit](#)
- [Kdenlive crash at start up, Kdenlive cannot be uninstalled](#)
- [Kdenlive crash or green Monitor](#)
- [General Issues](#)
 - [Audio Pops and Ticks in Render](#)

Frequently Asked Questions

Contents

- [Frequently Asked Questions](#)
 - [What components does Kdenlive use?](#)
 - [How do I fix Audio Sync Issues?](#)

What components does Kdenlive use?

In effect, **Kdenlive** is a front end to [melt](#)

[<http://www.mltframework.org/bin/view/MLT/MltMelt>] - which uses the MLT video framework. The MLT video framework relies on the FFmpeg project.

Kdenlive writes `sh.mlt` XML files that code the edit points and transitions and it then calls `/usr/bin/kdenlive_render` and `/usr/bin/melt` to render the video.

How do I fix Audio Sync Issues?

Often this is caused by having mixtures of different audio sources in the project. Audio encoded with VBR (be it pure audio like MP3 or video with audio) can be problematic.

If your audio source is from a video file try extracting the audio from your video sources and transcoding the audio to WAV format. If you use the [Extract Audio](#) feature of Kdenlive to do this it will write a `.wav` file for you.

If you have a pure audio source try transcoding that to WAV.

```
lame --decode file.mp3 file.wav
```

Installation Troubleshooting

Many problems encountered in Kdenlive are caused by installation problems (missing or mismatching packages). Kdenlive uses the MLT framework to process all video operations, and MLT uses many other libraries like FFmpeg, Frei0r, ...

Here are some tips to understand what might be wrong for you, depending on the error message you get on startup. If this does not help you, check the forums.

Your MLT installation cannot be found or Cannot start MLT backend

There is obviously something wrong with your MLT installation. Either it is not installed or not in a standard location. You can test your MLT installation from a terminal, type: *melt color:red* This should bring up a red window (press *q* to close it).

- If you see an error message, try reinstalling MLT or check that you don't have several versions installed on the system.
- If you see the red window, check where your MLT is installed: *which melt*. Then delete Kdenlive's config file (*\$HOME/.config/kdenlive/rc*) and restart Kdenlive.

Missing package

A dependency is missing and it is recommended to install it.

Frei0r

This package provides many effects and transitions. Without it, Kdenlive's features will be reduced. You can simply install frei0r-plugins from your

package manager.

Breeze icons

Many icons used by Kdenlive come from the Breeze Icons package. Without it, many parts of the UI will not appear correctly. You can simply install breeze-icon-theme or breeze-icons from your package manager.

MediaInfo

Download and install MediaInfo from [here](https://mediaarea.net/MediaInfo/Download) [https://mediaarea.net/MediaInfo/Download]

Missing MLT module

An MLT dependency is missing and it is required to install it.

SDL is used to output audio. Install *libsdl 1.x`* from your package manager.

Avformat is the FFmpeg module. Make sure you have ffmpeg installed on your system.

The following codecs were not found on your system...

Some audio / video codecs are not installed by default. Installing a package called *libavcodec-extra* might solve the problem.

On openSuse, you need to add the [packman repository](https://www.opensuse-community.org/) [https://www.opensuse-community.org/], then enable [replace vendor package](https://en.opensuse.org/SDB:Vendor_change_update#Full_repository_Vendor_change) [https://en.opensuse.org/SDB:Vendor_change_update#Full_repository_Vendor_change] on the packman repository.

Windows issue with scopes

Note

New in version 21.12.2: All video scopes are working with DirectX.

Workaround: Change the backend to OpenGL (*Settings ▸ OpenGL Backend ▸ OpenGL*)

If it's still not working go to: *Help ▸ Reset Configuration* and try again.

Troubleshooting and Common Problems

Contents

- [Troubleshooting and Common Problems](#)
 - [Kdenlive warns me about missing codecs, I cannot render in some formats](#)
 - [Kdenlive is too large on my screen. I cannot make it smaller.](#)
 - [I want to trim videos without re-encoding them. How can I do this?](#)
 - [I want to apply an effect, for example a watermark, to the whole project. What is the best way to do this?](#)
 - [My monitor plays distorted images, or generally something it really should not.](#)
 - [I want to back out to a previous release.](#)

Kdenlive warns me about missing codecs, I cannot render in some formats



There are several possible reasons for this:

1. You have installed the codecs after **Kdenlive's** installation. To force Kdenlive to check available codecs on your system, run the configuration wizard: *Settings* ▸ *Run Config Wizard*. Complete the wizard and restart **Kdenlive** to be sure that codecs have been detected.
2. The codecs are not available on your system. **Kdenlive** uses the codecs from your **FFmpeg** or **Libav** library. Due to licensing issues, some

distributions do not provide all codecs by default and you might need to install an extra package. On Ubuntu/Mint for example, you must install a package called `libavcodec-extra-xx`. After that, check the codecs again as explained in the first step.

3. Last possibility is that your **FFmpeg** or **Libav** version is buggy and does not report all supported codecs. **Kdenlive** releases after 0.9.2 have an option to try using codecs even if they seem unsupported: *Settings* ▸ *Configure Kdenlive* and check the *Bypass codec verification* option.

[Kdenlive is too large on my screen. I cannot make it smaller.](#)

This usually happens when too many widgets are open. Each widget label takes a minimum amount of space in width. Close some (e.g. via the *View* button) and consider using layouts (*View* ▸ *Save Layout As*).

[I want to trim videos without re-encoding them. How can I do this?](#)

You cannot do this with **Kdenlive**. (Please try [Avidemux](http://avidemux.org/) [http://avidemux.org/] instead.) The reason is that, for splitting, files need to be treated in a very different manner (the file itself needs to be edited, whereas **Kdenlive** renders frames into a new file). See also: <https://forum.kde.org/viewtopic.php?f=272&t=116144&p=286144&hilit=clips+without+render+again#p286144>.

[I want to apply an effect, for example a watermark, to the whole project. What is the best way to do this?](#)

Create a new project with the same project profile and import the project on which you want to apply the effect as a clip (*Project* ▸ *Add Clip*). See also: [How to: Add a Watermark in Kdenlive](http://vimeo.com/13610402) [http://vimeo.com/13610402] on Vimeo.

My monitor plays distorted images, or generally something it really should not.

Please check your *Settings* ▶ *Configure Kdenlive* ▶ *Playback* settings. Try to disable OpenGL if it is enabled, or use a different driver. **Kdenlive** may need to be restarted.

I want to back out to a previous release.

See Notes at [Installation](#).

Windows issues

Contents

- [Windows issues](#)
 - [Title tool, display real background not working in “DirectX” backend](#)
 - [Render problems](#)
 - [Scopes doesn't show anything](#)
 - [Audio crackling while playback](#)
 - [This application failed to start because no Qt platform plugin could be initialized](#)
 - [First time use of Kdenlive](#)
 - [Intel graphic card driver](#)
 - [Timeline: right-click menu close immediately after releasing mouse button](#)
 - [Icons are missing](#)
 - [Cannot open projects made with previous version, timeline snaps back, cannot import clip](#)
 - [Windows 10: timeline stuttering or Kdenlive hangs.](#)
 - [“Clip is invalid, will be removed”](#)
 - [Any critical bug](#)
 - [JPG files appear as white picture after rendering](#)
 - [Play/Pause Issue](#)
 - [Qt rendering crash](#)
 - [Kdenlive cannot be deleted, running process on exit](#)
 - [Kdenlive crash at start up, Kdenlive cannot be uninstalled](#)
 - [Kdenlive crash or green Monitor](#)
- [General Issues](#)
 - [Audio Pops and Ticks in Render](#)

The current **Kdenlive** on Windows® (April 2022, version 21.12.3) has a few issues that have workarounds. The purpose of this wiki page is to document

these issues and their workarounds.

[Title tool, display real background not working in “DirectX” backend](#)

Something with the settings went wrong. Go to: *Help* ▸ *Reset Configuration* and try again.

[Render problems](#)

After rendering you get de-synced audio or wrong effects or black frames at end of the last clip: download version 20.08.1 or higher from the [download page](https://kdenlive.org/en/download) [https://kdenlive.org/en/download]. If you still experience problems see [Windows issues](#).

[Scopes doesn't show anything](#)

[Windows issue with scopes](#)

[Audio crackling while playback](#)

CRL + SHIFT + , (comma), select *Playback* ▸ *audio backend* and play around with *WinMM* (Win7), *Wasapi* (Win10), *DirectSound* to see what give the best result. Restart Kdenlive after each switch.

[This application failed to start because no Qt platform plugin could be initialized](#)

Hit CTRL + SHIFT + , (comma) > *environment* > make sure the paths point to the same path as “MLT profiles folder”.

Download: `qt.conf`. Put the file `qt.conf` into the “bin” folder (the folder where `kdenlive.exe` is)

First time use of Kdenlive

This issue should be solved with Windows version 19.04.2-6. That `kdenliverc` is correct set up please start Kdenlive twice (start -> close -> start). Then start your work.

Intel graphic card driver

Updated Intel graphic driver versions lead to a corrupted Kdenlive GUI.

Solution 1: Open Kdenlive. Move the mouse to the top. The menus are showing up. Try to reach *Settings* -> *OpenGL backend* -> enable *OpenGL/DirectX*. Restart Kdenlive. This should solve your Intel graphic driver issue.

Maybe this statement helps: [Corrupted GUI](https://forum.kde.org/viewtopic.php?f=265&t=161309#p425882) [https://forum.kde.org/viewtopic.php?f=265&t=161309#p425882].

Solution 2: Press `Win + R` (Windows key and R key simultaneously) and type **appdata**. Go to `local` and within it open `kdenliverc` with an editor. Search for `[misc]` and delete `[misc]` and the following entry. . Restart Kdenlive.

Timeline: right-click menu close immediately after releasing mouse button

Don't use the style *Fusion*.

Go to: *Settings* -> *Style* and choose *Default* or *Windows*.

Icons are missing

Go to: *settings* -> untick *force breeze icon theme*. Kdenlive restarts and you should see the icons.

Cannot open projects made with previous version, timeline snaps back, cannot import clip

Go to: *Help* ▸ *Reset configuration*.

If this is not solving the problem: Press `Win + R` (`Windows` key and `R` key simultaneously) and type **appdata**. Go to `local` and within it rename `kdenliverc` to `kdenliverc.old`. Start **Kdenlive** -> do nothing -> close **Kdenlive** -> and restart **Kdenlive** again.

If you have still problems delete proxy clips and other cached data by going to *Project* menu > *Project Setting* > *Cache Data* tab > there you can delete cached data.

If you have still problems try [Windows issues](#).

Windows 10: timeline stuttering or Kdenlive hangs.

Most probably you got a major Win10 update (i.e 1809). If so you have to update all drivers for audio and video.

Intel driver can be updated with this updater: [Intel updater](#)

[<https://downloadcenter.intel.com/en/download/28425/Intel-Driver-Support-Assistant>].

“Clip is invalid, will be removed”

This bug can appear if you do a clean reinstall of **Kdenlive** (see above). Simply close and open **Kdenlive** once, and it should be fixed.

Additionally this can be a problem either with the `kdenliverc` file (see here [Windows issues](#)) or you have some mismatch in the “local” folder (see here [Windows issues](#)).

Any critical bug

This describes the process of doing a clean install on Windows®.

Firstly, delete your normal **Kdenlive** folder (containing the application)

Access the **Appdata** folder (Win + R and then type **APPDATA** in full caps). Go to `local` and search for folder `kdenlive`.

Note

If you have any saved effects or clips stored in your library, make a backup of the library folder.

Then once you have backup up your library folder, delete the `kdenlive` folder.

Reinstall the latest version of **Kdenlive** from the [download page](https://kdenlive.org/en/download)

[<https://kdenlive.org/en/download>]

JPG files appear as white picture after rendering

This issue should be solved with Windows version 19.04.0. If not convert the JPG to PNG and it renders correctly.

Play/Pause Issue

This issue is solved with Windows version 18.08.2 (30. Oct 2018). Get the current version from the [download page](https://kdenlive.org/en/download) [<https://kdenlive.org/en/download>].

Qt rendering crash

Hit `CTRL + SHIFT + ,` (comma) > *environment* > make sure the paths point to the same path as “MLT profiles folder”.

When switching from `kdenlive` for windows 17.12 > 18.04/18.08, a Qt rendering crash appears. To make sure this doesn't happen, you need to edit

the `kdenliverc` file in the `appdata/local` folder. To access your `appdata`, press `Win + R` (Windows key and R key simultaneously) and type **appdata**. Go to `local` and within it rename `kdenliverc` to `kdenliverc.old`.

[Kdenlive cannot be deleted, running process on exit](#)

This issue is solved with Windows version 18.12.1. Get the current version from the [download page](https://kdenlive.org/en/download) [https://kdenlive.org/en/download].

If you want to reinstall **Kdenlive** or re-run **Kdenlive**, it may tell you “The file or folder is open in another program”. Windows® then won’t let you delete or re-run **Kdenlive**.

To fix this you have to kill the running process: press and hold `Ctrl + Shift + Esc` & expand the task manager by clicking *all details*. Then find `kdenlive.exe` & `dbus-daemon.exe`, and click *End task* for both of them.

Or download the: `kdenlive-kill.zip`. Unpack it and just double-click the batch file which kills all running **Kdenlive** processes.

[Kdenlive crash at start up, Kdenlive cannot be uninstalled](#)

If Kdenlive crash at startup or if the uninstaller doesn’t work delete the entire folder: `C:/Program Files/kdenlive`.

Re-install Kdenlive

You have to manually delete in the start menu the Kdenlive folder.

[Kdenlive crash or green Monitor](#)

Get all newest Windows® updates. Afterwards, update your graphic card driver and your sound card driver and your printer driver. Some crashes

could occur of incompatibility of the graphics card and sound card with the newest Windows®10 updates (18.09 update). After you have updated the drivers re-start the computer and try again by starting `kdenlive.exe`.

If this is not solving the problem switch your standard printer to “Microsoft XPS Document Writer” and try again to start Kdenlive.

Delete the `kdenliverc` file as described here under [Windows issues](#).

Make sure you set processing thread to 1: `Ctrl + Shift + , (comma) > Environment > Processing thread > set to 1`

General Issues

The current **Kdenlive** version (November 2018, version 18.08.3) has a few issues that have workarounds.

Audio Pops and Ticks in Render

If this problem appears make sure the audio file is: 16-bit PCM WAV.

Glossary

Contents:

- [Credits and License](#)
 - [Documentation copyright](#)
 - [Documentation authors](#)
- [Introducing Scopes](#)
 - [Introducing Color Scopes](#)
 - [How the Histogram works](#)
 - [The Waveform and The RGB Parade](#)
 - [The Vectorscope](#)
 - [The Audio Spectrum and the Spectrogram](#)
- [Shooting Hints](#)
 - [Shooting with your DSLR](#)
 - [Using P2 footage from the Panasonic HVX200 on GNU/Linux \(tested on Ubuntu\)](#)
- [Tips & Tricks](#)
- [Useful Information](#)
 - [Adding meta data to mp4 video](#)
 - [Automatically Raising the Properties Pane](#)
 - [Color Hell: Ffmpeg Transcoding and Preserving BT.601](#)
 - [Compositing with transparency](#)
 - [Configuring the Default Transition Duration](#)
 - [Disable All Timeline Effects](#)
 - [Effects everywhere](#)
 - [Extract frame to project](#)
 - [Working with Extracted Frames in Higher Resolution than Project Profile](#)
 - [Fixing Unwanted Slow Audio Fade-Ins with Some USB Audio Cards](#)
 - [Full Luma](#)
 - [How to editing audio volume with keyframes](#)
 - [How to fading in-out Kdenlive titles](#)
 - [Insert and Overwrite: advanced timeline editing](#)

- [Kdenlive transitions](#)
- [Library clips with image sequences, Titles, Color clips](#)
- [Manage Cached Data](#)
- [Restoring Audio Mixing](#)
- [The “Smooth” Keyframe Interpolation](#)
- [Editing Surround Sound with Kdenlive](#)
- [The library: copy_paste between projects](#)
- [Timeline preview rendering](#)
- [Useful Resources](#)

Credits and License

Contents

- [Credits and License](#)
 - [Documentation copyright](#)
 - [Documentation authors](#)

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Introducing Scopes

- [Introducing Color Scopes](#)
 - [Basic Scope Options](#)
- [How the Histogram works](#)
 - [What the Histogram shows](#)
 - [Histogram example: Candlelight](#)
 - [Histogram example: Underexposed ABC](#)
 - [Histogram options](#)
 - [Sample files](#)
 - [Summary](#)
- [The Waveform and The RGB Parade](#)
 - [How the Waveform works](#)
 - [Waveform example: Sunset](#)
 - [RGB Parade example: Light Bulb](#)
 - [Waveform example: Leaf with hidden clipping](#)
 - [Waveform example: High Key clip](#)
 - [Waveform options](#)
 - [RGB Parade options](#)
 - [Clip Sources](#)
 - [Summary](#)
 - [Comments](#)
- [The Vectorscope](#)
 - [How the Vectorscope works](#)
 - [Vectorscope example: Grayscale video](#)
 - [Vectorscope example: Juggling balls](#)
 - [Vectorscope example: Musical box](#)
 - [Creating a look for your video](#)
 - [Vectorscope options](#)
 - [Clip Sources](#)
 - [Summary](#)
 - [What the I and the Q lines are good for](#)
 - [Where I/Q lines come from](#)
 - [The Purpose of the I and the Q line](#)
 - [Clip sources](#)

- [The Audio Spectrum and the Spectrogram](#)
 - [First of all, the scopes](#)
 - [Audio Spectrum](#)
 - [Spectrogram](#)
 - [What the scopes might help in as well](#)
 - [Sound](#)
 - [Clipping](#)
 - [Damping](#)
 - [Our ear](#)
 - [Links](#)
 - [Thanks ...](#)

Introducing Color Scopes

Submitted by Granjow on Mon, 08/30/2010 - 23:10

With kdenlive 0.7.8 I added some color scopes, used for displaying color information. In this section I will give a brief overview over scopes in general and explain the most basic scope, the histogram, in detail.

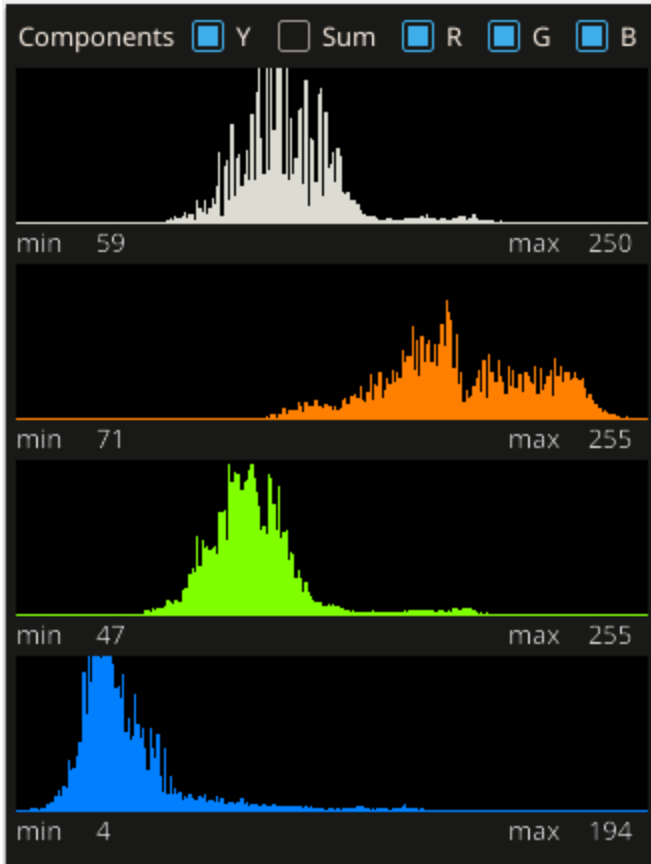
Color correction. This is a really important topic in video editing. It starts with simple stretching of the tonal range if the brightness is not ideal, goes on with white balance to ensure that white remains white and not blue, and finally ends with creating looks which make your video look unique.

(Remember the blueish [Minority Report](#)

[https://en.wikipedia.org/wiki/File:Minority_Report_bleached.jpg]?) The contrasty [The Departed](#)

[<https://web.archive.org/web/20160328033801/http://www.wbshop.com/product/code/1000121856.do>]?)

For color correction we basically need two things, Effects for changing the colors and Scopes for monitoring the changes. The first scope I'm showing now is, as already mentioned, the histogram:



Basic Scope Options

Let's first take a look at the basic options available in all scopes.



- *Auto Refresh* automatically refreshes the scope if the project/clip monitor changes. During the process of color correction you'll want to keep this option enabled. When not color correcting, it should be disabled as it usually heavily impacts the performance of playback. (There is a lot of calculations going on in the scopes.)
- *Realtime* tries to maintain a certain frame rate in the scopes by dropping part of the color information received (e.g. taking a look at every 8th pixel only instead of every single pixel).

Note that you can always update a scope by clicking on it.

So far about scopes in general. Now let's take a closer look at the [Histogram](#).

How the Histogram works

Submitted by Granjow on Mon, 08/30/2010 - 23:10

When the Histogram receives an updated image from one of the monitors, each of these pixels consist of a Red, Green, and Blue component. Each of these values lies within a range of 0 and 255, which are the numbers you can represent with one Byte. 0 means that the component is not shining at all (i.e. it is black), 255 means that it is shining as bright as possible.

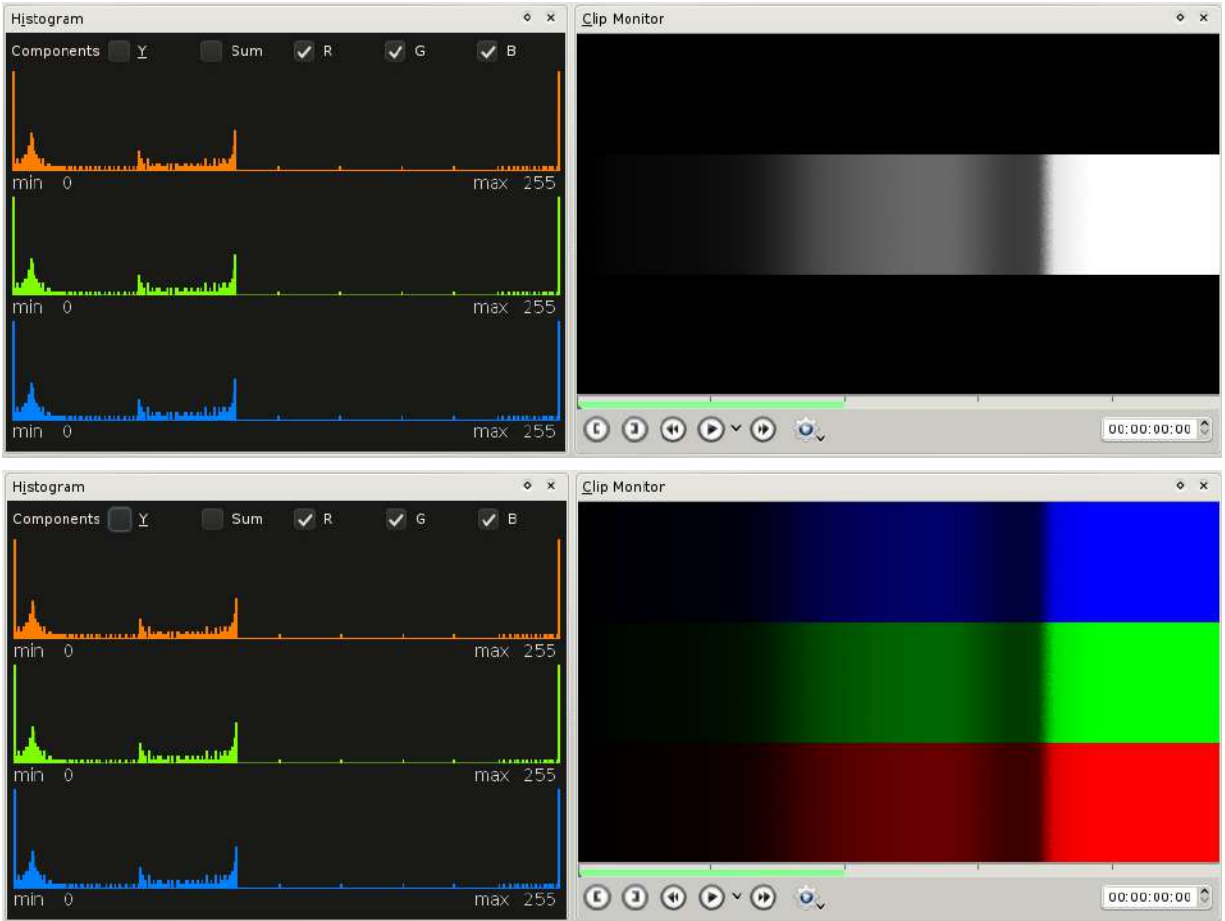
The Histogram is merely statistics; it shows how often a component of a certain brightness occurs. So what the Histogram then does is actually quite simple:

1. Take the first pixel
2. Look at the Red value (= x) of the pixel. Increase the height of the bar at position x of the histogram by 1. Example: If the red value is 0, increase the height of the bar at position 0 (that is at the very left) of the histogram by 1. If it is 42, increase bar 42 by 1. And so on.
3. Repeat the previous step with Green and Blue.
4. Look at R, G, and B together and calculate the Luma value. Luma is the perceived Luminance of this pixel. See further below how it is calculated (if you are interested).
5. Repeat these steps for all other pixels on the image.

What the Histogram shows

The Histogram only shows the distribution of the luminance of the selected components – nothing more, nothing less. Also when looking at the RGB channels separately, instead of at the calculated Luma component only, you cannot really guess the colors in the image.

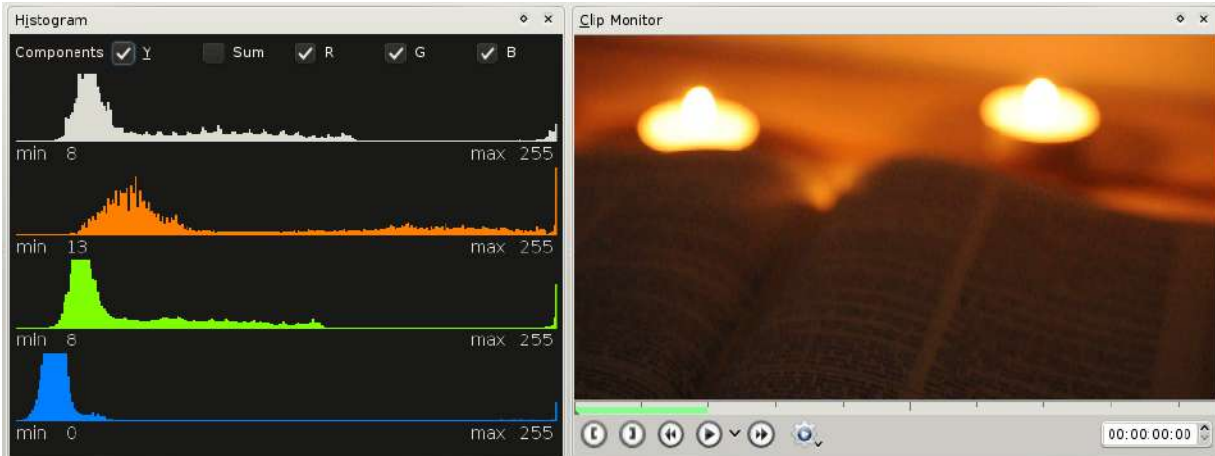
Really? Yes. Take a look at these two images.



Exactly the same Histogram. Totally different colors. (What you can do is guessing the color tone; see below.) But what is the histogram good for now?

To answer this question, I would like to point an article from the «Cambridge in Colour»: [Understanding Digital Camera Histograms: Tones and Contrast](https://www.cambridgeincolour.com/tutorials/histograms1.htm) [https://www.cambridgeincolour.com/tutorials/histograms1.htm] and the second part [Luminance & Color](https://www.cambridgeincolour.com/tutorials/histograms2.htm) [https://www.cambridgeincolour.com/tutorials/histograms2.htm]. Although written for digital photo cameras, exactly the same applies for digital video cameras. Both articles are easy to read and understand (and may also be of interest for experienced users).

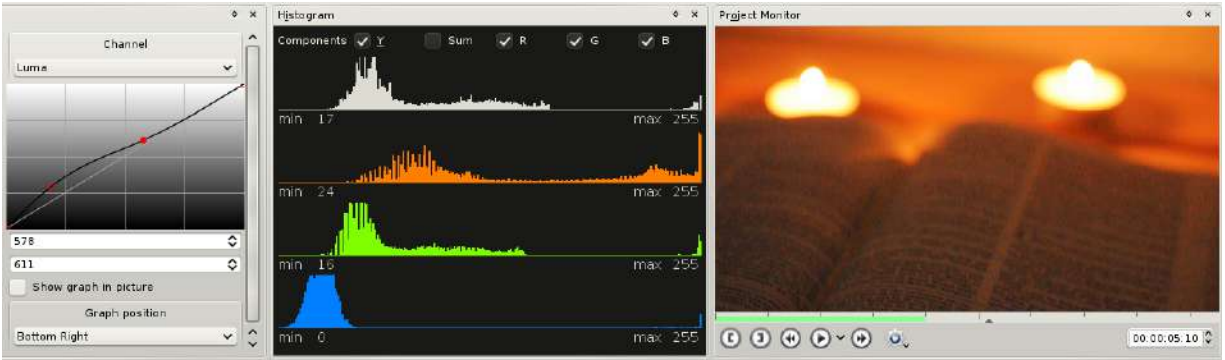
Histogram example: Candlelight



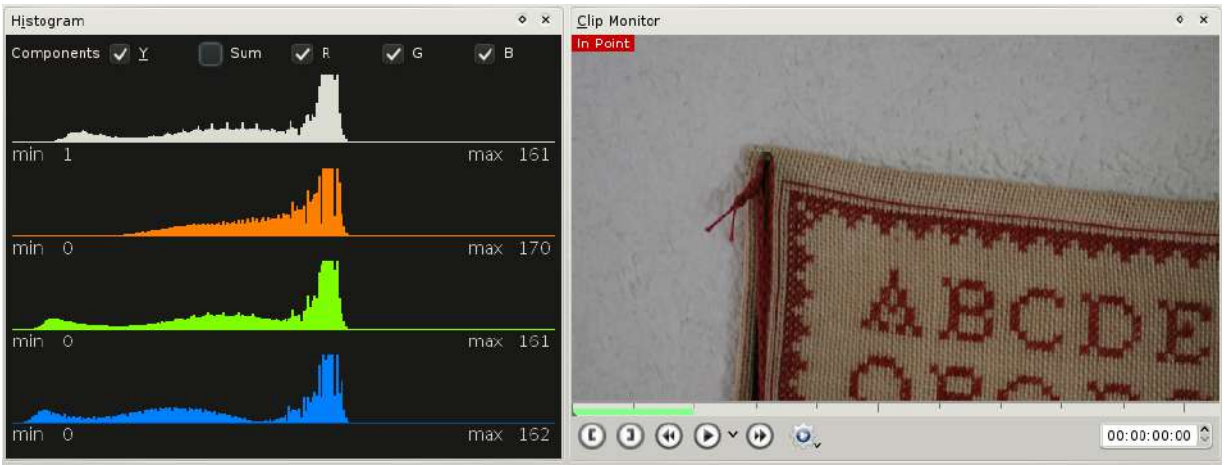
Two special things about this histogram.

- Most pixels are dark, according to the Luma component (white). Though there is no total black: Notice that the Luma component shows «min: 8». Nevertheless, the blue component does reach 0. This means that the darkest pixels are still slightly orange and didn't lose all color information yet.
- There is quite some clipping. A lot of R values are sticking at the very right, at 255. Having a peak at 255 usually means that we lost information because some regions were too bright for the camera sensor with the current sensitivity settings. This could have been solved by lowering the sensitivity, but then the book and nearly everything else would be black. In this case the candles cause the clipping. (Not too bad here, because the lost detail isn't important for the image.)

The RGB components also show very well that the shadows are not neutral grey but orange, otherwise the color heaps on the left would, as in the gradient histogram above, have their center at the same position. There isn't a lot to correct here, what could be done is raising the shadows with a Curves effect, but this is a matter of taste and the intended mood for the final movie.



Histogram example: Underexposed ABC



We immediately notice two things:

- The RGB peaks are at the same position, near the middle. The white wall is the brightest part, so this peaks are from the white wall. As they are not shifted, the white balance should be okay (the image confirms that). Note that the Histogram is not very accurate for white balance. Later I will introduce a much more accurate scope.
- The image is too dark. The brightest component, red, only reaches a value of 170. The white wall is actually grey.

Monitoring correct exposure is the Histogram's strength! The exposure can be corrected with curves as well, but this time I will use the *Levels effect*.



I've lowered the Input white level of the Luma channel until one of the RGB components reached 255. Lowering the input white level further would cause clipping on the wall and lost image information. (Which may be desired in certain circumstances!)

This process is called *Stretching* of the tonal range.

Histogram options

In kdenlive 0.7.8 the histogram can be adjusted as follows:

- Components – They can be enabled individually. For example, you might only want to see the Luma component, or you want to hide the Sum display.
 - Y or Luma is the best known Histogram. Every digital camera shows it, digikam, GIMP, etc. know it. See below how it is calculated.
 - Sum is basically a quick overview over the individual RGB channels. If it shows e.g. 5 as the minimum value, you know that none of the RGB components goes lower than 5.
 - RGB show the Histogram for the individual channels.
- Unscaled (Context menu) – Does not scale the width of the histogram (unless the widget size is smaller). Just a goodie if you want to have it 256 px wide.
- Luma mode (Context menu) – This option defines how the Luma value of a pixel is calculated. Two options are available:

- Rec. 601 uses the formula $Y' = 0.299 R' + 0.587 G' + 0.114 B'$
- Rec. 709 uses $Y' = 0.2126 R' + 0.7152 G' + 0.0722 B'$

Most of the time you will want to use Rec. 709 which is, as far as I know, mostly used in digital video today.

Sample files

The sample files used above can be downloaded here:

- [Histogram-bw.png](http://granjow.net/uploads/kdenlive/samples/Histogram-bw.png) [http://granjow.net/uploads/kdenlive/samples/Histogram-bw.png]
- [Histogram-col.png](http://granjow.net/uploads/kdenlive/samples/Histogram-col.png) [http://granjow.net/uploads/kdenlive/samples/Histogram-col.png]
- [abc-underexposed.avi](http://granjow.net/uploads/kdenlive/samples/abc-underexposed.avi) [http://granjow.net/uploads/kdenlive/samples/abc-underexposed.avi] (26 MB; 720/24p)
- [candlelight.avi](http://granjow.net/uploads/kdenlive/samples/candlelight.avi) [http://granjow.net/uploads/kdenlive/samples/candlelight.avi] (14 MB; 720/24p)

Summary



The Histogram is a great tool for exposure correction, together with the Curves and the Levels effects. It helps to avoid clipping (burned out areas) and crushed blacks (the opposite) when applying effects.

Thanks for reading! Continue with the [Waveform and the RGB Parade](#).

Please drop your comments below.

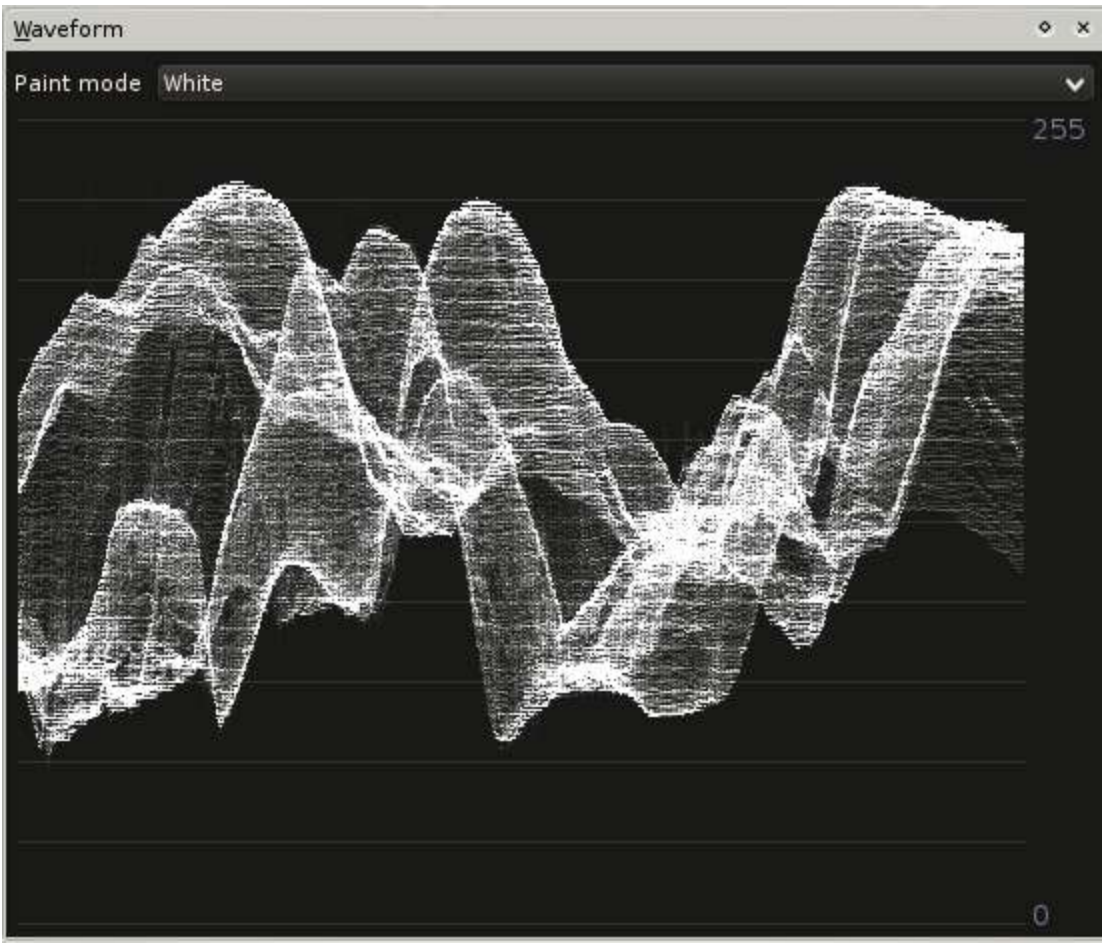
Simon A. Eugster (Granjow)

The Waveform and The RGB Parade

Submitted by Granjow on Tue, 09/14/2010 - 15:01

In my previous post I've [introduced the Histogram](#) that will be available in kdenlive 0.7.8.

Next in the list of the Color Scopes I added are two closely related scopes: **Waveform** and **RGB Parade**. Both of them do the same, Waveform for Luma, RGB Parade for the RGB components. Therefore I will not always explicitly point out that properties hold for both scopes and speak of Waveform only.



How the Waveform works

The Waveform is kind of a 3D Histogram.

Yeah.

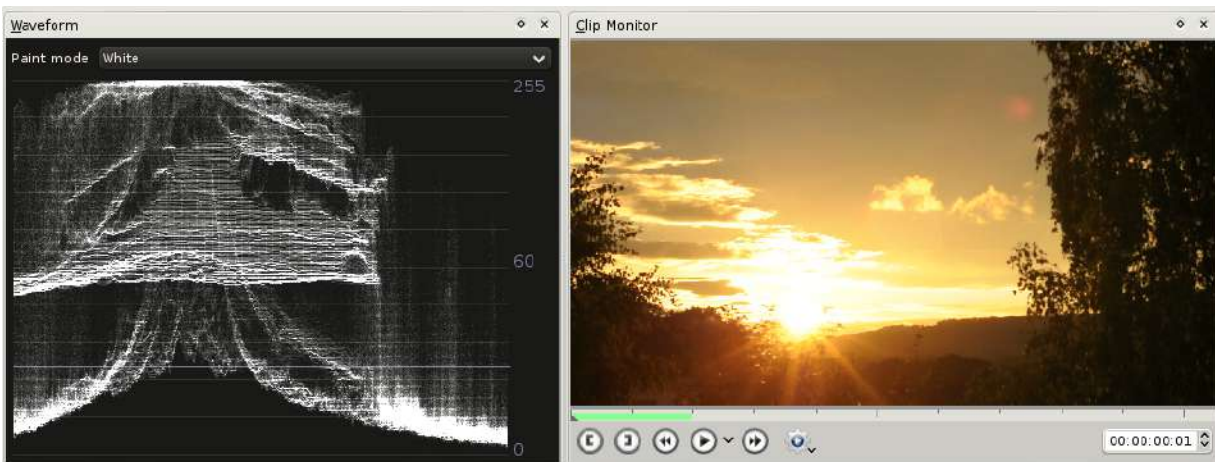
That's nothing to do with the fact that the above image looks kind of 3D. So where are the three dimensions?

1. The most obvious dimension is Luma; Dark pixels are at the bottom, bright ones are at the top. So if all pixels in the Waveform stick at the very top, your video is most likely white.
2. The second dimension is the horizontal position of the pixel in the original image. That's one of the things that makes the Waveform cool. Pixels in the first column of your input video will also be painted in the

first column of the Waveform. This goes on until the scope reaches the last column of the input video, which will be painted in the last column of the Waveform.

3. The third dimension is the brightness of a pixel in the Waveform. The brighter a point there, the more pixels in this column share this specific brightness value.

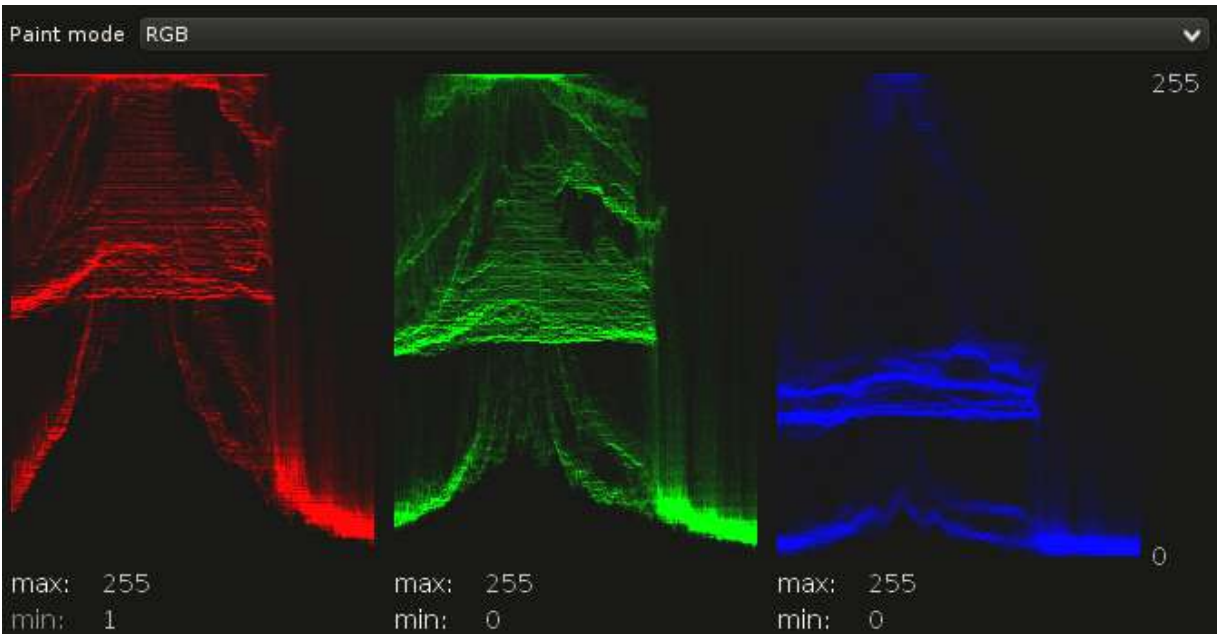
Waveform example: Sunset



The Waveform looks quite impressive here. But what can we learn about the image?

- In the left third we've got some clipping. There are some bright spots (which are the sun and the clouds).
- The last third of the image is dark, but not black (no crushing). This means that there is still a chance for color information. The image confirms that; The tree does not look neutral but green with an orange touch. Or the other way round?

That is where the RGB parade drops in now.

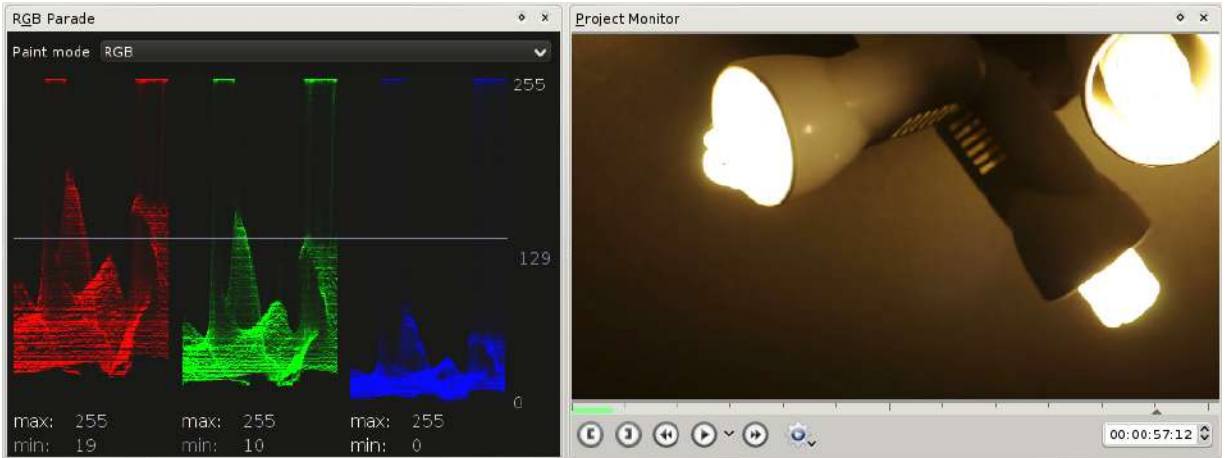


What we see is very slight crushing for blue on the tree, and more or less equal parts of red and green as well. So if you thought the tree were green, your brain fooled you. It is not. (Actually there is no green at all in the image.) Also, blue nearly doesn't clip at all, even in the sun. So it is still a little bit orange, which is great.

Now, didn't the Histogram show clipping and crushing as well? Yes, it did. But it did not show where. That is a big benefit. As in some cases, if you see that there is some clipping on a light bulb, you perhaps don't mind increasing the overall brightness of the image. It does increase clipping as seen on the Histogram, but the Waveform shows that only the light bulb is clipped a little more, which you can afford in our imaginary case.

RGB Parade example: Light Bulb

Wait ... imaginary, I said? Actually I do have a short clip with light bulbs. Which is quite interesting, not only due to the wrong white balance.

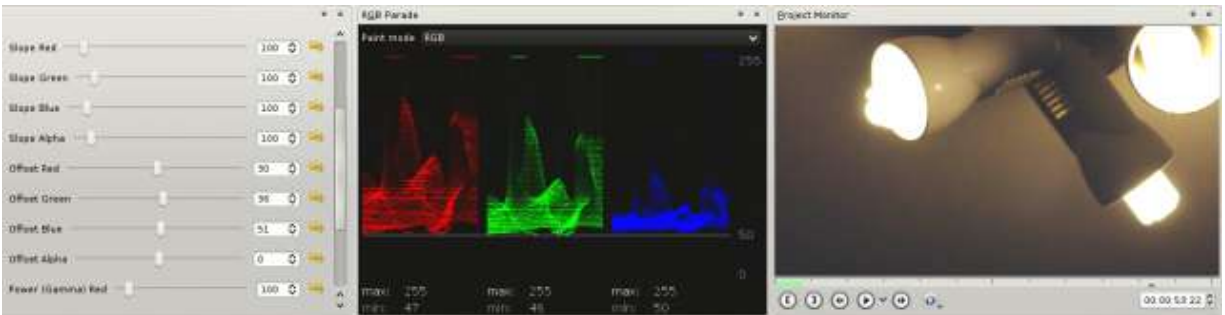


The RGB Parade reveals two things at first glance. You will at least recognize the first one as well.

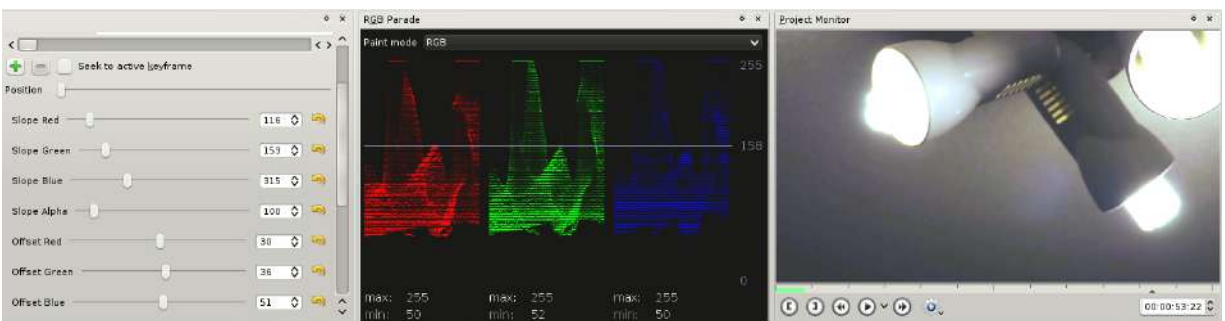
- The fluorescent lamps are clipped. All channels are at 255 there, so they are totally white.
- The white balance is wrong. This can be told for sure. The ceiling is white in reality. And in the very left quarter of the image there only consists of the ceiling. This part should look equal in the RGB Parade, but when e.g. comparing Red to Blue, you see that Red starts at 19 whileas Blue starts at 0. Furthermore, the Blue channel is much more compressed. Its height in this area is 25, whileas the height of the Red channel is about 50.

To achieve proper white balance here, we make use of a new effect called SOP/Sat (if you want to know more about it: It implements the [ASC Color Decision List](https://en.wikipedia.org/wiki/ASC_CD_L) [https://en.wikipedia.org/wiki/ASC_CD_L]. More to read also in the [source code comments](https://github.com/dyne/frei0r/blob/master/src/filter/sopsat/sopsat.cpp) [https://github.com/dyne/frei0r/blob/master/src/filter/sopsat/sopsat.cpp] of the effect.) Curves would work as well (actually curves could do everything), but let's use a new effect here.

The first thing to decide is how bright the darkest spot should be. This can be controlled with the Offset parameter. Reference is again the left part of the Parades, the soon-to-be white ceiling. You can use your mouse to make the Waveform or RGB Parade draw a horizontal line and display the value there. I lifted all channels to 48 in this example:



Second step is Stretching the channels. This is done with the Slope sliders. The goal is again to find a neutral spot in the RGB Parade and use it as reference. We could again use the ceiling on the left, but after some testing I found out that the little wave in the middle of the scope works as well. Its advantage is that it is slightly brighter than the ceiling, allowing to correct the color cast more precisely.



And voilà, exposure and white balance are corrected.

When taking a look at the full-sized image (or when trying it yourself with the sample clip available for download at the end of this article) you will notice color waves in the image. This is the result of the stretching; We have blown up the ceiling on the left from 25 px height to nearly 100 px. If the clip had been exposed and white balanced correctly when shooting, we would have 100 distinct values there, but now there are only 25 different blue levels, causing these steps. Also in the histogram the image looks torn apart. (Another reason might be the high compression of the Nikon D90 clips.) This effect is called [Posterization](https://www.cambridgeincolour.com/tutorials/posterization.htm) [https://www.cambridgeincolour.com/tutorials/posterization.htm].

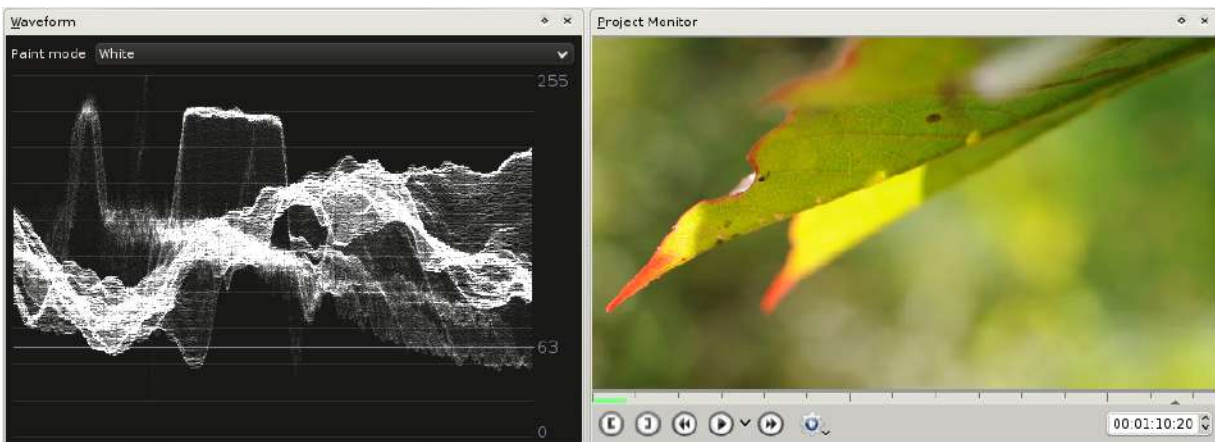
This is one of the reasons why more expensive cameras (and with that I mean *really* expensive ones, like the [RED One](https://en.wikipedia.org/wiki/Red_Digital_Cinema) [https://en.wikipedia.org/wiki/Red_Digital_Cinema], to name an extreme example) record

videos in higher [bit depth](https://www.cambridgeincolour.com/tutorials/bit-depth.htm). Perhaps all clips you'll ever encounter only store 8 bits per channel, so there are $2^8 = 256$ possible values for each channel. Having for example 10 bits per channel would already result in $2^{10} = 1024$ possible values. This would already have solved our problem.

But before you buy a RED one now – kdenlive does not support more than 8 bit yet.

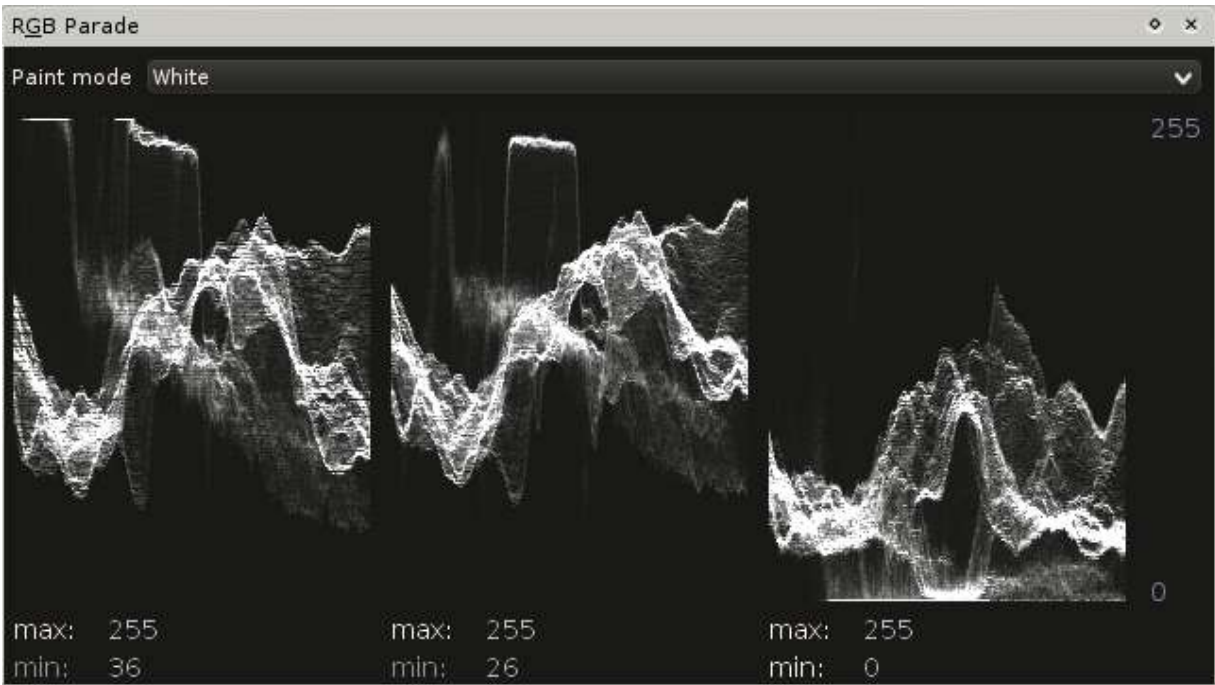
Where you already can play with more than 8 bits per channel are [RAW](https://www.cambridgeincolour.com/tutorials/RAW-file-format.htm) images from DSLR cameras. Supported by [digikam](https://www.digikam.org/), [RawTherapee](http://www.rawtherapee.com/), and several more.

Waveform example: Leaf with hidden clipping



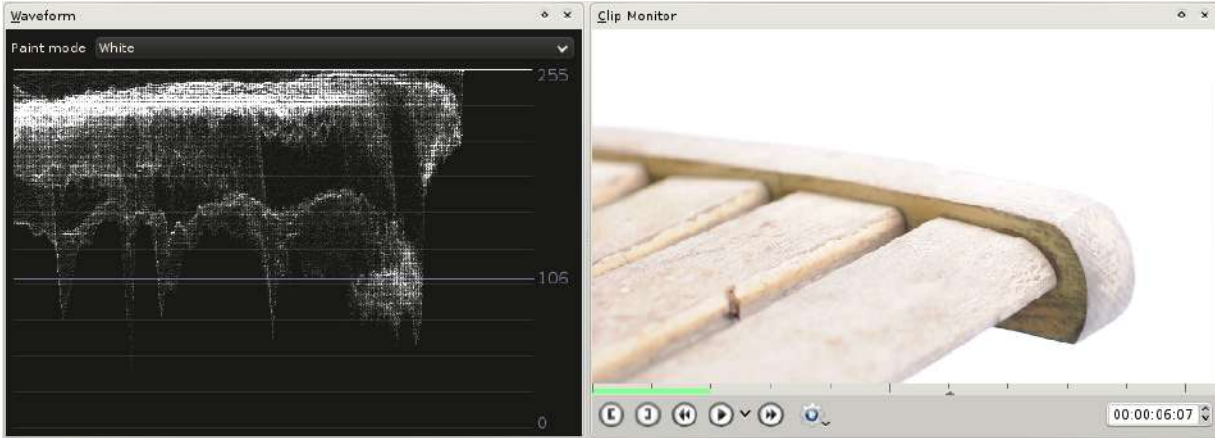
Looks perfect. Good exposure (says the eye and the Waveform), beautiful colors.

Nevertheless, there is some clipping. It is just hidden by the Luma calculation: For Luma, only pixels that are totally white are at the top of the Waveform.



Although the green leaf looks much brighter than the red tip, it is the Red channel which clips at the tips. The thing is that our eyes are most sensitive to Green, less to Red, and even less to Blue. That is also the reason why the beam of a green laser is visible in the night sky, but a red one is not (unless you've got a really strong one.)

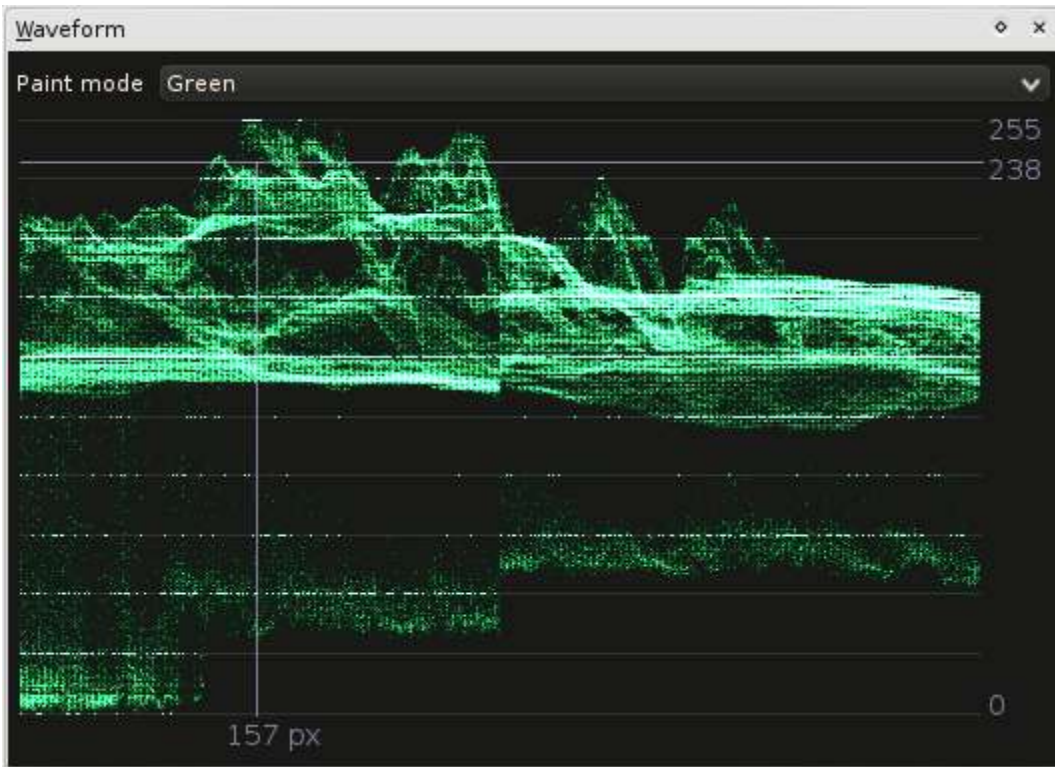
Waveform example: High Key clip



This is a classical [High Key](https://www.diyphotography.net/lighting-high-key-and-low-key/) shot. Bright subject (but not clipped yet), white background.

Waveform options

- *Paint Mode* – Changes the paint mode for the Waveform. Usually changes its brightness as well. Green also highlights pixels with values 0 or 255.
- *Luma mode* (Context menu) – As for the Histogram you can choose how to calculate Luma (Rec.601 or Rec.709).



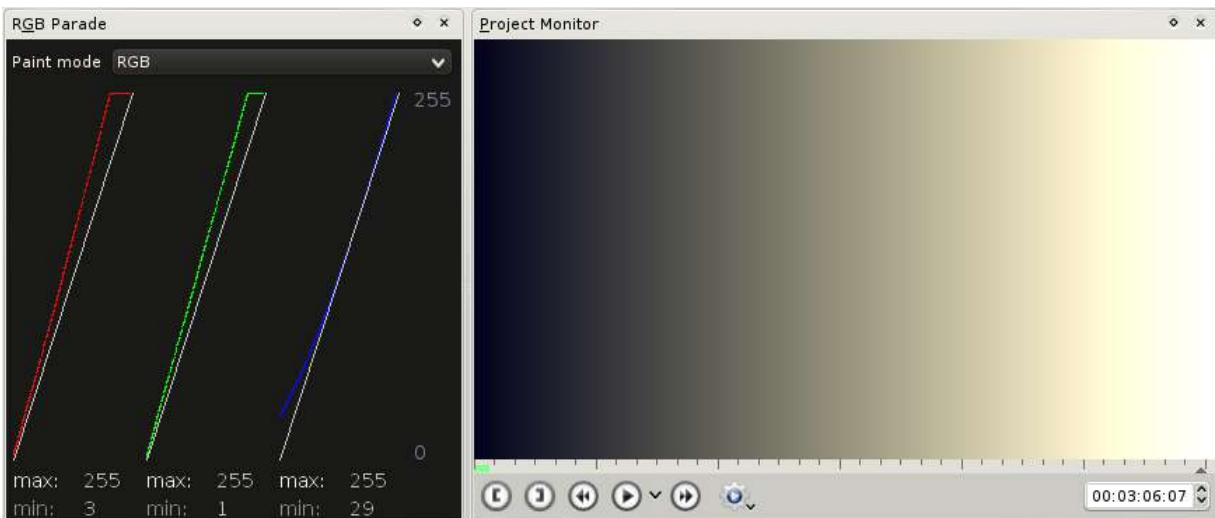
Interesting detail: When color grading, some colorists prefer scopes with neutral colors, and basically with neutral everything. Just greyscale, except for the video itself. Why that? Quick answer: [Afterimages](https://en.wikipedia.org/wiki/Afterimage) [https://en.wikipedia.org/wiki/Afterimage]. If you look at a green surface and then immediately color grade an image by eye, there will be too much green in it.

RGB Parade options

- *Paint Mode* – Changes the paint mode; see above.
- *Draw Axis* (Context menu) – Draws an axis with 10 steps

- *Gradient reference line* (Context menu) – Draws a line from bottom left to top right. This is useful when testing color correction on a linear gradient clip (Black on the left, White on the right), to observe changes in each channels.

To explain the last point a little more in detail: A black/white gradient draws a line from the bottom left to top right on the Waveform. When changing the colors, e.g. with the SOP/Sat filter or with Curves, the line will change. (Attention, effects working on the saturation will not have any effect on a grayscale gradient!)



In this gradient above I have applied a SOP/Sat effect to give the blacks a blueish touch and the mids and highs a warm touch. You can play around with the gradient file and some color correction effects on the gradient file as well. What the above is good for will be in the next part.

Clip Sources

- [windy-sunset.avi](http://granjow.net/uploads/kdenlive/samples/windy-sunset.avi) [http://granjow.net/uploads/kdenlive/samples/windy-sunset.avi] (22 MB; 720/24p)
- [fluorescent-wrong-whitebalance.avi](http://granjow.net/uploads/kdenlive/samples/fluorescent-wrong-whitebalance.avi) [http://granjow.net/uploads/kdenlive/samples/fluorescent-wrong-whitebalance.avi] (22 MB; 720/24p)

- [red-leaf-tips.avi](http://granjow.net/uploads/kdenlive/samples/red-leaf-tips.avi) [http://granjow.net/uploads/kdenlive/samples/red-leaf-tips.avi] (13.5 MB; 720/24p)
- [highkey.avi](http://granjow.net/uploads/kdenlive/samples/highkey.avi) [http://granjow.net/uploads/kdenlive/samples/highkey.avi] (13 MB; 720/24p)
- [Gradient_1080.png](http://granjow.net/uploads/kdenlive/samples/Gradient_1080.png) [http://granjow.net/uploads/kdenlive/samples/Gradient_1080.png] (10 kB, 1920×1080)

Summary



Waveform and RGB Parade are mighty scopes. Especially the RGB Parade. Correcting the exposure is easy, with these scopes you can always keep track of the levels of each color component. It is also possible to do white balance by adjusting blacks first and whites afterwards because the horizontal axis in the Scopes correspond to the horizontal axis in the video which allows to detect spots that should be neutral.

Thanks for reading! Please drop your comments below.

Simon A. Eugster (Granjow)

Comments

yellow, Wed, 09/15/2010 - 16:40

Granjow, great work and write up. I see you use the ASC colour corrector. Are you considering a Lift Gamma Gain 3 way? or is this an option already, such as found in Colorista II?

Granjow, Thu, 09/16/2010 - 08:00

Thank you! Actually a 3-way color corrector was the initial goal, and when I asked Stu Maschwitz (the author of colorista) he told me about the ASC CDL. So I implemented the SOP/Sat effect first to play around with the possibilities I had using the Color Decision List only. And noticed that I couldn't just implement a 3-way now because fine-tuning the values would

require at least a tiny bit of experience. Because [everyone is doing it differently](https://digitalfilms.wordpress.com/2010/03/13/) [https://digitalfilms.wordpress.com/2010/03/13/] anyways ;)

You said Lift/Gain/Gamma. This is just another expression for Slope/Offset/Power?

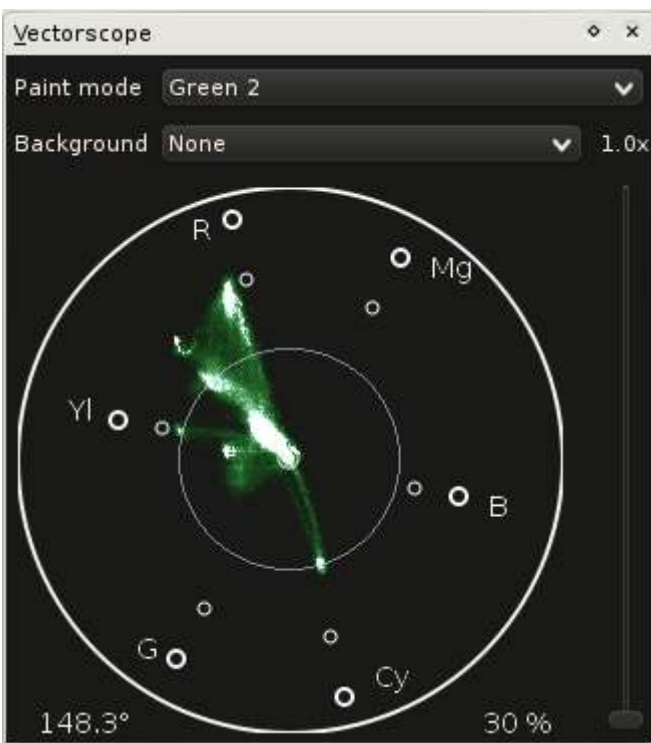
yellow, Thu, 09/16/2010 - 14:49

I believe LGG & SOP are different formulas and therefore assume apply the 'corrections' differently. But as you say so many variations of implementation anyway, even choosing one or the other.

The Vectorscope

Submitted by Granjow on Sun, 10/10/2010 - 18:30

The last scope (after the [Histogram](#) and the [Waveform and RGB Parade](#)) that is new to kdenlive 0.7.8 is the **Vectorscope**. This is actually the most interesting scope because it is quite different from the other ones and, secondly, is really useful for Color Grading.



How the Vectorscope works

There is one simple thing that makes the Vectorscope so special: It uses a color space different than RGB. That sounds unspectacular, but it is not. The previous scopes allow you to determine which brightness values exist in your image, the Vectorscope shows which colors there are.

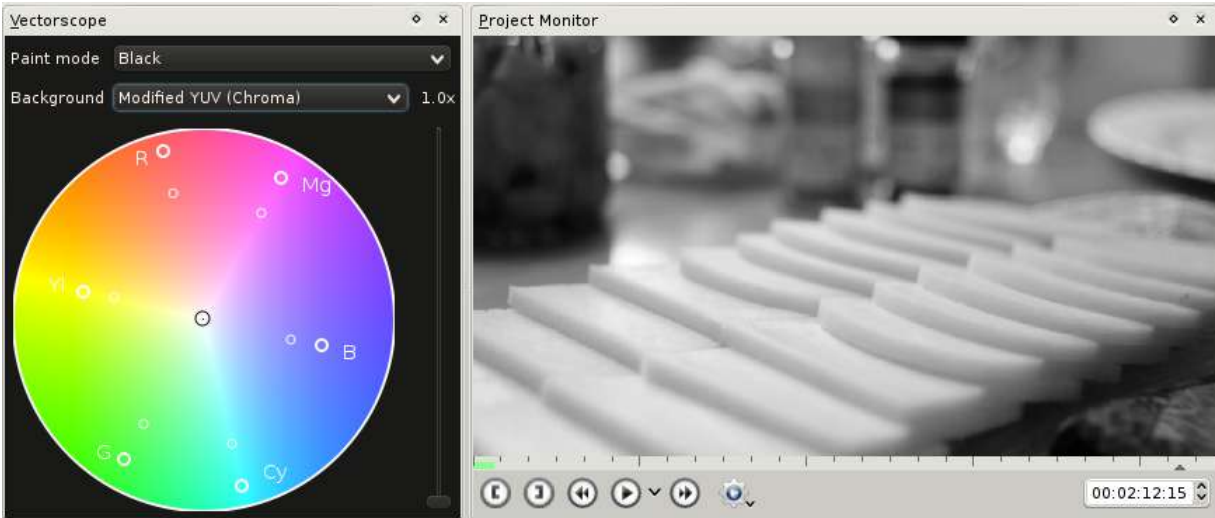
The Vectorscope supports two different color spaces: *YUV* and *YPbPr*. Both of them have the *Y* in common, something you know from before: It is the *Luma component* (Rec.601 in both cases). This, amongst others, comes from black/white TV. When Color TV was introduced, some people actually recognized that not everybody would immediately trash his old b/w TV and buy a new one, so they still sent the b/w signal, but with two additional channels: The blue difference and the red difference (to Luma), called *U* and *V*. So that is how [YUV](https://en.wikipedia.org/wiki/YUV) works (please take a look at the image in its *YUV* components on the linked Wikipedia page).

The other color space, [YPbPr](https://en.wikipedia.org/wiki/YPbPr) or its digital counterpart [YCbCr](https://en.wikipedia.org/wiki/YCbCr) respectively, are similar. If you switch between the two color models in the Vectorscope (via the context menu) you will notice that the colors are slightly shifted. *YCbCr* is used basically everywhere in digital video.

So, what the Vectorscope does: It calculates the Luma value of a pixel, then calculates the blue difference/red difference values. Then it throws the Luma value away. Why that? It is because the Vectorscope is 2-dimensional. The blue difference is on the horizontal axis, the red difference is on the vertical axis. (There actually are three-dimensional vectorscopes which put the Luma component on the third axis!)

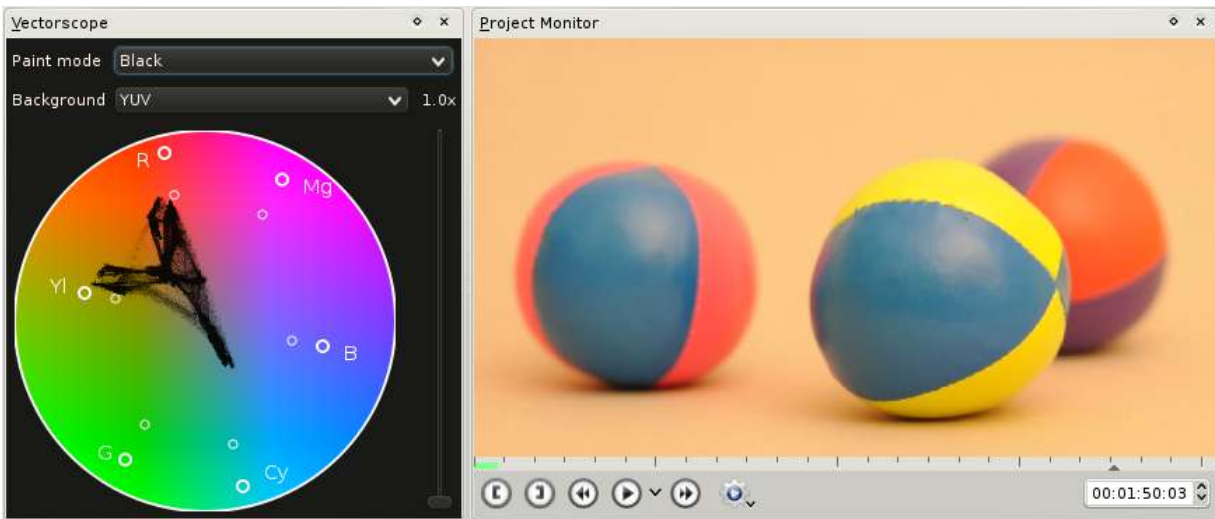
Vectorscope example: Grayscale video

Now let's take a look at how this actually looks like in a video.



Well ... nothing? Close. There is a little pixel in the middle of the scope. And that is the whole image. That looks a little disappointing now, but actually it is great. All greys (plus black and white) are exactly in the middle. Everything that is not in the middle has some color information (and the further away it is from the middle, the higher its saturation aka. chrominance). This will come in very handy when it comes to white balance.

Vectorscope example: Juggling balls



Juggling balls are more interesting, especially when they are colored. The ones above are. I've switched on a YUV background (with fixed Luma)

which helps identifying the colors of pixel heaps on the scope. Two things can be noticed:

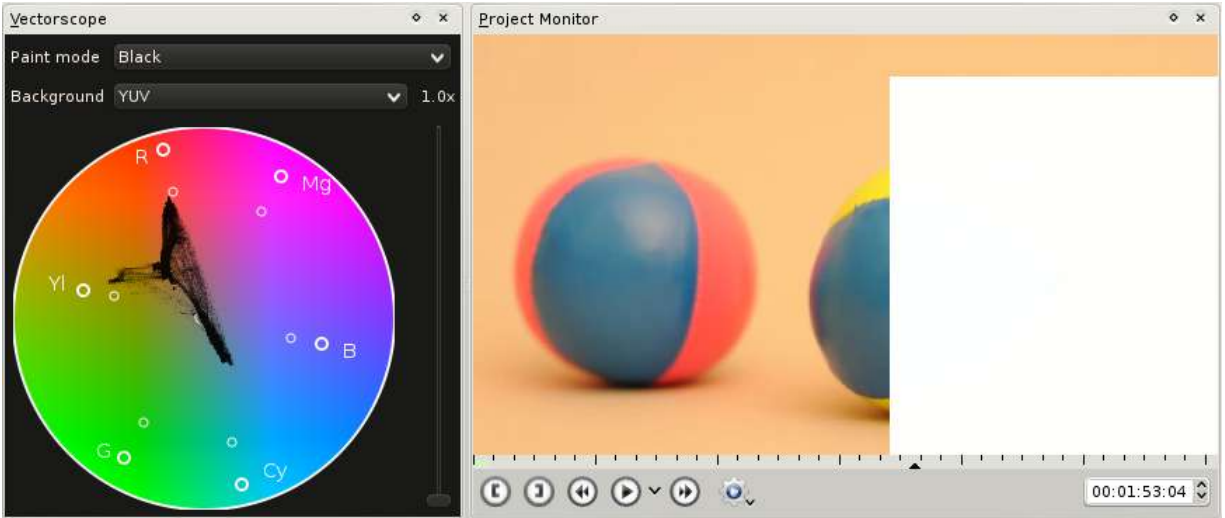
- here are six areas with high black density on the scope (which means that many pixels share this hue):
 1. One that points towards blue (bottom right),
 2. A big one around yellow,
 3. Two big ones around red,
 4. A smaller one between red and yellow,
 5. And the last one which you might have missed (I nearly did so as well), between red and blue.

These are exactly the ball's colors! Blue comes from the two balls on the left, yellow from the yellow ball, the left red area is the pink part of the left ball, the right part in red is the red ball on the right. The part between red and yellow, which is actually orange, is the background of the whole scene, and the last one between red and blue is the violet part of the right red ball.

- The orange background seems to connect all other areas. This is something really amazing. Like magic. It will help doing white balance. The neutral area will almost always seem to connect the other ones.

As the shot above is actually correctly white balanced, I will not maltreat it here. But you should actually try! Download the sample below, add a SOP/Sat effect and change the Offset parameters for the RGB values. (Don't forget to enable auto-refresh.)

Now perhaps you wonder how I could assign those spots to colors with surety. Is it really the upper spot caused by the red ball? To find out (I didn't want to write wrong things here) I have masked the red ball out (with a Title Clip I've drawn a white rectangle on). The spot then indeed disappeared.



The violet spot has disappeared as well, and also big parts of the yellow spot because the white rectangle covers the yellow ball as well.

Vectorscope example: Musical box

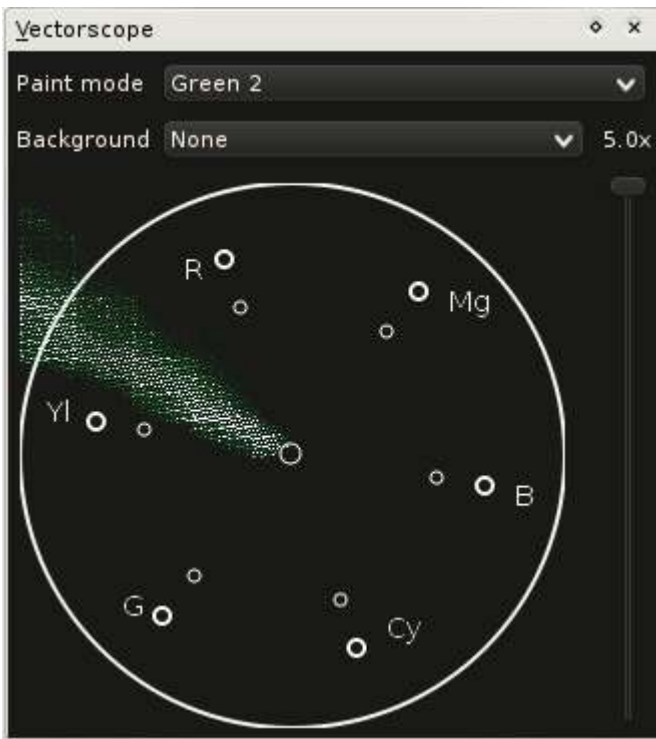


Again, two things worth pointing out for this clip.

- This shot of a Swiss Musical Box mainly consists of orange tones, all points on the vectorscope lie between neutral (center) and orange. Not too saturated orange tones as they come from the bronze/messing parts. (I guess that is what they are.)

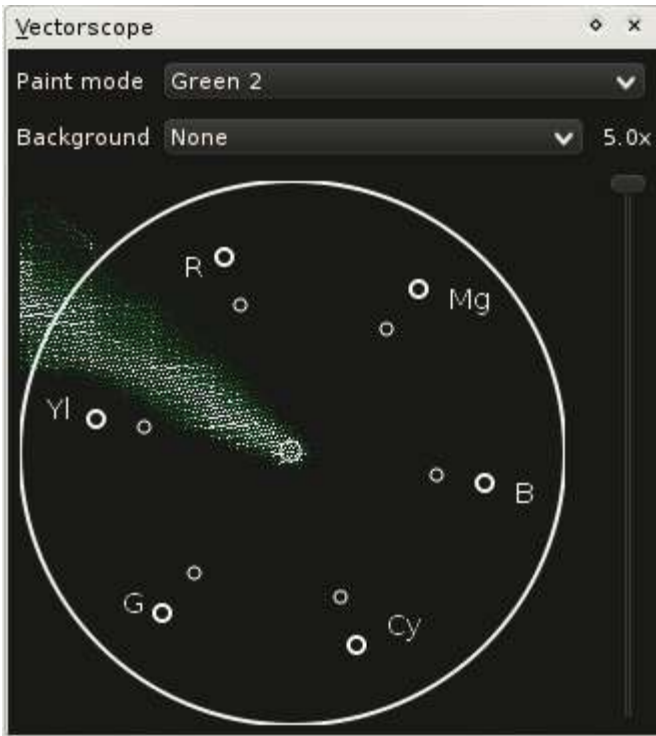
- The white balance seems to be correct. The Vectorscope indicates that there are neutral pixels (i.e. greys), and they seem to be the origin for the other colors.

But when increasing the gain of the Vectorscope to 5× we see that the scope image actually stops right before neutral.



If you open this clip and take a look at the Waveform you will notice that it shows the same: Blue is too low, red is too high. To correct this minor color cast we can use the SOP/Sat effect again, adjusting the Offset values. By doing that the points on the Vectorscoped will be shifted around. A positive red offset will make the points shift towards red at the top, a negative offset shifts them towards the opposite direction (that is, towards the [complementary color](#)

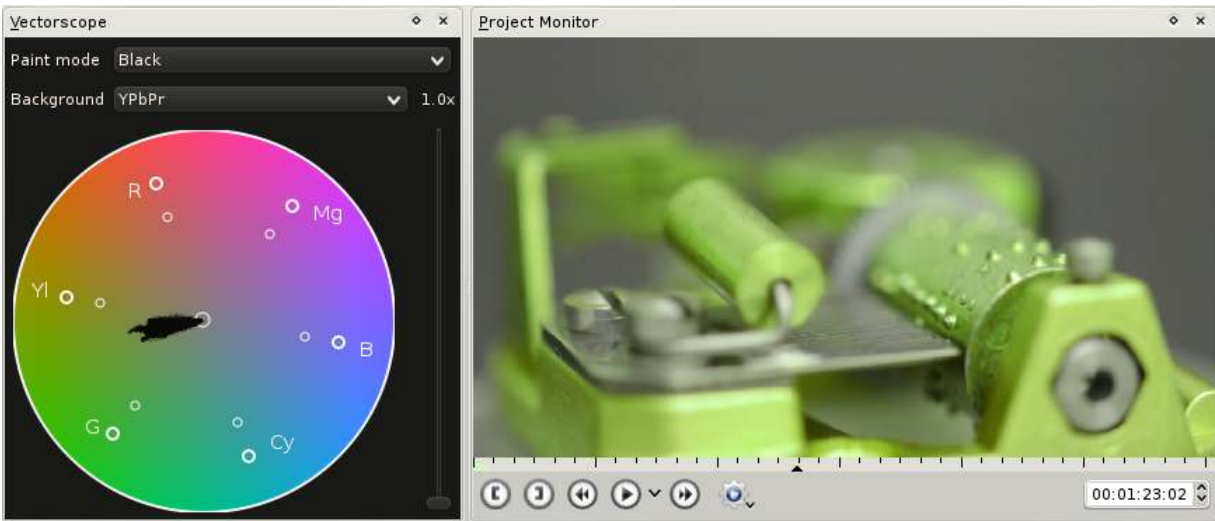
[<https://web.archive.org/web/20160318213205/http://www.tigercolor.com/color-lab/color-theory/color-theory-intro.htm#complementary>] of red, cyan).



I adjusted the blue and red values such that there is some padding around the neutral center. It is usually not enough to just let the first pixel hit the neutral point because several factors like the material of the neutral object itself, chromatic aberration (there is also a more accurate [article about chromatic aberration](http://toothwalker.org/optics/chromatic.html)

[<https://web.archive.org/web/20160318204109/http://toothwalker.org/optics/chromatic.html>]) in lenses, artifacts in the recorded video file. So usually neutral areas will not share one single pixel in the vectorscope but have a certain diameter. Therefore the padding.

Because this is a suitable clip for hue:



Now what happened here? The hue has changed, and the points on the scope look like rotated by 30 degrees. And indeed they did rotate. The Hueshift effect changes the hue of all colors by a certain (configurable ;) amount. In the Vectorscope this becomes visible as a rotation around the center of the scope.

Similarly, when changing the saturation/chroma, the dots on the vectorscope will move closer to the center or further away from it.

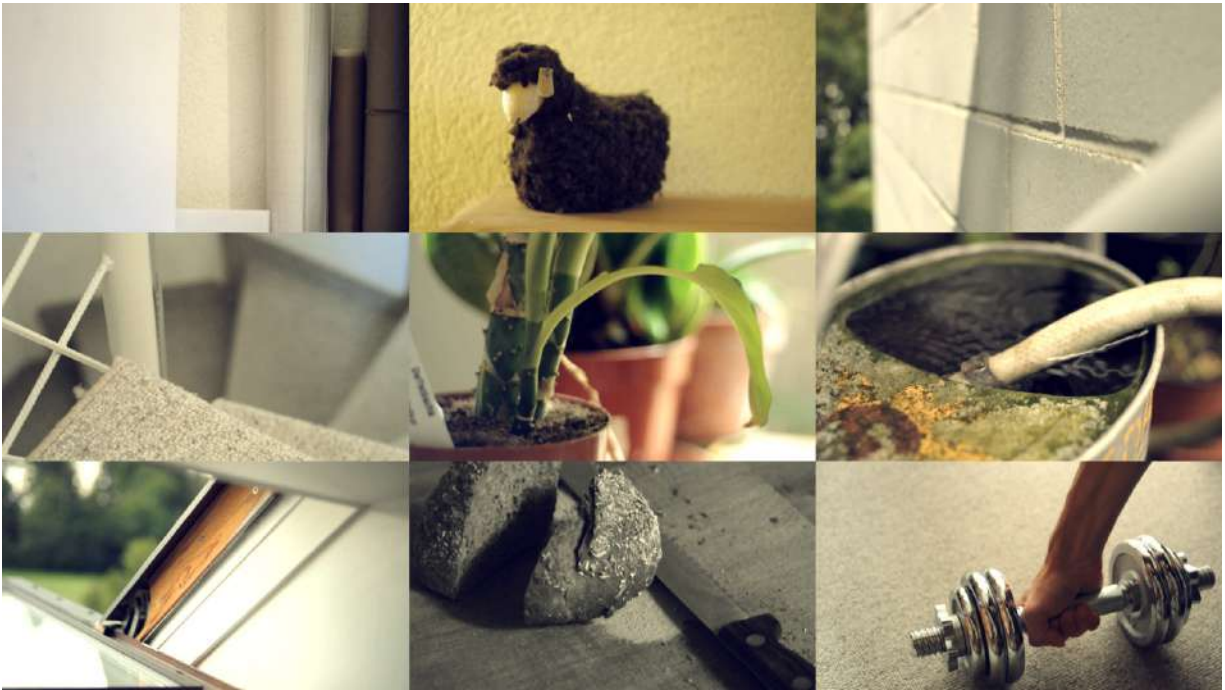
Creating a look for your video

In the Histogram article's introduction I mentioned creating looks with color correction. This example covers part of the tip of the iceberg of this topic. (The tip is the most important part of an iceberg because it tells you where you can drive safely ;))

What is special about creating a look for a video? Let's take a look at some random clips:



Mostly different content and therefore different colors – as said: random. One point of Color Grading is to give single clips a connection. This is not limited to white balance only. White balancing a clip is about removing color casts (which is a good thing because it gives you a neutral starting point). But we can also add new colors.



These clips look much more like if they belonged together. This is the result of Primary Color Correction (Primary means that it affects the whole image; Secondary Color Correction would only affect parts of it, e.g. by using masks, choosing color ranges, etc.): White balance (plus in some cases reduction of saturation) followed by a SOP/Sat effect. The latter SOP/Sat effect does something similar as the Blockbuster Effect; here the blacks become blueish, the mids and the whites tend towards yellow.

See also [this page](#)

[http://www.kenstone.net/fcp_homepage/fcp_7_scopes_vectorscope_stone.html] for some hints about Looks and the Vectorscope.

Vectorscope options

In kdenlive 0.7.8 you can adjust the Vectorscope as follows by right-clicking it:

- *Export Background* – Exports a color plane of the desired color space. This is a goodie for interested people like me ;) It allows to export RGB, YUV and YCbCr planes (like the ones you see when visiting the Wikipedia articles about this color spaces).
- *75 % Box* – Marks the position where color saturation reaches 75 % of its maximum value. This may be interesting if you work for broadcast. Colors exceeding this box were not regarded as [broadcast safe](#) [<https://en.wikipedia.org/wiki/Vectorscope#Video>] – but before changing the saturation to a max of 75 % better consult your broadcast company ;)
- *Draw axis* – Draws the U/Pb (horizontal) and V/Cr (vertical) axis.
- *YUV and YPbPr* – Switches between the two color spaces YUV and YPbPr.

Clip Sources

- [raclette-greyscale.avi](#) [<http://granjow.net/uploads/kdenlive/samples/raclette-greyscale.avi>] (720/24p, 12 MB)
- [juggling-balls.avi](#) [<http://granjow.net/uploads/kdenlive/samples/juggling-balls.avi>] (720/24p, 11 MB)

- [Musical-box.avi](http://granjow.net/uploads/kdenlive/samples/Musical-box.avi) [http://granjow.net/uploads/kdenlive/samples/Musical-box.avi] (720/24p, 23 MB. Video from Nikon D90, Audio from Zoom H4n.)

Summary

The Vectorscope shows the hue and saturation distribution in a way we can understand without problems. This is useful for quickly recognizing color casts, but also helps judging the color distribution of a clip and match it to others.

All scopes together fulfill another important task: They help matching video from different light situations and different input sources (like a second camera) regarding brightness and color. This is what you need Test Charts as e.g. seen [here](https://web.archive.org/web/20141006190923/http://www.image-engineering.de/index.php?option=com_content&view=article&id=370:the-universal-test-target-utt-a-new-approach&catid=1:latest-news&Itemid=97) [https://web.archive.org/web/20141006190923/http://www.image-engineering.de/index.php?option=com_content&view=article&id=370:the-universal-test-target-utt-a-new-approach&catid=1:latest-news&Itemid=97] for. Different cameras might have a different dynamic range and different colors. So when combining these shots you first shoot a test chart and then [match exposure and color](https://web.archive.org/web/20141010162133/http://www.hdcinematics.com/chapters/chapter2.html) [https://web.archive.org/web/20141010162133/http://www.hdcinematics.com/chapters/chapter2.html]. This is also widely covered in the book [Color Correction for Video](https://www.amazon.de/s?k=0240810783%2C+9780240810782&link_code=qs&sourceid=Mozilla-search&tag=firefox-de-21) [https://www.amazon.de/s?k=0240810783%2C+9780240810782&link_code=qs&sourceid=Mozilla-search&tag=firefox-de-21] by Steve Hullfish and Jamie Fowler.



So — have fun with the scopes! May they guide you through your color grading.

Thanks for reading!

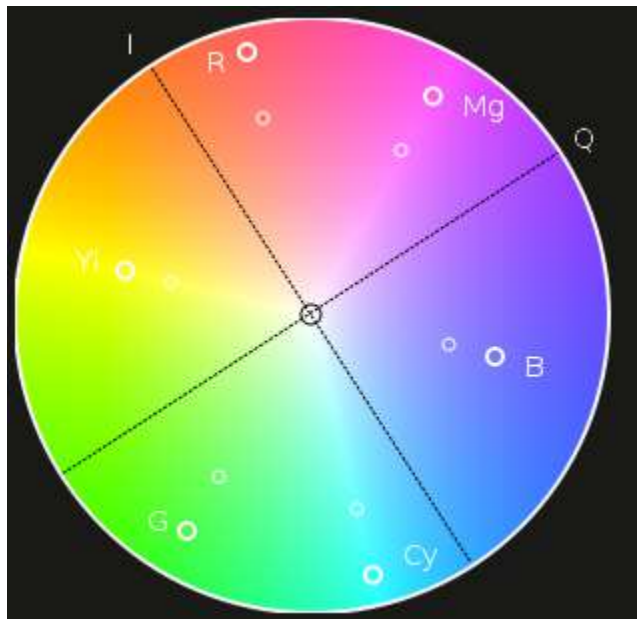
Please drop your comments below.

Simon A. Eugster (Granjow)

What the I and the Q lines are good for

Submitted by Granjow on Fri, 11/26/2010 - 18:05

In the next kdenlive version (or in the current SVN version, if you dare compile it yourself :)) you will find a new option for the vectorscope: To draw I/Q lines. What are they good for?



Where I/Q lines come from

You may remember from my blog post about the Vectorscope (see above) that the Vectorscope uses a color space different than RGB. In the image above it is [YUV](https://en.wikipedia.org/wiki/YUV), in the image below it is [YPbPr](https://en.wikipedia.org/wiki/YPbPr). They both share the property that the Y component represents Luma only (i.e. how bright a pixel is), and the other two components represent Chroma (colour) by expressing deviations from neutral color on the red-green and yellow-blue axis. (These are complementary colours each, so mixing them in equal parts results in neutral again – which is why they can be used for the deviation.)

YUV is the standard color space for analog PAL television. NTSC, the american analog TV standard, uses a color space I did not mention yet: [YIQ](https://en.wikipedia.org/wiki/YIQ). The special thing about this color space is that the I component was chosen such that skin tones (also known as flesh tones) lie on the I line (orange-blue), and it was given more than four times as much

bandwidth as the Q component (which represents the green-purple line; the human eye is also less sensitive for changes on this line).



The Purpose of the I and the Q line

You might have guessed it already: The reason for displaying the Q and, especially, the I line is to help with skin tones. There is a rule of thumb in post production saying that all skin tones should approximately lie on the I line. If it is not, you might want to [color-correct your clip](#)

[<https://prolost.com/blog/2008/3/23/save-our-skins.html>].

Why? If skin tones do not lie on the I line, they are likely to look unnatural. Our eye is trained on skin tones ;) End of the story.

Clip sources

Only one this time.

- skin1.avi (720p, 5.1 MB)

That's it! Thanks for reading.

Feel free to post your comments below.

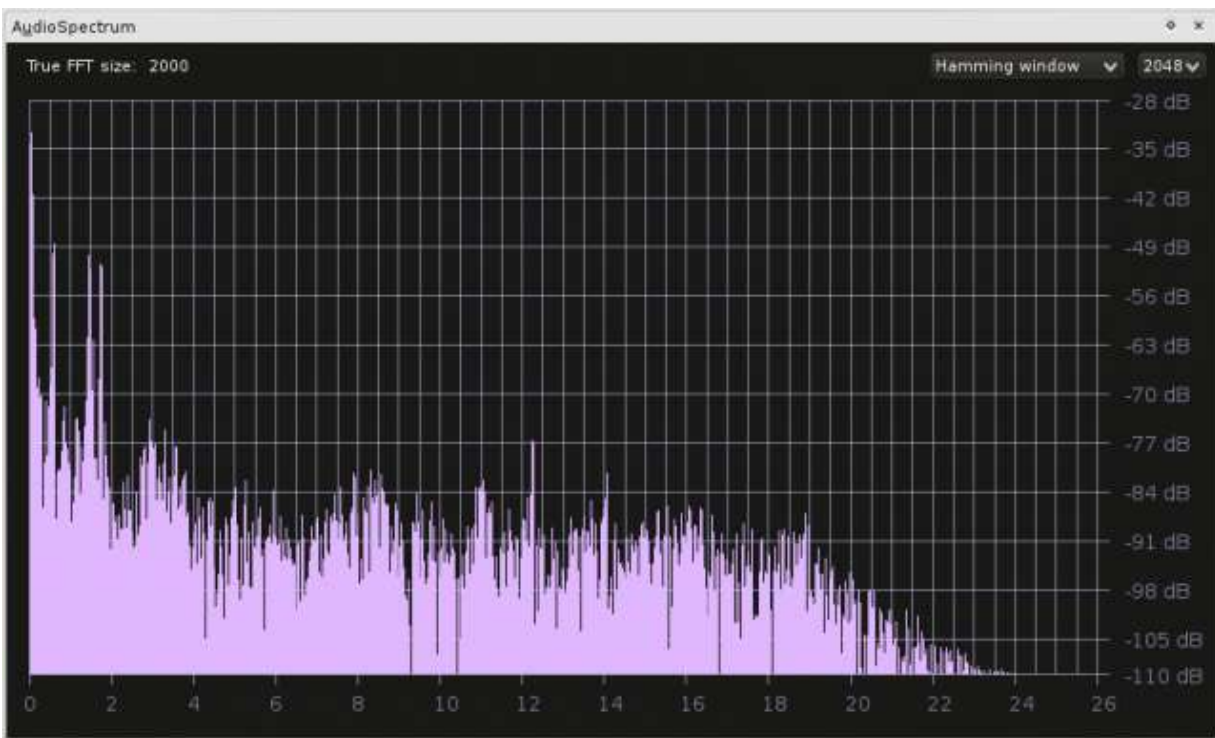
Simon A. Eugster (Granjow)



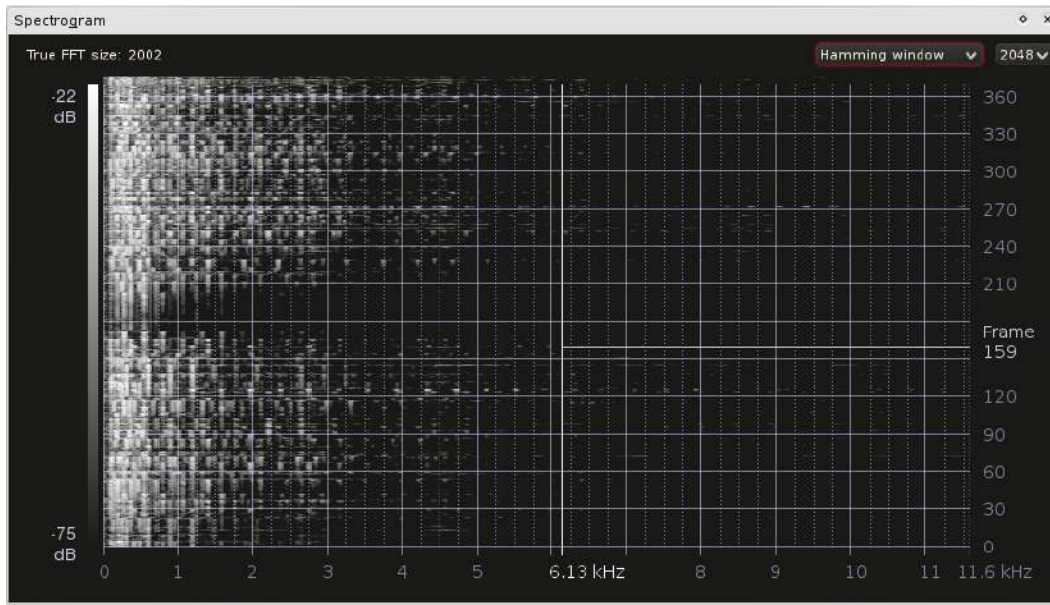
The Audio Spectrum and the Spectrogram

Submitted by Granjow on Sat, 12/25/2010 - 12:51

In the next version of Kdenlive you will again find new scopes. This time not for video but for audio! I will also give some tips about audio in general (recording, perception, etc.), not only about kdenlive's scopes.



First of all, the scopes



Spectrogram screenshot

The audio scopes are documented in-depth in [Audio Scopes for kdenlive \(PDF\)](http://granjow.net/uploads/kdenlive/kdenlive-audioscopes.pdf) [http://granjow.net/uploads/kdenlive/kdenlive-audioscopes.pdf]. You may skip the technical/mathematical part — it is not necessary for understanding the scope, and the maths behind is not very trivial. The rest might be interesting though.

Nevertheless, a quick overview over the features currently available.

Audio Spectrum

This scope displays the frequency spectrum for each frame. Low frequencies are on the left, high frequencies on the right. And the higher the bar, the louder this frequency.

Loudness is measured in [decibel](https://en.wikipedia.org/wiki/Decibel) [https://en.wikipedia.org/wiki/Decibel] in the spectrum. (To be very precise, the unit used in the scope is [dbFS](https://en.wikipedia.org/wiki/DBFS) [https://en.wikipedia.org/wiki/DBFS], so 0 dB refers to the maximum possible loudness that can be achieved with the digital input signal.) If all frequencies have equal loudness, you can adjust the range to display by dragging vertically. Simply dragging adjusts the lower threshold, `Shift + drag` adjusts the

maximum loudness to display. Horizontal dragging adjusts the maximum frequency to display samples for.

But what is this display useful for? One thing is that, as described in the PDF linked at the top, you can visually distinguish between good and bad sound quality: If there are no frequencies higher than, like, 3 kHz, then the audio quality most likely is not too good.

(If you have no clue how high 3 kHz are, which is nothing unusual since our ears do not deliver numerical values to our brain, you can use a program like [SignalGen](https://arachnoid.com/SignalGen/index.html) [https://arachnoid.com/SignalGen/index.html] or [Audacity](https://www.audacityteam.org/) [https://www.audacityteam.org/] to generate a sine wave with 3 kHz (which is 3000 Hz).)

Something else the frequency spectrum is useful for is to avoid [clipping](https://en.wikipedia.org/wiki/Clipping_(signal_processing)) [https://en.wikipedia.org/wiki/Clipping_(signal_processing)]. The same effect that can be seen with colors, e.g. in the [RGB parade](#), and actually with every signal that is digitalized. More about this below.

Spectrogram

The [Spectrogram](https://en.wikipedia.org/wiki/Spectrogram) [https://en.wikipedia.org/wiki/Spectrogram] does the same as the Audio Spectrum: It shows the frequency distribution. With the difference though that the frequencies are not shown for one frame only. Similar to the RGB Parade for colors are stronger (louder) frequencies represented by brighter pixels; this allows to put a whole frame's spectrum in one line.

What the scopes might help in as well

To maintain equal loudness over multiple shots. Consider [this review](https://www.youtube.com/watch?app=desktop&v=ZWXU3mScCzM) [https://www.youtube.com/watch?app=desktop&v=ZWXU3mScCzM] about the Nikon D7000, and listen at 7:00 and 11:00. At 7:00 you can hear the reviewer loud and clear, at 11:00 you need to turn up the volume to even understand something. This should not happen.

Sound

Now a few interesting details about sound.

Clipping



Audio levels on a Zoom H4n

As mentioned above sound can clip as well. Everyone has heard this already. This is how it sounds (Extracts from James Edwards' Greensleeves, cc-nc-by-sa, link at the end of this article):

- [Original](http://granjow.net/uploads/kdenlive/samples/James-Edwards-Greensleeves-original.ogg) [http://granjow.net/uploads/kdenlive/samples/James-Edwards-Greensleeves-original.ogg] (Just noticed that Firefox plays .ogg natively :))
- [Volume increased by 24 dB:](http://granjow.net/uploads/kdenlive/samples/James-Edwards-Greensleeves-overdriven-24dB.ogg) [http://granjow.net/uploads/kdenlive/samples/James-Edwards-Greensleeves-overdriven-24dB.ogg] Massive clipping!
- [Volume afterwards decreased by 24 dB](http://granjow.net/uploads/kdenlive/samples/James-Edwards-Greensleeves-overdriven-24dB-reverted.ogg) [http://granjow.net/uploads/kdenlive/samples/James-Edwards-Greensleeves-overdriven-24dB-reverted.ogg] — the clipping effect is irreversible

Clipping is also very well visible in the audio wave itself, if you e.g. open the samples above with Audacity. (If you want to reproduce the above effect with Audacity, make sure to select «allow overdrive», otherwise it will [prevent clipping](https://en.wikipedia.org/wiki/Dynamic_range_compression) [https://en.wikipedia.org/wiki/Dynamic_range_compression]. When decreasing the volume afterwards do not use the same project since Audacity actually stores values that are bigger than the maximum amplitude value (.aup files only). This is great for editing, and perhaps one day we will have that for color as well in kdenlive ...)

So when may clipping occur?

1. When recording audio. The input gain can be adjusted on the audio recorder. (Usually. For the Nikon D90 you cannot adjust anything for example. But its audio is not really usable anyway.) If the gain is too high, it might record for example low talking at a good volume, but clip as soon as someone rises his/her voice. Therefore input gain is usually adjusted such that the mean volume and peaks do not exceed a certain limit. This limit depends on the expected dynamic audio range. A common choice is -12 dB for the mean volume and maximally -6 dB for peaks.
2. When editing. There are multiple volume effects in kdenlive. If you raise the volume too much, you will experience clipping. (Try it.) To prevent clipping in kdenlive, you actually do quite the same as when recording audio. Try to keep peak values below -6 dB. If you need one cut to be really much louder than the rest and you cannot raise it any further, then you need to lower everything else.

Damping

The further away you are from the sound source, the quieter you hear it. Until finally it will be as loud as the noise floor of your microphone and audio recorder. To maintain a good SNR you will therefore usually try to keep your microphone as close as possible to the sound source. Such that the signal is much stronger than the noise (and with the input gain adjusted such that no clipping occurs).

But that is not everything yet. (Actually the above point was not about dampening at all but merely about wave propagation.) There is one interesting aspect, which is that higher frequencies are absorbed much stronger than low frequencies. Unlike the previous points this is not a problem but rather an interesting variable: If you record someone's voice and want to put him far away in the video (next room for example), lower the higher frequencies (using Audacity's Equalizer effect for example).

Our ear

What is louder, a sine wave of 200 Hz or a sine wave of 4 kHz?

- [200 Hz Sine](http://granjow.net/uploads/kdenlive/samples/Sine-200Hz.ogg) [http://granjow.net/uploads/kdenlive/samples/Sine-200Hz.ogg]
- [4000 Hz Sine](http://granjow.net/uploads/kdenlive/samples/Sine-4000Hz.ogg) [http://granjow.net/uploads/kdenlive/samples/Sine-4000Hz.ogg]

They have both been generated with the same amplitude (volume). But our ear is most sensible on the frequencies we talk in. To read more about our ear, [Wikipedia](https://en.wikipedia.org/wiki/Hearing) [https://en.wikipedia.org/wiki/Hearing] is a good starting point.

Links

- [James Edwards](https://www.jamendo.com/artist/355390/james-edwards) [https://www.jamendo.com/artist/355390/james-edwards] at Jamendo
- [Damping of frequencies in air \(PDF\)](https://web.archive.org/web/20140715193728/http://www.isi.ee.ethz.ch/teaching/courses/ak1/akustik-schallausbreitung-im-freien.pdf) [https://web.archive.org/web/20140715193728/http://www.isi.ee.ethz.ch/teaching/courses/ak1/akustik-schallausbreitung-im-freien.pdf], German
- [Capturing good sound](https://vimeo.com/blog/post/capturing-good-sound) [https://vimeo.com/blog/post/capturing-good-sound] at Vimeo, about microphones.
- [Thread about audio and clipping](https://web.archive.org/web/20140715164749/http://www.dvxuser.com/V6/showthread.php?207009-Db-level-peaks-matter-in-this-situation&highlight=audio+clipping) [https://web.archive.org/web/20140715164749/http://www.dvxuser.com/V6/showthread.php?207009-Db-level-peaks-matter-in-this-situation&highlight=audio+clipping] at dvxuser.com (I think it is a good idea to search for interesting forum threads there for yourself if you are interested)

Thanks ...



... for reading! I hope you will have fun with the scopes in the next kdenlive version.

Simon A. Eugster (Granjow)

Shooting Hints

- [Shooting with your DSLR](#)
 - [Camera hardware](#)
 - [Lens](#)
 - [Filter](#)
 - [Shooting](#)
 - [Aperture, Shutter, and ISO](#)
 - [Exposure](#)
 - [White Balance](#)
 - [Autofocus](#)
 - [Camera specific tips](#)
 - [Nikon D90](#)
 - [Canon EOS 550D/Ti2 \(and Co.\)](#)
 - [DSLR related links](#)
 - [Summary](#)
- [Using P2 footage from the Panasonic HVX200 on GNU/Linux \(tested on Ubuntu\)](#)
 - [Step One: FreeMXF](#)
 - [Step Two: Using mxfsplit](#)
 - [Conclusion](#)

Shooting with your DSLR

Submitted by Granjow on Sun, 11/14/2010 - 21:27

This article is going to give some tips regarding shooting Video with your DSLR and editing it in kdenlive afterwards.

Camera hardware

Lens

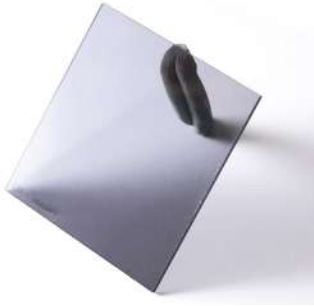


Generally Primes are preferred over zooms in video. (Some people, like me, prefer it over zooms as well for photography — but this is a matter of taste and of how you work.) Why that? A psychological reason is that eyes (at least mine) cannot zoom either, so zooming is hardly ever used in video. The technical reason is that Primes are cheaper to build whilst offering better quality: Better sharpness, bigger aperture (for limiting the Depth of Field). Opening the aperture gives you a very nice look. (Please also read ArtInvent's comment on this.)

Examples for very popular primes are the Nikon 50mm f/1.8D and the Canon 50mm f/1.8 II.

If you own such a lens, just don't forget that you should not always shoot at f/1.8. ;)

Filter



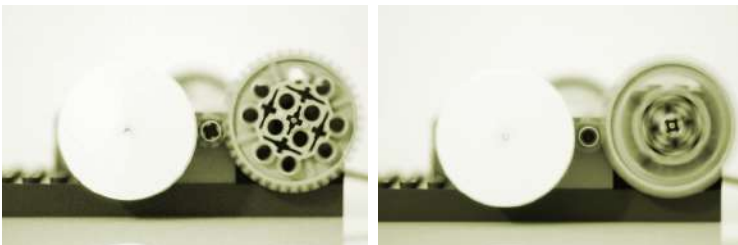
Directly related to the previous point about lenses. Shooting with an open aperture works well as long as it is dark. In bright sunlight it will fail because there is too much light falling on the sensor. Furthermore you are forced to use a high shutter speed which makes movements look jerky; Most of the time you will want to have some kind of motion blur because it looks more natural to our eyes.

If you ever tried to follow a bird or another animal with your eyes in dawn, you will know that our eyes do support motion blur.

So the trick is to remove some light with a filter called Neutral Density Filter. You can see one on the right. (The piece of kneaded eraser is not part of the filter.)

Shooting

Aperture, Shutter, and ISO



The same as for shooting stills. Really? Not quite. As written above you will usually want to have the shutter speed lower than for photography in order to

get motion blur — around 1/50 s. (This is just a rule of thumb, as all rules in video are; made to be broken.)

Also, some additional problems may arise due to the sensor being read out line-wise. One I would like to mention are Rolling Shutter effects. Longer exposure can, but need not, prevent such problems. It does if you are shooting with fluorescent lamps. Shooting at high shutter speed shows wave patterns from top to bottom of the screen, lowering it hides them if you hit the correct shutter speed.

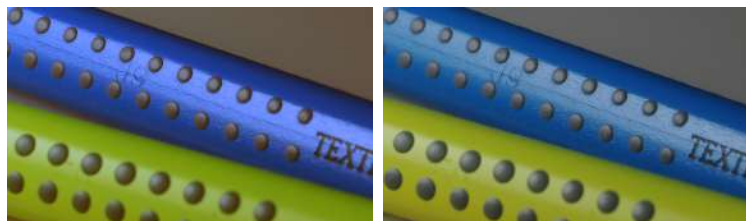
On the right: Two images I shot with my Nikon D90, the left one at lowest ISO possible, the right one at highest possible.

Exposure



The image should be exposed as bright as possible (without too much clipping!) if enough light is available. If you don't need to boost the brightness too much in post-production, you can avoid some noise in dark areas.

White Balance



The White Balance should be set as accurate as possible because DSLRs only support 8 bit per color channel (see also my article about the [Waveform Monitor](#)). If done wrong, much of the color information is lost.

DSLRs also offer different camera profiles with different Contrast/Saturation/etc. settings. Usually low saturation is preferred over high saturation — especially because raising the saturation can be done in post, and because high in-camera saturation settings can lead to color clipping.

In the example images on the right you can see the difference. The left one looked blueish due to wrong white balance and was corrected in post; much of the tonal range of the blue colors has been lost. The right one has been shot with proper white balance.

Autofocus

The in-camera autofocus may be fast enough to focus, but it will fail in the most important moment. It is useful for getting the initial focus point, but while shooting it should stay switched off.

Camera specific tips

Nikon D90

The Nikon D90 was the first DSLR offering video. 720/24p (AVI container).

D90 videos at 720p are scaled awfully. That's why you can see stair-stepping in sharp, skew lines. If this becomes perturbing for a clip, you can apply the «Nikon D90 Stairstepping fix» frei0r filter. Written (but not invented) by me :) See our [Nikon D90 page](#)

[<https://web.archive.org/web/20160403024219/https://kdenlive.org/video-editor/nikon-d90>] for an example of how stairstepping looks like (before and after correction).

There is an extensive overview over the D90 video function at dvxuser.com: [Understanding and Optimizing the Nikon D90 D-Movie Mode Image](#)

[<https://web.archive.org/web/20160208161124/http://www.dvxuser.com/V6/showthread.php?146661-Understanding-and-Optimizing-the-Nikon-D90-D-Movie-Mode-Image>]

Canon EOS 550D/Ti2 (and Co.)

These cameras shoot 1080p (H.264 encoded, MOV container) — but record video with a height of 1088 pixels. Prior to MLT 0.5.6 you have/had to crop the additional 8 pixels with a crop effect from the top or the bottom of the video, newer versions of MLT do this automatically.

DSLR related links

One can find tons of information about shooting in the internet. Some helpful links listed below.

- DSLR HD Video Tips: Shooting Basics — Introduction to DSLR video shooting
- [Philip Bloom Gives Photographers A Basic Video Shooting Tip](https://philipbloom.net/blog/shooting-video-with-a-dslr/)
[https://philipbloom.net/blog/shooting-video-with-a-dslr/] — How to get from photo to video
- [7 Tips To Get Better Video from a DSLR Camera](https://www.sportsshooter.com/news/2376)
[https://www.sportsshooter.com/news/2376] — Tips on shooting (not tech only)
- [Hurlbut Visuals Camera Protocol](https://vimeo.com/groups/28231/videos/15635719) [https://vimeo.com/groups/28231/videos/15635719]
— Professional shooting workflow
- [Pro DSLR Video Tips from David Harry Stewart](https://www.pophoto.com/how-to/2010/07/pro-dslr-video-tips-david-harry-stewart/)
[https://www.pophoto.com/how-to/2010/07/pro-dslr-video-tips-david-harry-stewart/] — Interview containing several tips
- [Tips on Shooting Video With a D.S.L.R.](https://webcache.googleusercontent.com/search?q=cache:3CJdJI0nNW4J:https://gadgetwise.blogs.nytimes.com/2010/04/15/tips-on-shooting-video-with-a-d-s-l-r/+&cd=1&hl=de&ct=clnk&gl=ch)
[https://webcache.googleusercontent.com/search?q=cache:3CJdJI0nNW4J:https://gadgetwise.blogs.nytimes.com/2010/04/15/tips-on-shooting-video-with-a-d-s-l-r/+&cd=1&hl=de&ct=clnk&gl=ch] — Various tips
- [How To Guide For Shooting HD Video With A DSLR Camera](https://tubularinsights.com/hd-video-dslr-camera/)
[https://tubularinsights.com/hd-video-dslr-camera/] — Various tips

Summary

Summary? There is no such thing. You need to read everything, really :)



Have fun!

Please drop your comments below.

Simon A. Eugster (Granjow)

Using P2 footage from the Panasonic HVX200 on GNU/Linux (tested on Ubuntu)

Using footage from P2 cards is easy when you know how! The MXF files on P2 cards cannot be read until you convert them with **mxfsplit**, a part of **FreeMXF**. The conversion is lossless and the resulting files contain both video and audio and can be edited in real time with **Kdenlive** (or **Blender 2.5+**) on most computers made within the last five years or so. Also, **FFMPEG** can read these files. This process is very fast because there is no transcoding and so can be done in the field while shooting just as fast as simply transferring the original P2 files.

Step One: FreeMXF

Get the source code for **MXFlib** from [here](http://sourceforge.net/projects/mxf/lib/) [http://sourceforge.net/projects/mxf/lib/].

Then configure, compile, and install it by running the following code in the directory where you saved the source files:

```
./configure
make
sudo make install
```

This will get **mxfsplit** (part of **mxflib**) working.

Step Two: Using mxfsplit

Here is a simple script that can be run in the terminal. It will convert all MXF files in a chosen directory into usable files. Do a search and replace for `/source/directory` and `/destination/directory`

```
# /source/directory
# /destination/directory
#
# change to destination directory
cd /destination/directory
#find all *.MXF files in a specific directory and loop
through them using the variable 'i'
for i in /source/directory/*.MXF
do
# use mxfsplit to convert files
STREAM=`mxfsplit -m $i | grep "File=" | cut -c 31-52`
# rename the files so they make sense, appending the word
'converted' to the end of the basename
mv *.Stream "`basename $i .MXF`converted.MXF"
#end loop
done
```

Conclusion

Now you have a script that can easily prepare footage for editing (e.g. with **Kdenlive** or **Blender**) and for transcoding. **FFMPEG** can be used to transcode the resulting .MXF files to whatever format is preferred. For example, the following code would get the files ready for **Youtube**, **Vimeo**, etc.:

```
cd ""
for i in *.*
do
ffmpeg -threads 2 -i $i -acodec libmp3lame -aq 192 -vcodec
libx264 -vpre slow converted$i.mp4
done
```

Tips & Tricks

Contents

- [Tips & Tricks](#)
- You can advance and retard the clip in the project monitor by rotating the mouse wheel when the pointer is over the [Timeline](#) or over the [Monitors](#)
- You can advance and retard the clip in the [Monitors](#) by rotating the mouse wheel when the pointer is over the [Monitors](#)
- You can zoom the timeline by vertical drag on the ruler (if enabled in [Configure Kdenlive](#))
- What's this [Full Luma](#)

Useful Information

- [HOWTO Produce 4k and 2K videos, YouTube compatible](https://forum.kde.org/viewtopic.php?f=272&t=124869#p329129)
[https://forum.kde.org/viewtopic.php?f=272&t=124869#p329129]

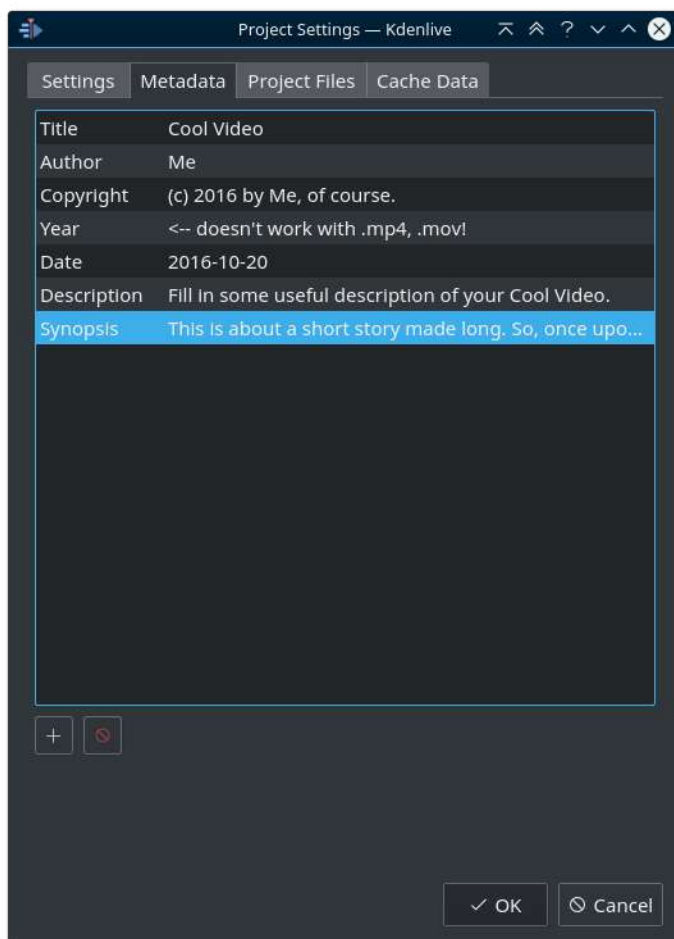
Contents:

- [Adding meta data to mp4 video](#)
- [Automatically Raising the Properties Pane](#)
- [Color Hell: Ffmpeg Transcoding and Preserving BT.601](#)
- [Compositing with transparency](#)
- [Configuring the Default Transition Duration](#)
- [Disable All Timeline Effects](#)
- [Effects everywhere](#)
- [Extract frame to project](#)
- [Working with Extracted Frames in Higher Resolution than Project Profile](#)
- [Fixing Unwanted Slow Audio Fade-Ins with Some USB Audio Cards](#)
- [Full Luma](#)
- [How to editing audio volume with keyframes](#)
- [How to fading in-out Kdenlive titles](#)
- [Insert and Overwrite: advanced timeline editing](#)
- [Kdenlive transitions](#)
- [Library clips with image sequences, Titles, Color clips](#)
- [Manage Cached Data](#)
- [Restoring Audio Mixing](#)
- [The “Smooth” Keyframe Interpolation](#)
- [Editing Surround Sound with Kdenlive](#)
- [The library: copy paste between projects](#)
- [Timeline preview rendering](#)

Adding meta data to mp4 video

Adding a useful information to your video files – such as title, authors, the date of production, and some description – can be quite helpful to both yourself and your customers. This additional data – or *meta data* – can be used by media players to organize your many video files. Unfortunately, while adding such meta data to audio files is straightforward, adding useful meta data to video files is ... a nightmare. But don't despair, as we've compiled some useful information for you!

Project Meta Data



Kdenlive allows you to specify the meta information that should be added to a rendered file. Just go to *Project* ▸ *Project Settings*, then select the second tab named *Metadata*.

For your convenience, Kdenlive automatically adds the following four elements to each new project:

- **title**.
- **author** – doesn't work for .mp4 containers, but for .mov containers; you may use **artist** instead with .mp4 containers.
- **copyright**.
- **year** – please note that this element does not work for video rendered into MP4 containers (such as .mov and .mp4). See below for more details. Use a date element instead. Oh, this year element is actually quite pesky: you can delete it, but it will automatically reappear. So simply ignore it ... as ffmpeg does too.

But there are more elements that you actually may use with your MP4 containers.

MP4 Containers

Unfortunately, there are competing sets of meta data when working with MP4 containers. The older, standard MP4 set is rather limited in what additional meta data can be used. Then, there is Apple iTunes, and that brings in a lot of meta data, and even changes the allowed set from time to time. We will come back to this difference in a second.

Unfortunately, information about what meta data can be used in which situation is rather scarce, sometimes outdated, and sometimes plainly wrong. Of course, this may also apply to this Toolbox article, but I've taken much effort to cross-check things in real life. As Kdenlive uses [ffmpeg](https://www.ffmpeg.org/) [https://www.ffmpeg.org/] for encoding, one would think that there's plenty of information – unfortunately, it's not, and the scarce information is sometimes plainly wrong. At some point, I've resorted to reading the source code in order to find out which so-called MP4 atoms actually are supported and through which element names (the magic happens inside

`mov_writeilst_tag()` in [moveenc.c](#)

[<https://github.com/FFmpeg/FFmpeg/blob/5a8b41b4a76fc6586ff6aff78e5f0aa7b25068a/libavformat/movenc.c#L2996>]). Luckily, you don't need to dive into the source anymore.

Finally, please note that other container formats, such as [Matroska](#) [<https://en.wikipedia.org/wiki/Matroska>] (.mkv) or *cough* [Audio Video Interleave](#) [https://en.wikipedia.org/wiki/Audio_Video_Interleave] (.avi), support yet other sets of meta data elements. So, variance galore!

Ffmpeg Supported MP4 Container Meta Information

But now for the real meat: here come the available meta data elements that ffmpeg supports.

1. Please note that you must use the ffmpeg meta data keys from the second column in the table below as the metadata keys in Kdenlive's Project Metadata dialog!
2. Ffmpeg supports different meta data elements, based on the type of container. And this container type normally gets derived from the container filename suffix (ending): in particular, .mp4 and .mov.

Element	ffmpeg Meta Data Key	Description	MOV	MP4 (iTunes)	Tag
Title	title	The title of this video. (String)	✓	✓	©nam

Element	ffmpeg Meta Data Key	Description	MOV	MP4 (iTunes)	Tag
Year	date	The date of production. Please note that the ffmpeg documentation is totally wrong here, there is no key named year, but only date. (String)	✓	✓	©day
Copyright	copyright	The copyright of your video. (String)	✓	✓	©cpy
Artist	artist	The name of the (video) artist. Please don't use this element for the composer, as there is a dedicated element especially for the composer, see below. (String)	✓	✓	©ART

Element	ffmpeg Meta Data Key	Description	MOV	MP4 (iTunes)	Tag
Album Artist	album_artist	The name of the album artist: this may be a guest artist or a featured artist. This element can also be left out or be the same name as the artist. (String)		✓	aART
Author	author	The author of the video. (String)	✓		©aut
Composer	composer	The name of the composer. (String)			©wrt
Album	album	The title or the name of this album. (String)	✓		©alb

Element	ffmpeg Meta Data Key	Description	MOV	MP4 (iTunes)	Tag
Description	comment	A (content) description of this video. For a synopsis, please see the separate element instead. (String)		✓	desc
Comment	comment	A (short) comment on your video. This will probably a comment set by the audience, not at the time of production. (String)	✓		©des
Comment	comment	Same as before, but encoded in a separate element. (String)	✓	✓	©cmt

Element	ffmpeg Meta Data Key	Description	MOV	MP4 (iTunes)	Tag
Synopsis	synopsis	A synopsis, a longer description of this video. (String)		✓	ldes
Genre	genre	The genre this video belongs to. (String)	✓	✓	©gen
Make	make	(String)	✓		©mak
Model	model	(String)	✓		©mod
Location	location	(String)	✓		©xyz

Element	ffmpeg Meta Data Key	Description	MOV	MP4 (iTunes)	Tag
Grouping	grouping	The name of a group of videos somehow belonging together. In contrast to the album element, grouping happens inside (that is, below) the album level. (String)		✓	©grp
Show	show	The name of the TV show, if applicable. (String)		✓	tvsh

Element	ffmpeg Meta Data Key	Description	MOV	MP4 (iTunes)	Tag
Episode	episode_id	Either the episode name or episode number, for display. If necessary, use the separate, yet optional episode number element for correct sorting. (String)		✓	tven

Element	ffmpeg Meta Data Key	Description	MOV	MP4 (iTunes)	Tag
Episode (Sorting)	episode_sort	This element is for sorting only, but never displayed. It allows numerical sorting of episode names that are strings, but not (necessarily) numbers. The valid range is limited to 0 to 255 only, so this doesn't support all those endless telenovas, it seems... (Int8)		✓	tves
Season	season_number	The season number, in the range of 0 to 255 only. (Int8)		✓	tvsn

Element	ffmpeg Meta Data Key	Description	MOV	MP4 (iTunes)	Tag
Lyrics	lyrics	Optional lyrics for badly sung sing-along... (String)		✓	©lyr
Compilation	compilation	If 1, then this video file is part of a compilation. 0 otherwise. (Int8)		✓	cpil
Network	network	(String)		✓	tvnm
Media Type	media_type	(Int8)		✓	stik
HD Video	hd_video	(Int8)		✓	hdvd
Gapless Playback	gapless_playback	(Int8)		✓	pgap

Element	ffmpeg Meta Data Key	Description	MOV	MP4 (iTunes)	Tag
Encoding Tool	encoder	Not available to us users, as it gets automatically set by ffmpeg itself; this is set to the libavformat version string.	✓		©swr
Encoding Tool	encoding_tool	Not available to us users, as it gets automatically set by ffmpeg itself; this is set to the libavformat version string.		✓	©too

Notes

There is no way to add cover art or DVD art to MP4 containers through ffmpeg, and in consequence, in Kdenlive. Instead, you need to resort to other video container tagging tools, such as [AtomicParsley](https://sourceforge.net/p/atomicparsley/wiki/Home/).

[<https://sourceforge.net/p/atomicparsley/wiki/Home/>].

Kdenlive leverages ffmpeg for encoding, so if ffmpeg doesn't support certain atoms, there's no way for Kdenlive to get it into the rendered output file.

Useful References

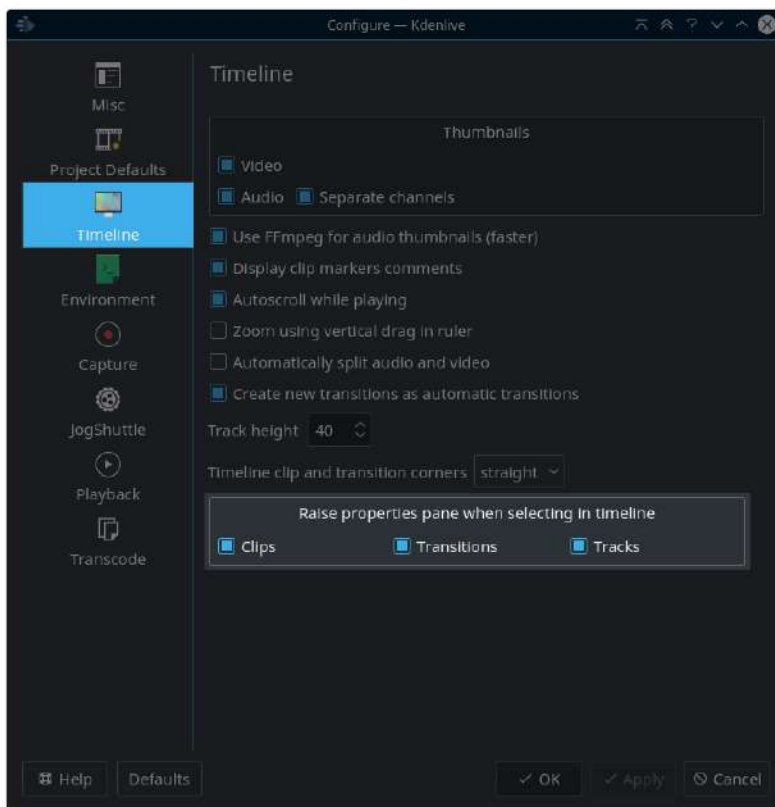
The following references give some more background information on ffmpeg and meta data in .mov/.mp4 containers.

- First, and foremost, the ffmpeg source code for reference, and [moveenc.c](https://sourceforge.net/p/atomicparsley/wiki/Home/) [https://sourceforge.net/p/atomicparsley/wiki/Home/] in particular.
 - *mov_writeilst_tag()* is responsible to write the iTunes-compatible tags for .mp4 containers.
 - *mov_write_udta_tag()* write the MPEG-standard tags instead, when using a .mov container.
- [How To: Create/Write ID3 tags using ffmpeg](https://jonhall.info/create_id3_tags_using_ffmpeg/) [https://jonhall.info/create_id3_tags_using_ffmpeg/] by Jon Hall. This article finally got me on the right track. However, beware of a few incorrect ffmpeg keys in Jon's table (such as the TIT3 key, which I think isn't correct); these may be due to later changes in ffmpeg (or whatever). In the end, since some of Jon's keys didn't work, I went for the ffmpeg source code which is the authoritative source, of course. Nevertheless, I'm very thankful to Jon and he is some of the rare really good sources with good insight into the topic. Most other source just tell you how to press some buttons on some application, but don't give you any clue as to what is actually going on behind the scenes.
- [How To: Dump and Load metadata with ffmpeg](https://jonhall.info/how-to/dump_and_load_metadata_with_ffmpeg/) [https://jonhall.info/how-to/dump_and_load_metadata_with_ffmpeg/] by Jon Hall. Sheds more light on how to work with meta data when it comes to ffmpeg.
- [FFmpeg Metadata](https://wiki.multimedia.cx/index.php?title=FFmpeg_Metadata) [https://wiki.multimedia.cx/index.php?title=FFmpeg_Metadata] article from the [MultimediaWiki](https://wiki.multimedia.cx/index.php?title=Main_Page) [https://wiki.multimedia.cx/index.php?title=Main_Page].

Automatically Raising the Properties Pane

New in version 16.12.0.

Depending on your workflow habits, you can configure **when to raise the properties pane** (in case it's currently hidden).



To configure when Kdenlive should automatically raise the properties pane, go to *Settings* ▶ *Configure Kdenlive* then tab *Timeline*.

You should now see a group titled **Raise properties pane when selecting in timeline**, which contains these three check boxes:

- when selecting timeline **clips**,

- when selecting **transitions**,
- when selecting **tracks**.

Simply check the timeline elements for which you want the properties pane to be automatically raised (shown) when you select them in the timeline.

The default (classic) behavior of Kdenlive is to automatically raise the properties pane for all clips, transitions, and tracks.

Color Hell: Ffmpeg Transcoding and Preserving BT.601

From time to time, you may get into weird digital video territory quite unexpectedly. For instance, you just want to cut some screen records made on mobile devices, such as tablets or mobile phones. What could possibly go wrong? Colors, for instance...

“Run-of-the-Mill” Footage

The drama starts with screen recording footage that seems quite innocent and normal at first sight. It may have been recorded on Android 7 devices using a screen recording app (such as «AZ Screen Recording», but not the “Pro” fake). And this footage has two slightly unusual properties:

- a *highly variable frame rate*,
- it's using [BT.601](https://en.wikipedia.org/wiki/Rec._601) [https://en.wikipedia.org/wiki/Rec._601] , instead of BT.709 like so much HD footage these days.

Should cause no problems, right? Well...

As it turns out, Kdenlive's media engine [MLT](https://www.mltframework.org/) [https://www.mltframework.org/] can exhibit some issues with video footage that has a highly variable frame rate, such as between 0.001 and 100+ fps. The symptoms are subtle, yet endanger production quality: it seems as if MLT may well pick a future frame which is way off in regions with a low framerate. While this isn't an issue for a suitably high framerate, this causes odd results in other places. For instance, in my productions user touch interaction shows up even a few seconds before the interaction will appear. This is probably caused by a very low fps during the inactivity period just before the user interaction.

Alas, transcoding to a fixed frame rate surely is one of [ffmpeg's](https://www.ffmpeg.org/) [https://www.ffmpeg.org/] easy tasks (this example assumes a constant project frame rate of 25 fps):

```
$ ffmpeg -i raw.mp4 -r 25 -crf 18 screen-rec.mp4
```

The constant frame rate cures the issues mentioned above, so the results are as to be expected. Except...

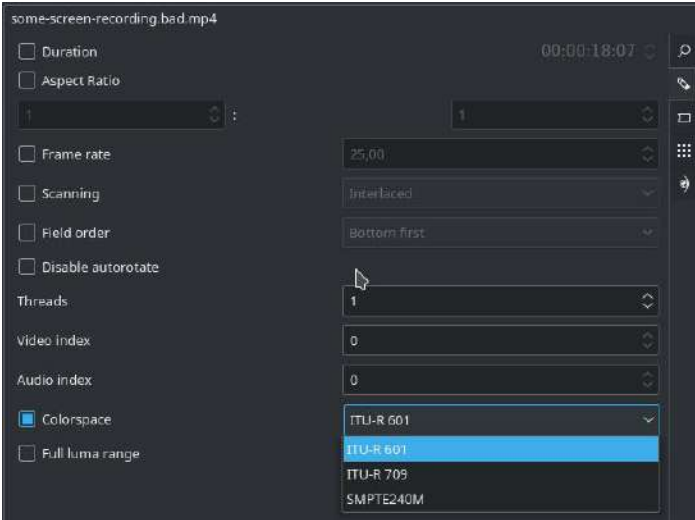
Easy Transcoding: Color Me Bad



Unfortunately, the resulting video now shows shifted colors! It might not be too obvious in the first place, but it can be quite prominent when you work more with your footage. And it gets clearly visible to your audience in case you are going to mix this footage side-by-side with further processed versions of it, such as extracted frames for stills.

A more close inspection, either using Kdenlive's built-in clip properties pane or [ffprobe](https://www.ffmpeg.org/ffprobe.html) [https://www.ffmpeg.org/ffprobe.html], reveals that the *transcoded file lacks the BT.601 color profile indication*. Yet, *ffmpeg did not transform the colors* at all during transcoding, and simply dropped the correct color profile information!

Makeshift Measures



Of course, there's always Kdenlive's ability to overwrite source clip properties using the built-in clip properties pane.

Simply select the transcoded video clip in the project bin. Then go to the clip properties pane and select its "Force Properties" tab which shows a *writing pen*. Check "Colorspace" and then select "ITU-R 601". Kdenlive now applies the correct color profile.

While very easy, this method has its limitations; it's fine while you keep working *solely inside the Kdenlive editor and its MLT renderer*. But as soon as you need to pull in external video tools, such as *ffmpeg* for image extraction..., you will lose: these tools don't know about Kdenlive's source clip property overrides. We thus need to get the correct color profile information right into the transcoded video files themselves.

Preserving BT.601 in Transcoding

To make this matter worse, the seemingly obvious color profile transformation `-vf colormatrix=bt601:bt601` simply doesn't work: *ffmpeg* complains about not being to transform between the same input and output color profile. *Grrrr*.

It took quite some extensive searching until I found the missing puzzle piece on Stack Exchange's Video Production Q&A site: [ffmpeg: explicitly tag h.264 as bt.601, rather than leaving unspecified?](#)

[<https://video.stackexchange.com/questions/16840/ffmpeg-explicitly-tag-h-264-as-bt-601-rather-than-leaving-unspecified>]

There's a catch to watch out for: BT.601 comes in PAL and NTSC flavors which feature slightly different primary chromaticities, transfer curves, and colorspace. So check your raw footage first using `ffprobe` (or `mediainfo`) which one has been used during recording in your case. Please note that it doesn't matter that your screen recording hasn't standard definition (SD) resolution at all, but it does matter when it comes to encoding color.

I'm Not Quite Dead Yet: PAL and NTSC DNA

So how do we find out if a given video recording file, say `raw.mp4`, uses the PAL or NTSC color space? Of course, `ffprobe` comes to our rescue. But in order to not get lost in all the nitty-gritty details `ffprobe` will throw at you, we need to tame it using a few options and `grep`:

```
$ ffprobe -v error -show_streams raw.mp4 | grep color_
```

This should give you something along these lines:

```
color_range=tv color_space=bt470bg color_transfer=smp170m
color_primaries=bt470bg
```

Someone surely thought that using a TV standard definition-related BT.601 is a clever idea to record mobile device screens. Must have been a hipster with a old-school tube TV sitting on his desk. Alas, the line `color_space=...` will tell us whether we're dealing with PAL (`=bt470bg`) or NTSC (`=smp170m`).

PAL

If it's **PAL chromaticities** (`=bt470bg`), we then need to transcode as follows:

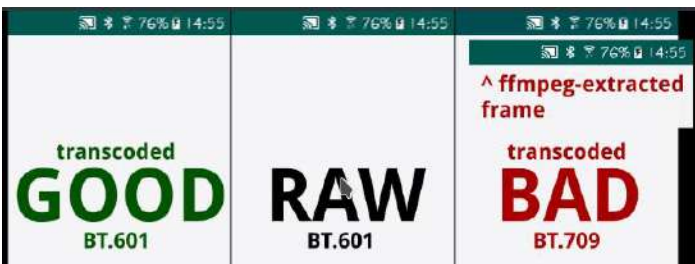
```
$ ffmpeg -i raw.mp4
```

```
-color_primaries bt470bg -color_trc gamma28 -colorspace  
bt470bg  
-r 25 -crf 18 screen-rec.mp4
```

NTSC

For **NTSC chromaticities** (=smpte170m), we'll need a different set of primaries, transfer curve, and colorspace:

```
$ ffmpeg -i raw.mp4  
-color_primaries smpte170m -color_trc smpte170m -colorspace  
smpte170m  
-r 25 -crf 18 screen-rec.mp4
```



In any case, Kdenlive/MLT now correctly see the transcoded video using the BT.601 color profile. In addition, other media tools correctly detect the color profile too – unless they are broken in that they don't understand BT.601 at all.

Compositing with transparency

When transparency is involved in both frames processed by one of Kdenlive's dynamic compositing transitions, the outcome may be surprising to some of us users. Luckily, things aren't as inexplicable as they appear, so let's dive right into transparency and transitions...

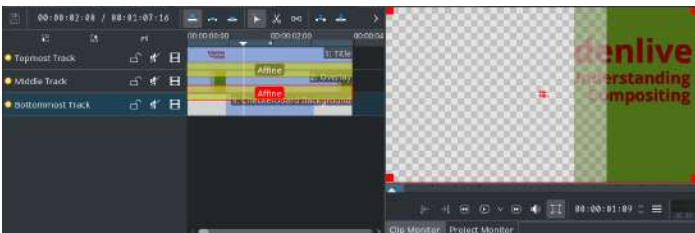
Transparency & Dynamic Transitions

When it comes to handling transparency, Kdenlive's [Kdenlive transitions](#) fall into two categories:

- **Affine:** uses the so-called **atop** compositing operator.
- **Composite, Composite & Transform, Cairo (Affine) Blend:** uses the **over** compositing operator instead.

So what does these **atop** and **over** really mean? Let's discover what these compositing operators do using a typical title and semi-transparent background example. For simplicity, we first will ignore the **Opacity** parameter of the aforementioned transitions to keep things easier to grasp. And after we've mastered this step, we will finally look at how the opacity parameter fits into the full picture.

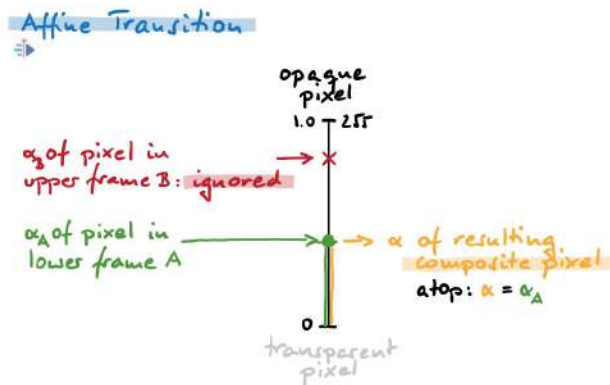
Affine: Atop Compositing



The result of the **atop** compositing is best explained at first by showing its outcome: Text from the topmost title clip (partly) vanishes in those regions where the underlying clip on the middle track is (semi) transparent.

The checkerboard clip on the bottom track just serves for illustrational purposes, so we can better see the transparent regions.

Please notice how the two **Affine** transitions are chained: first, the upper Affine composes the title clip onto the gradient background. Then, the lower Affine composes the result onto the checkerboard background.



But how does the **Affine** transition exactly handle transparency? Let's look at this hand-made illustration, where we have two pixels with some transparency each (the alpha values, α_A and α_B). It's important to **not** confuse pixel transparency with the opaque parameter of transitions.

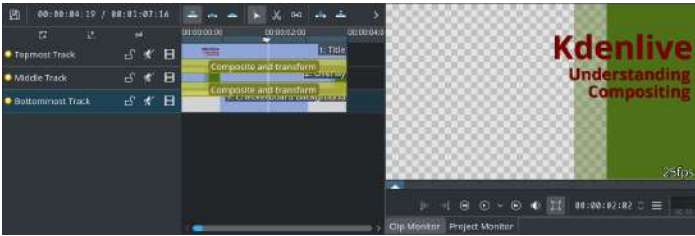
Our red pixel comes from the upper track frame (B), whereas the green pixel stems from the lower track frame (A). An alpha of 0 means a completely transparent pixel, whereas an alpha of 1.0 (or 255) means totally opaque pixel.

The **Affine** transition now simply ignores the transparency information from the upper frame pixel (the red one).

It solely uses the transparency information (green) contained in the lower track frames! Or more mathematical: $\alpha = \alpha_A$

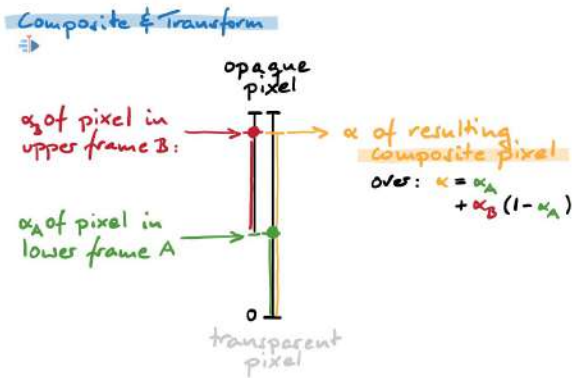
And that's the explanation why in our example above the title text vanishes in those regions where the middle clip is transparent.

Composite & Co: Over Compositing



Again, we basically use the same setup as before, but this time we use **Composite & Transform** in place of **Affine** transitions. We chain the transitions as before, so that the lower transition works on the outcome of the upper transition.

But look! The outcome is different! The result of the **over** operator is probably more to the expectations of most users. Now, the top title clip doesn't get (*sorry*) clipped anymore.



As the **over** operation produces results more to the expectations of many users, how does it handle transparency exactly?

Simply spoken: if you paint some semi-transparent pixel over another semi-transparent pixel, then **the result will be less transparent**. It will be even less transparent than the lower frame pixel transparency. This is what we would probably expect from painting with semi-opaque paint.

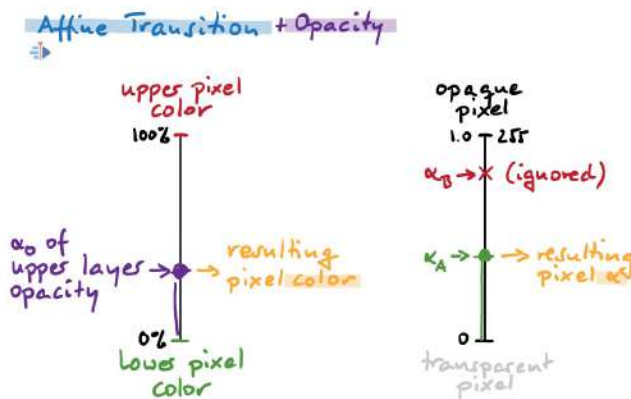
Calculating the resulting transparency for two given pixels from an upper frame (B) and a lower frame (A) is thus more involved this time.

Again, we start with the transparency of the lower frame pixel (green) as a base. But this time, we can't ignore the transparency of the (red) upper frame pixel. But simply adding both transparencies wouldn't yield sensible results; what does a transparency of 2.0 or 511 mean?

So the red pixel transparency is **scaled**: you may think of shrinking the original 0-1.0 scale into the available space above the green transparency value. The resulting transparency then is the sum of the green base alpha value, plus the rescaled red alpha value. Remember, we kind of paint over the lower frame. For the formula-affines: $\alpha = \alpha_A + \alpha_B (1 - \alpha_A)$

Transition Parameter Opacity

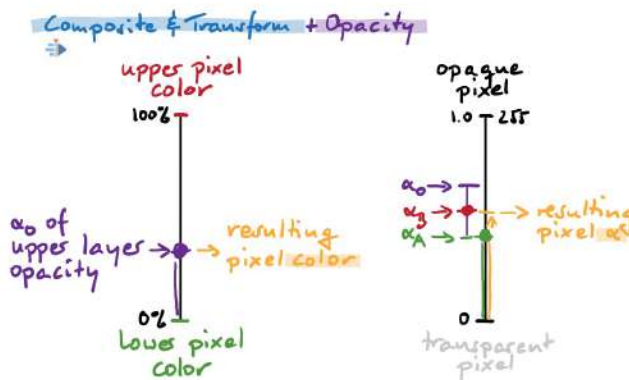
The dynamic compositing transitions also feature a parameter called **Opacity**. It's easy to confuse it with pixel transparency, but it's something different. The opacity parameter applies to the upper frames (B) only. It is kind of a master control ... but how does it work?



Let's start with the **Affine** transition, again. Above, we've seen that Affine ignores the transparency of the (red) upper frame pixels. And Affine also ignores the **Opacity** parameter when calculating the result **pixel transparency**.

Instead, the Opacity parameter influences how the result **pixel color** gets calculated: this is a linear interpolation between the color of the upper frame (B) pixel and the lower frame (A) pixel. The Opacity now controls the exact blending point. An opacity of 0.0 results in only the lower frame (B) pixel color, while 1.0 solely yields the upper frame pixel (A) color. 0.5 would be halfway between the two pixel colors.

To sum up: in case of the **Affine** transition, the **Opacity parameter solely affects color blending** between upper frame (B) and lower frame (A) pixels.



Next, let's look at the other transitions: **Composite & Co.**

As for the color blending, the same procedure applies that we've just seen with the Affine transition: the Opacity parameter controls how much upper frame (B) pixel color gets into the blend.

But when we look at how the transparency of the resulting pixel gets calculated, things are starting to look different. We've seen that the transparency of the upper frame (B) pixel gets scaled down in reverse proportion of the lower frame (A) pixel transparency. The **Opacity** parameter takes this even further: it additionally scales down the upper frame (B) pixel transparency. Please see also the illustration.

In consequence, the Opacity parameter thus controls how much opacity of an upper frame (B) pixel is applied at all. This way, you can fade in or out the upper frame.

To sum up: in case of the **Composite (&Co)** transitions, the **Opacity parameter affects both color blending** of upper frame (B) and lower frame (A) pixels, as well as **transparency of the upper frame (B)**.

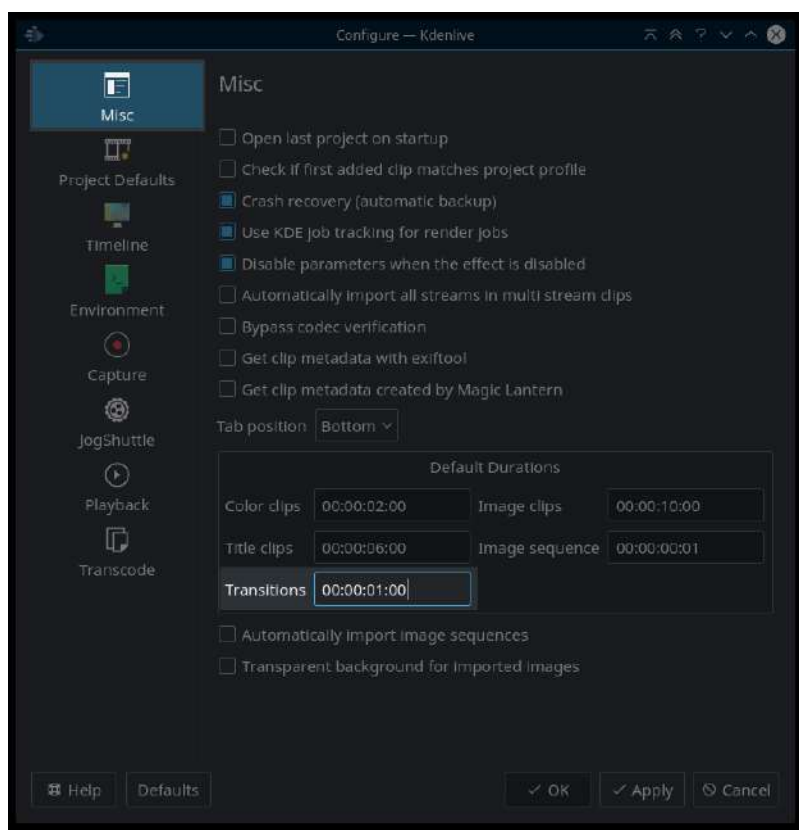
Useful References

- Wikipedia article on [alpha compositing](https://en.wikipedia.org/wiki/Alpha_compositing)
[https://en.wikipedia.org/wiki/Alpha_compositing], with a reference to the original Porter Duff SIGGRAPH'84 paper on «Compositing Digital Images».
- the SVG Open 2015 paper by Craig Northway on [understanding compositing and color extensions in SVG 1.2 in 30 minutes!](http://www.graphicalweb.org/2005/papers/abstractsvgopen/index.html)
[<http://www.graphicalweb.org/2005/papers/abstractsvgopen/index.html>] – especially the Porter Duff operator table in chapter 6 with resulting alpha calculation column.

Configuring the Default Transition Duration

New in version 16.08.1.

You can now configure the **default duration for all newly created transitions**. Before this, all new transitions were always 65 frames long – and this translated to varying default durations, depending on a project’s frame rate. This new configuration option should appeal all those users who work a lot with transitions.

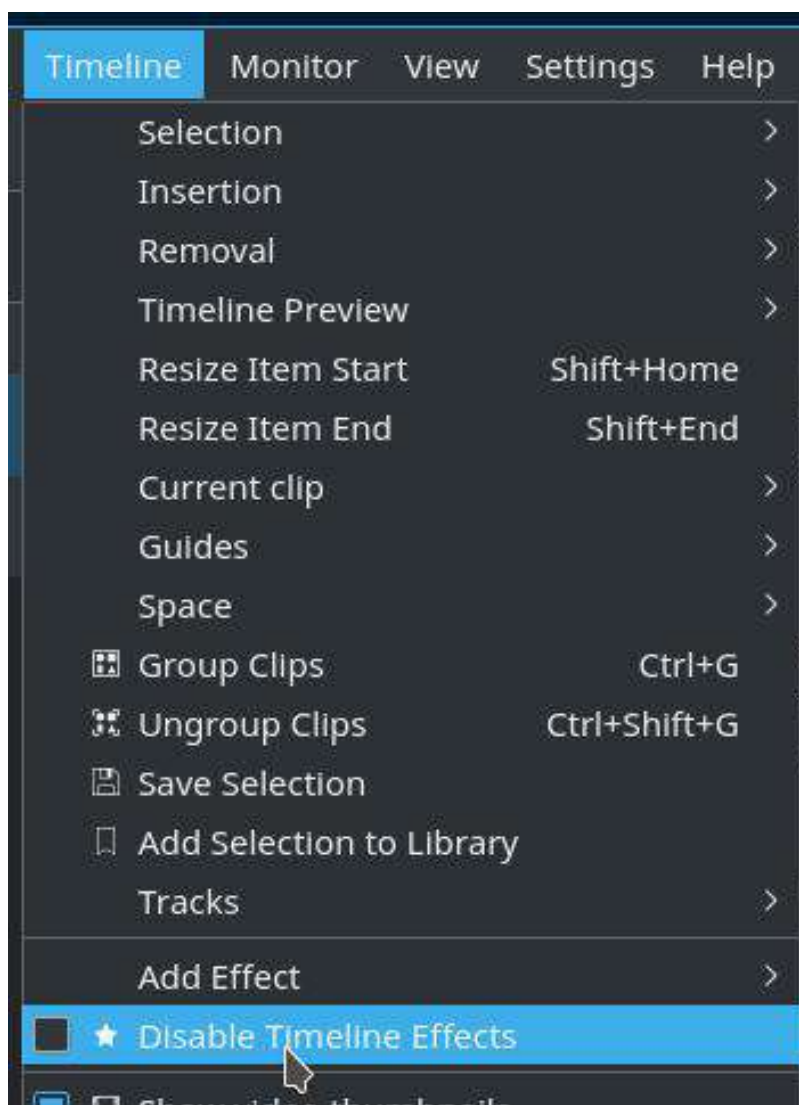


Go to *Settings* ▶ *Configure Kdenlive* ▶ *Misc* category. Under the heading *Default Durations* you’ll now find the new fifth option to configure the default duration for newly created transitions. Enter a duration in the usual format *hh:mm:ss:ff*.

Please note that the frames (:ff) field will be interpreted on the basis of the current project's framerate. In contrast, the other fields hh:mm:ss are independent of the framerate.

Disable All Timeline Effects

Did you know that you can **temporarily disable all timeline effects at once**? This may be helpful when you want to do some timeline work, yet some performance heavy effects slow down this work. Alternatively, you may want to consider using Kdenlive's timeline preview.



You'll find the corresponding option in the main menu *Timeline* ▶ *Disable Timeline Effects*. This disables or re-enables all timeline effects, that is, timeline clip effects and track effects.

However, please note that prior to Kdenlive 16.08.1, track effects are not properly disabled or re-enabled by *Timeline ▸ Disable Timeline Effects*.

Please see [Effects everywhere](#) about how to temporarily disable bin clip effects.

Effects everywhere

Did you know that you can **apply effects** not only to clips in the timeline, but also to **project bin clips** and even to specific **tracks in the timeline**?

Clip Effects

Probably most of the time, many Kdenlive users will simply slap **individual effects on individual timeline clips**. For instance, as lighting conditions vary *within* the same source clip, multiple scenes taken from it might be in need of individual grading. Or you need to crop and place an individual clip, separately from others. So we're all used to it, and we do it almost unconsciously.

But in some situations, we would like to ease and speed up our timeline work. Instead of laboriously setting up effect after effect on individual timeline clips, we want to add effects to either a specific bin clip or a timeline track once and for all...

Hint

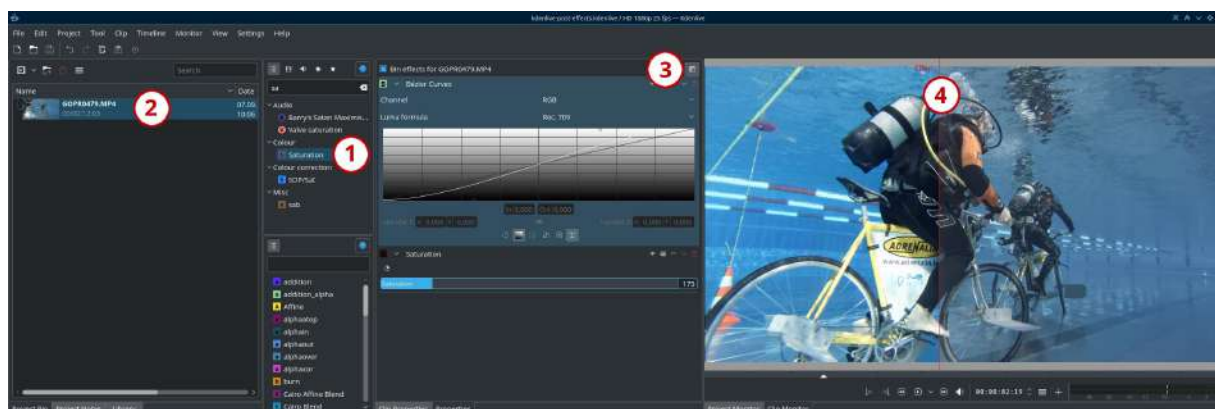
Did you know that you can temporarily [Disable All Timeline Effects](#)? Use *Timeline* ▸ *Disable timeline effects*.

Effects on Project Bin Clips

Effects on bin clips allow you to, for instance, color grade a clip itself. All copies of it that you use in the timeline then will automatically use these effects. Also, all changes you make to the bin clip will immediately become effective on all copies in the timeline.

Note

Please note that bin clip effects are applied first, before any timeline clip effects.



Apply Effects to Bin Clips

To apply effects to a clip in the project bin in general, simply drag and drop an effect from the effects pane (1) into your clip in the project bin (2). The parameters pane (3) then will switch to the effects applied to this particular bin clip. Adjust as you like.

If you later need to return to the bin clip effects in order to edit them again, simply select the clip in the project bin. The parameters pane (3) then will automatically switch to your bin clip's effect stack.

Compare Before/After Effects

Please note the split compare button at the top of the parameters pane (3): when active, the **clip monitor** (4) shows your clip in a before/after fashion:

- **left half** of clip monitor (4): your bin clip with all effects applied; the text «effect» to the left of the red divider (4) is a reminder of which side is showing effects, and which side is without effects.
- **right half**: your bin clip **without any effects applied**.

While hovering your mouse cursor over the clip monitor, you should notice a red vertical divider line appearing. Drag it to dynamically change the split

between the clip parts with/without effects.

Temporarily Disable Bin Clip Effects

You can (temporarily) **disable all effects on a single bin clip**, by selecting it and then **un-checking** the **Bin effects for...** box at the top of the parameters pane (3). This works exactly the same as with effects applied to timeline clips.



Bin clips that have effects directly applied on them show the effects signet: a star. It is overlaid on the clip thumbnail, as you can see to the right.

Temporarily disable ALL bin effects

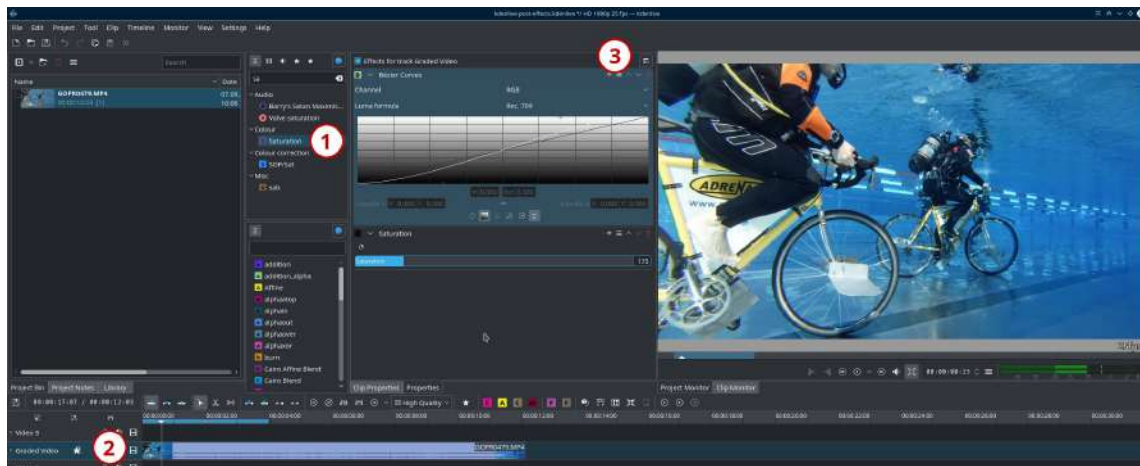
You can also temporarily disable all bin effects at once, using either a keyboard shortcut or a toolbar button. Unfortunately, this function is slightly hidden, as there is (yet) no menu item for it. You'll need to either configure a shortcut for this action, or add the action to a toolbar:

- To configure a keyboard shortcut, go to *Settings* ▶ *Configure Shortcuts...*, then search for *Disable Bin Effects*. Now set your desired shortcut, click *OK*. Done.
- Alternatively, go to *Settings* ▶ *Configure Toolbars...*, then search for the available action *Disable Bin Effects*. Add it to whatever toolbar you like, such as the **Timeline Toolbar** by clicking the > button. Click *OK*. Done.

You can now quickly disable and enable all bin effects at once using either the shortcut or toolbar button you've configured above.

Effects on Tracks

Similar to effects on bin clips, you can also add effects to a specific timeline track. For instance, you can set the crop and placement of clips on a specific track, so you don't need to copy these settings over and over again onto all clips in this track. When you change a track effects, it immediately applies to all clips on this track. Sweet.



Apply Effects to Tracks

To apply effects to a track in the timeline, simply drag and drop an effect from the effects pane (1) into the desired track in your timeline (2). The parameters pane (3) then will switch to the effects applied to this track. Adjust effects as you like.

There's one minor catch here: the split compare button unfortunately doesn't work here, as it applies to individual clips only. It doesn't work for timeline tracks.

If you later need to return to track effects in order to edit them again, simply click into the header of the desired track. The parameters pane (3) then will automatically switch to your track effect stack.

Temporarily Disable Track Effects

You can (temporarily) **disable all effects for a track**, by clicking into the track header and then **un-checking** the **Bin effects for...** box at the top of the

parameters pane (3). This works exactly the same as with effects applied to timeline clips.



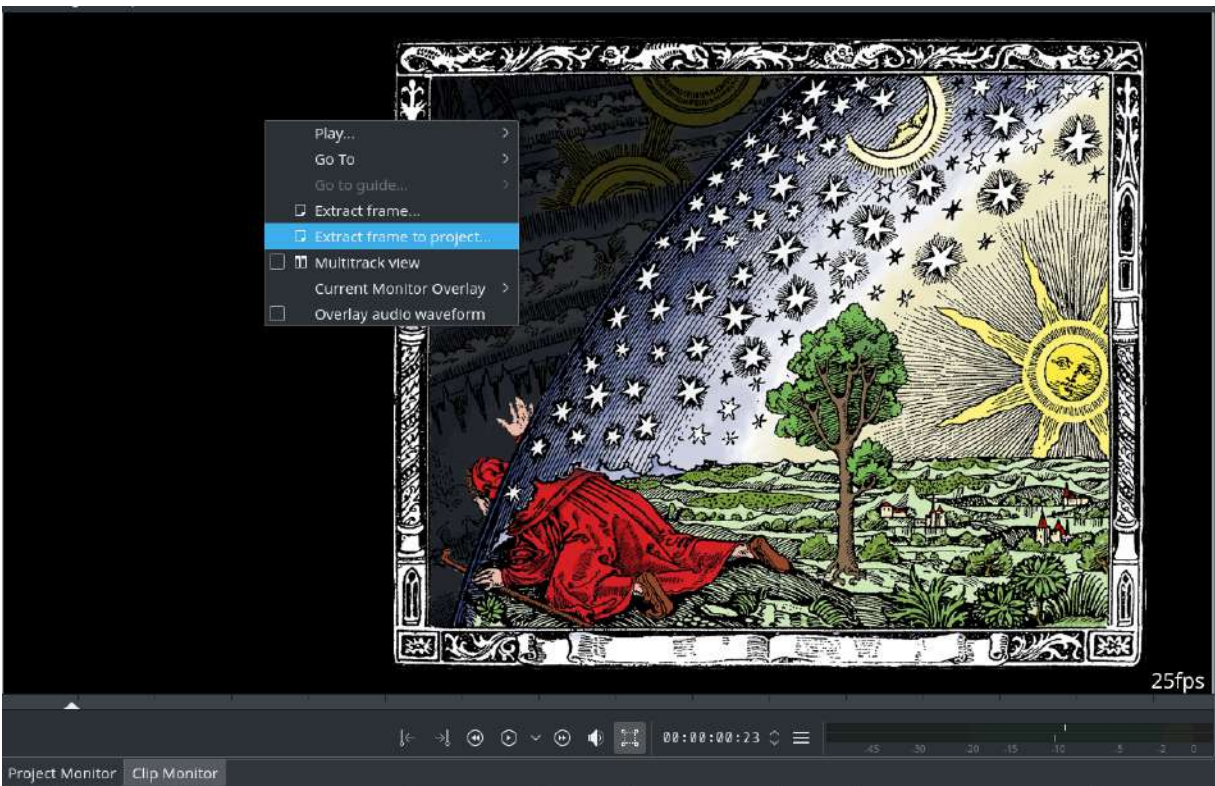
Timeline tracks that have effects directly applied on them show the (usual) effects signet: a star. It shows up after the clip title. In single-line layout, the effects signet shows up in between the clip title and the track controls.

Extract frame to project

New in version 16.12.0.

If you happen to work a lot with still images from your video source material in your Kdenlive project, then you may like the new *Extract Frame to Project*, scheduled to debut in Kdenlive 16.12.0. Instead of the tedious mill of extract clip, thinking of a usable image filename other than adshsgfg.png, then finding this file again to add it to your project ... simply let Kdenlive propose a suitable filename, click OK, and you're set.

Extract Frame to Project



The clip and project monitors now have a new context menu item *Extract frame to project*, in addition to the existing *Extract frame*. This new menu

item not only extracts the currently shown frame, but also adds it automatically to your project.

You'll still see the *Save Image* dialog, but there's additional convenience: Kdenlive now proposes an image filename. This bases on either (in the clip monitor) on the clip name, or (in the project monitor) on the project filename. To avoid filename clashes when extracting multiple frames from the same source clip or project, Kdenlive neatly adds the frame number. So, when extracting frames from your clip named *coolclip.mp4*, the suggested image names are like *coolclip-f42.png*, and so on. Of course, you can still use your own filenames as before. But you'll probably soon start to like just forgetting about filenames, as it is so convenient to focus on content, not clip names.

The extracted image is immediately added to your project bin. If you use bin folders, then the image gets added to your currently selected bin folder.

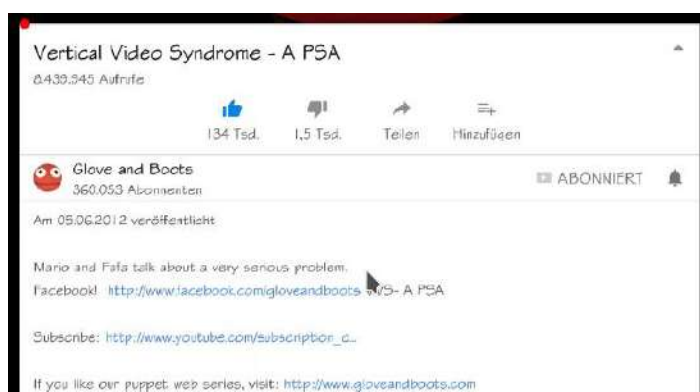
On purpose, Kdenlive **does not** switch to the project bin. This way, you can focus on extracting the required still images from a source video clip, without loosing context all the time. In contrast, with the exiting *Extract frame*, you need to add the extracted still images at some time, so you need to switch to the project bin, loosing the context on your source clip.

Working with Extracted Frames in Higher Resolution than Project Profile

Sometimes, you may need to work in your Kdenlive projects with images stills extracted from your source footage. Now that's easy, thanks to the "extract frame..." and "extract frame to project..." items in the context menu of the clip monitor. See also our earlier Toolbox post [Extract Frame to Project](#).

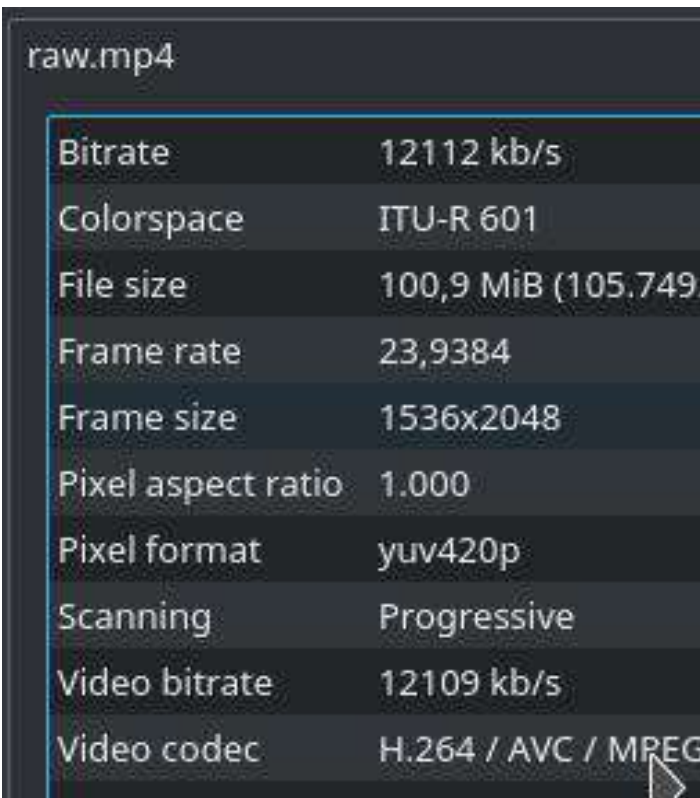
Now, there's a **gotcha** to watch out for: Kdenlive currently extracts frames according to your project settings. That means: if your source footage happens to be of higher resolution than your project settings and even different orientation, then the extracted frame will be in project frame format. In consequence, extracted frame quality might noticeably differ from the same video footage when used side-by-side in your project. Luckily, there's help.

Project Profile ... and Profile-Differing Footage



In some projects you may face source footage that *doesn't match the project profile at all*. For instance, when working with certain screen recordings, especially when recorded on tablets and smartphone. The recordings might be even in a different orientation.

Agreed, such footage *might* be a sign of the – rather hilarious – [Vertical Video Syndrome](https://www.youtube.com/watch?v=f2picMQC-9E) (link to YouTube explanation). Or it might be the sign of an outstanding arthouse production. But there are other sensible reasons, such as their use in tutorial videos: a portrait mobile device screen can be easily composed with a 16:9 scene, leaving room for additional illustrations, explanations, and so on.



A screenshot of a video player's metadata interface. The title 'raw.mp4' is at the top left. Below it is a table of technical specifications. The table has two columns: the property name and its value. The properties listed are Bitrate, Colorspace, File size, Frame rate, Frame size, Pixel aspect ratio, Pixel format, Scanning, Video bitrate, and Video codec.

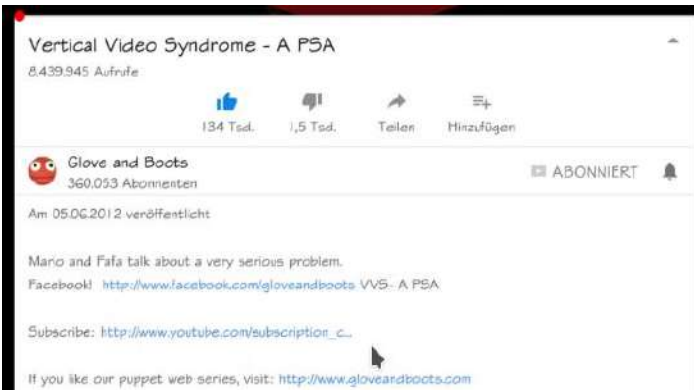
Property	Value
Bitrate	12112 kb/s
Colorspace	ITU-R 601
File size	100,9 MiB (105.749)
Frame rate	23,9384
Frame size	1536x2048
Pixel aspect ratio	1.000
Pixel format	yuv420p
Scanning	Progressive
Video bitrate	12109 kb/s
Video codec	H.264 / AVC / MPEG

To give a concrete example: recording the screen of an Android Tablet, say, a Samsung Galaxy Tab S3 gives raw footage with a frame size of 1536×2048 pixels with 2:3 aspect ratio (because the portrait orientation). Even when recording in landscape orientation, the 3:2 display aspect ratio isn't ideal. And you may very well want to record in original resolution in order to not lose later downstream during production when you may need the reserve in the raw footage.

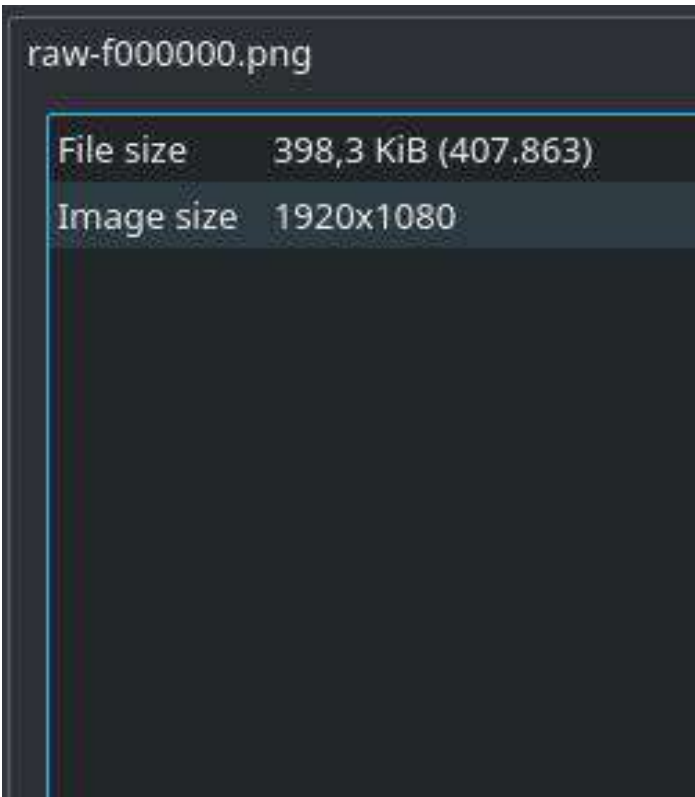
Note

the frame rate displayed by Kdenlive for this footage (see screenshot) is *not even in the right ballpark*. In fact, this footage has a widely varying

frame rate (not to be confused with a variable bitrate), and Kdenlive/MLT/ffmpeg seem to offer wild guesses here, maybe based on the TV color range indicated for the video stream. But a 23500/1001 framerate is used by NTSC, yet this has been recorded with PAL chromaticities on a PAL device. Anyway...



Unfortunately, if you need to work with still images extracted from such source footage, then you might have already met a nasty surprise: Kdenlive's media engine MLT extracts still frames always according to the *project settings*. Consider you have a FullHD 1920×1080 pixels 19:6 project. And the screencast footage is 1536×2048 pixels with 2:3 portrait aspect ratio. Then you end up with extracted frames of 1920×1080 pixels size with a landscape 16:9 aspect ratio and a lot of transparent space, but not the expected 1536×2048. So not only the resolution changed, but also the aspect ratio.



Hardly what you want here, as our detail screenshot shows. When comparing this clip monitor screenshot with the clip monitor screenshot taken from the raw footage, you'll notice their different qualities. It doesn't matter which we you prefer, the issue is that they noticeably differ.

This is a no-no when we need to use both the raw footage as well as the extracted frames in the same project, especially adjacent to each other in the timeline. The differences are clearly visible, unless you compress the resulting video to the extreme of looking rather like a fake [Barbapapa](https://en.wikipedia.org/wiki/Barbapapa) episode (yep, I'm *that old* to have this seen in its time).

Original Resolution Frame Extraction

Of course, after all timeline cuts have been mostly settled with the required extracted frames for stills, we could then manually (re-) extract the frames in their original resolution. Of course, this is not only a daunting but also error-prone task. Been there, done that ... never again.

Fortunately, there's the easy route using the so-called [extract-frames](https://gist.github.com/TheDiveO/57fd76e4d15252232aaacc7e422a79a2) [https://gist.github.com/TheDiveO/57fd76e4d15252232aaacc7e422a79a2] bash shell script (courtesy of your blog post author TheDiveO). Download the bash script from the [extract-frames GitHubGist](https://gist.github.com/TheDiveO/57fd76e4d15252232aaacc7e422a79a2/raw/b3e605eb74737916bffa55bbc1b907e29ee7016d/extract-frames)

[https://gist.github.com/TheDiveO/57fd76e4d15252232aaacc7e422a79a2/raw/b3e605eb74737916bffa55bbc1b907e29ee7016d/extract-frames] and make it executable (`$ chmod u+x extract-frames`).

A word of caution: before you let loose anything on your Kdenlive project directory that makes changes, make sure to have backed up your project first. You have been warned. We take no responsibility for any data losses or other losses you may experience.

Now run the script inside your project directory, where your frame image PNGs are located together with the corresponding video files from which the frames have been extracted. You always need to specify the Kdenlive project filename in order to run the script:

```
$ extract-frames myproject.kdenlive
```

That's all to it! You should now see also Kdenlive's project bin noticing that the image files have been updated. Thus, you can run the script while your Kdenlive project is opened (at least that's my experience so far).

What does this script actually do? It first scans for frame image PNGs with filenames in the form `xxx-f000000.png`. Here, `xxx` is the filename (without extension) of the corresponding video file from which the frame has been extracted. At this time, the script only looks for corresponding video files ending in `.mp4` and `.MP4`.

The `f000000` part now identifies the frame number from which the still frame has been extracted. Now this is posing an interesting question: in which reference system were these frames counted?

Remember that we wrote above that Kdenlive extracts frames from bin clips using the project properties? So, the reference system for counting extracted frame numbers is your project. And that's the reason why you need to tell `extract-frames` of your project: the script learns the project's frame rate in

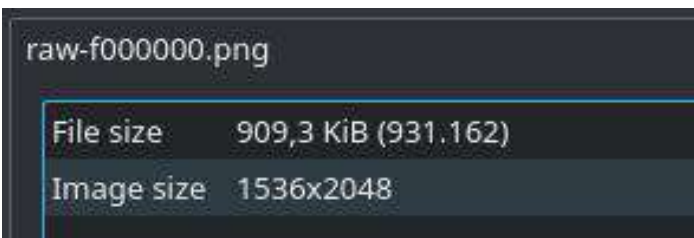
order to correctly handle frame number. Without it, we would later extract the wrong frames in case the raw footage has a different frame rate and thus frame counting from your project.

Note

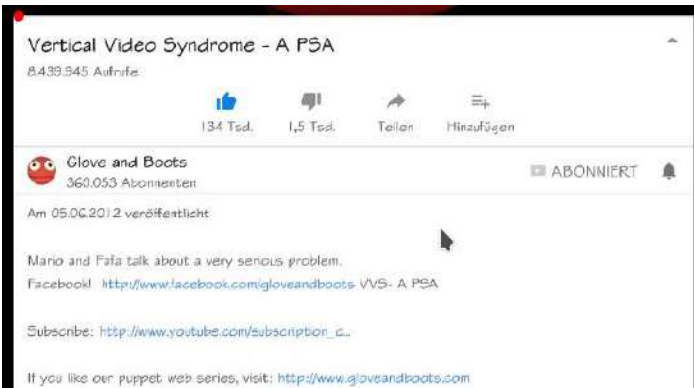
The frame image files can be located not only in the project directory, but also in sub directories. The script won't find any extracted frame PNG files outside your project directory sub-tree, because it doesn't scan your Kdenlive project for extracted frames.

Note

Do not change the project frame rate afterwards, or the frame extraction will get messed up. That's because the frame numbers from the filenames don't match the project settings anymore.



After you've run the `extract-frames` script, you should notice in Kdenlive's clip properties pane that the extracted frame PNGs are now having the correct original frame size and aspect ratio. Just for completeness: the clip preview monitor now shows the same image quality as the original raw footage does. So you're all set to finalize and tape-out, erm, render your project.



If you happen to see color changes at this stage, then please check out our other Toolbox post about [Color Hell: Ffmpeg Transcoding and Preserving BT.601](#).

Work Flow in a Nutshell

Your overall workflow doesn't change much, just throw running the `extract-frames` script inside your Kdenlive project directory whenever you need to update the frame image files with full-resolution images from your raw footage. You can run and rerun the script at any time while you work on your project.

But remember to not change the project frame rate while working on your project, as this will put the frame numbers encoded in the filenames out of sync.

References

[extract-frames GitHubGist](#)

[<https://gist.githubusercontent.com/TheDiveO/57fd76e4d15252232aaacc7e422a79a2/raw/b3e605eb74737916bffa55bbc1b907e29ee7016d/extract-frames>]

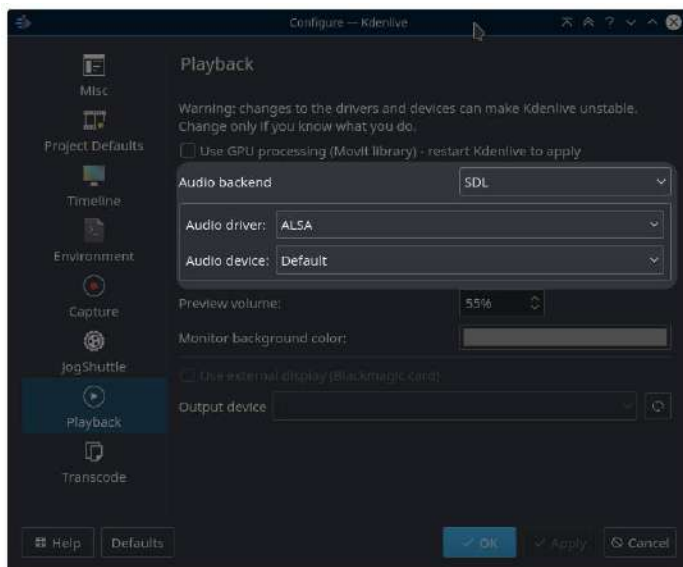
[Vertical Video Syndrome](#) [<https://www.youtube.com/watch?v=f2picMQC-9E>] – A PSA by Glove and Boots on YouTube.

[Color Hell: Ffmpeg Transcoding and Preserving BT.601](#)

Fixing Unwanted Slow Audio Fade-Ins with Some USB Audio Cards

Do you suffer from an unwanted slow audio fade-ins whenever starting playback in the timeline or in the clip monitor, while you don't have any audio fade effects applied at all? Turns out this is some odd interference between some(!) USB audio cards and the PulseAudio sound backend...

ALSA to the Res-Cue



Luckily, there's an easy remedy in case you're affected.

Go to the menu *Settings > Configure Kdenlive*, then in the configuration dialog select the *Playback* section. Change the *Audio driver* from *Automatic* to *ALSA*. Leave the *Audio device* set to "Default", so your desktop audio device settings apply.

Click *OK*, and you're done.

Your timeline and bin clip audio playback should now be working as expected, without any unwanted slow audio fade-ins anymore.

You'll find the corresponding option in the main menu *Timeline* ▶ *Disable Timeline Effects*. This disables or re-enables all timeline effects, that is, timeline clip effects and track effects.

However, please note that prior to Kdenlive 16.08.1, track effects are not properly disabled or re-enabled by *Timeline* ▶ *Disable Timeline Effects*.

Please see [Effects everywhere](#) about how to temporarily disable bin clip effects.

Background Information

Please note that the unwanted ~2 seconds audio fade-in only happens with some USB audio cards, but not others. I've noticed when trying a Steinberg UR22mkII USB audio interface.

Using the UR22mkII in Kdenlive using the stock audio settings was impossible, as the automatic fade-in made any voice over editing a complete and utter fail. Curiously, the UR22mkII worked beautifully when I played back audio using an Android tablet (that's a beautiful aspect of the UR22mkII: it's designed to be used with mobile devices). For comparison, my (much more bulky) Behringer QX1202USB doesn't exhibit the strange behavior even with the default audio settings in Kdenlive, or when using PulseAudio.

And what is even more strange and surprising: at least some other software, such as VLC, are unaffected either, even when using PulseAudio for audio output.

Unfortunately, no-one was able to give me the solution; but luckily, in the end I found it myself after some trial and error. Hopefully my solution is of help to those Kdenlive users experiencing the same strange audio fade-in behavior.

Full Luma

Contents

- [Full Luma](#)
 - [Advance Clip Property - Full Luma Range](#)

Advance Clip Property - Full Luma Range

A clip can have its full luma flag set from the [Clips](#)

From [this](#) [<http://www.kdenlive.org/forum/what-does-full-luma-exactly-do#comment-18298>] forum post by Yellow

The full luma option refers to video sources with luma recorded outside of the typical ‘broadcast’, ‘restricted’ 16 - 235 8bit range.

This option fixes problems round tripping video files with luma outside of the 16 - 235 8bit range. By default when we import a video it is handled and displayed based on the 16 - 235 range, levels below ie: 0 to 15 and those above 235 to 255 are compressed to 0 and 255, so shadows get overly dark and highlights saturated, in the preview within **Kdenlive** for camera sources that are full range.

Then when we render out, those levels remain in the final video, compressed shadows and saturated highlights, so there is a mismatch between the levels in the video we import compared to that exported. **This only really matters for round tripping to an external application.**

For any playback on DVD’s, Blu-ray and including the web like Vimeo or Youtube our video levels in the final rendered output should be in the

16 - 235 range, otherwise we see so called 'gamma shifts', 'washed out' or saturated playback depending on playback handling.

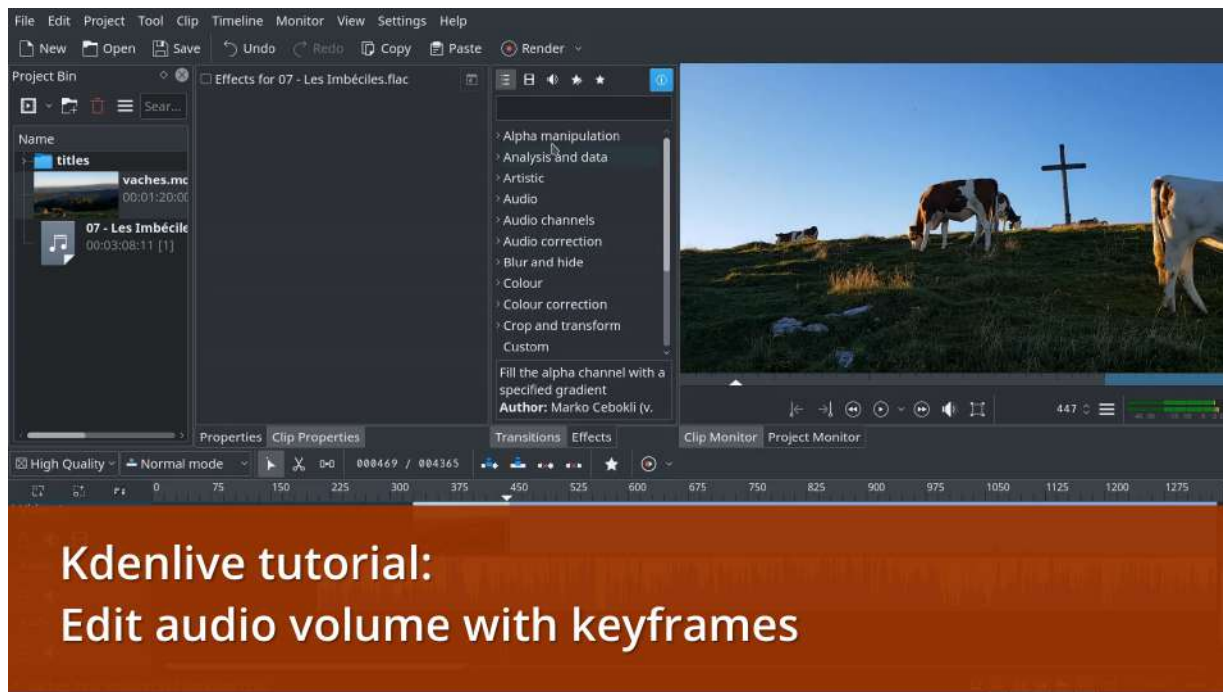
However really we want to have control of the levels adjustment in **Kdenlive** i.e.: 0 - 255 into 16 - 235 so full luma option changes the handling of the files and preview / scopes are based on an alternative YCbCr to RGB calculation.

By setting the full luma on, which should only be done for camera sources known to be full range 0 - 255 or even 16 - 255 such as FS100, Nex5, HV20, HV30 and probably many more consumer cameras. Canon and Nikon DSLR's too but a little more complicated, we can export video with the levels as imported, BUT and it's a big but, that is without doing any RGB operations in **Kdenlive**, so no effects, color correction etc. If any effects are added then the output will be restricted range again.

For me I use full luma all the time, it allows roundtripping a video edit and maintaining levels for grading in an external application that offers 32bit float precision. When it's necessary to otherwise happy with **Kdenlive's** SOP/SAT and scopes.

How to editing audio volume with keyframes

In this *HOWTO* video we show you how to **edit the audio volume of a clip** using keyframes: learn how to add a *Volume* effect to adjust the volume of a clip, how to add and edit keyframes in the effect properties, and how to manage and edit keyframes directly in the timeline. Double click to add a keyframe, remove a keyframe by dragging it above or below the clip.



[<https://kdenlive.org/wp-content/uploads/2016/12/volume.mp4>]

How to fading in-out Kdenlive titles

In this short *HOWTO* video, we show you how to (smoothly) fade in and out Kdenlive titles over a video clip, fading from and to transparency. The key to success is to use a **Composite & Transform** transition with keyframes (**Affine** and **Composite** will work too). **Don't** use the Fade from/to Black effects though, as these effects remove the title transparency information.



[<https://kdenlive.org/wp-content/uploads/2017/01/Kdenlive-Title-Fading.mp4>]

Notes

These are the individual steps shown in this HOWTO video:

1. Add a Composite & Transform transition to the title clip.
2. First keyframe: set the opacity to 0%. This marks the beginning of the fade in (ramp up).
3. Second keyframe: add a new keyframe where you want the title to be fully faded in, set the opacity to 100%. Set the type of the

keyframe to Linear.





- The rationale to set this keyframe to Linear is that otherwise Kdenlive (MLT) calculates a smooth curve fitting to the previous and following keyframe, causing the opacity value to overshoot. With a maximum possible opacity of 100% you won't notice. However, when you use a maximum opacity of less than 100%, then this overshooting may become visible.
 - Ensure that the first keyframe is Smooth. You can only adjust the type of the first keyframes after you've added a second keyframe.
4. Third keyframe: add another keyframe near the end where you want to start fading out the title. Leave the opacity at 100%. Set the keyframe type to Smooth.
 5. Fourth keyframe: add a final keyframe, where you set the opacity to 0%.

Done.

In case you are scratching your head now, why this mixture of smooth and linear interpolated keyframes? Then head over to our new article on [The “Smooth” Keyframe Interpolation](#).

Insert and Overwrite: advanced timeline editing

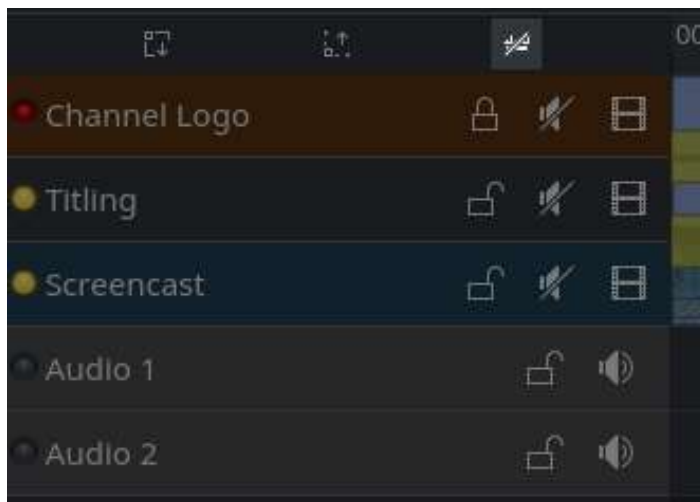
New in version 15.12.0.


Kdenlive offers advanced timeline editing functions. In this article we're looking at the *insert*  and *overwrite*  advanced editing functions. A later article then will cover the opposite *lift*  and *extract*  functions.

When inserting or overwriting some part in the timeline with some part from a clip, we now face two zones, so how does this work out at all? We only want to deal with three points, that is, with one zone and a point (for that reason this is also sometimes termed three point editing). In consequence, there are two different insert/overwrite operations:

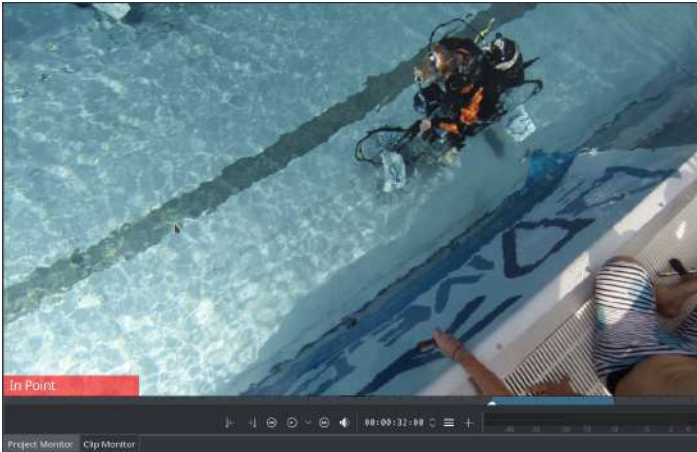
1. insert/overwrite a clip zone into timeline at some point (cursor/playhead), or
2. insert/overwrite a clip starting at some point into a timeline zone.



Insert Clip Zone into Timeline at Timeline Cursor

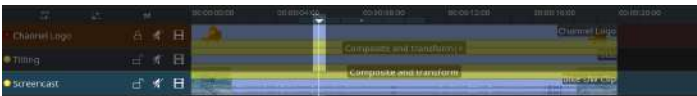


As we're going to insert a clip zone into the timeline, first make sure that the *switch for using timeline zone is crossed out*  (it's off). This is also shown in the screenshot. (You'll find this switch above the track headers, next to the track size zoom in/out controls.)

A visual clue (albeit a rather unintrusive one) is that the **timeline zone bar** is now *dimmed*.

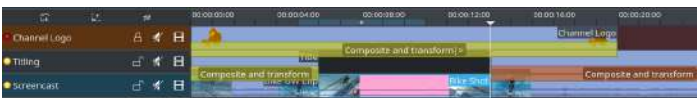



Next, mark the **clip region** of the source clip you want to insert into the timeline. You do this as usual, using either the  and  shortcuts, or the set zone in/out buttons of the clip monitor.



Now **place the timeline cursor** to where you want to start with the insert.

Also make sure to **select the correct track** for insertion – using the `cursor up` and `cursor down` keys. (Remember that the currently selected track is marked with the semi-transparent selection color, the exact color of which depends on your particular color theme.)

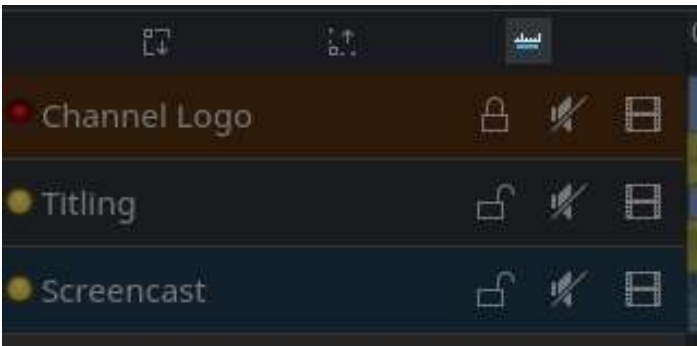



Finally press the \vee shortcut, or click the *insert clip zone toolbar button* , or use *Timeline* \triangleright *Insertion* \triangleright *Insert Clip Zone in Timeline*.

Note

- Insertion starts from the timeline cursor, and not from the timeline zone start (because we chose to ignore it in our very first step).
- Locked tracks are unaffected, such as the topmost track in our example.
- Unlocked tracks get affected in that whatever is at the insertion point and later in the timeline gets shifted away to make room for the insertion.

Insert Clip (from In Point) into Timeline Zone



This time, we're going to insert some part of a clip to *exactly fit* into the timeline zone. So we now need to switch on using the *timeline zone* . This is also shown in the screenshot. (You'll find this switch above the track headers, next to the track size zoom in/out controls.)

A visual clue (albeit a rather unintrusive one) is that the **timeline zone bar** is now *bright*.




This time, we only need to **set the in point** for our source clip. The out point doesn't matter, as it will be later determined automatically by the length of the timeline zone.



Now, place **mark the timeline zone** into which you want to insert a part of your source clip. Notice that the timeline cursor position now doesn't matter.

Make sure to **select the correct track** for insertion – using the `cursor up` and `cursor down` keys.




Finally press the `v` shortcut, or click the *insert clip zone toolbar button* , or use *Timeline > Insertion > Insert Clip Zone in Timeline*.

Note

- Insertion starts from the beginning of the timeline zone, and not from the timeline cursor position (because we chose to enable the timeline zone in our very first step).
- Locked tracks are unaffected, such as the topmost track in our example.


- Unlocked tracks get affected in that whatever is at the insertion point and later in the timeline gets shifted away to make room for the insertion.

Overwrite Timeline with Clip Zone

overwrite 

(will be documented later)

Overwrite Timeline Zone with Clip

overwrite 

(will be documented later)

Kdenlive transitions

Depending on their background in video editing, users may find **Kdenlive transitions** somewhat confusing. Hopefully, this article clears up this confusion surrounding Kdenlive transitions, at least to some degree.

Kdenlive Transitions: 3-in-1

In Kdenlive, **transitions** can roughly be classified into three different types as follows:

Type of Transition	Description
1. Clip-to-Clip Transition	Gradually replaces one clip by another clip. Has exactly two implicit keyframes, for start and end. This is what many users usually understand transitions to be.
2. Dynamic Compositing	For combining two clips, and the way of combination may vary with time. Supports user-defined keyframes that allow to control at least certain parameters.
3. Layer Compositing	For combining two clips in a constant, static way: much like you see layer compositing in image tools. As no keyframes are supported, this type of compositing is static, thus invariant of time.

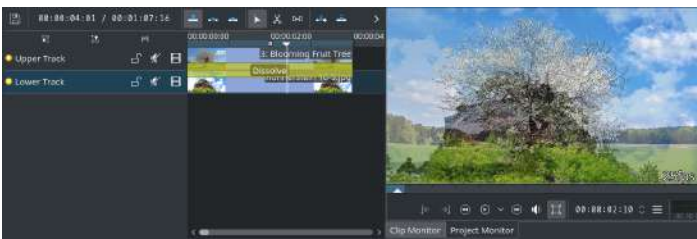
Historically, Kdenlive borrows the term **transition**, with its 3-fold meaning, directly from the [multimedia engine MLT](https://mltframework.org/) [https://mltframework.org/]. MLT does all

the video and audio processing according in your timeline. In the MLT universe, transitions basically «merge» video frames from upper tracks with video frames from lower tracks, producing result frames.

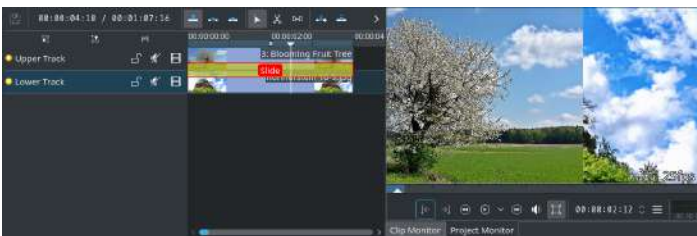
In contrast, many users experienced in video editing have come to know transitions as a mechanism to transition between to adjacent clips. However, Kdenlive doesn't even support such in-track transitions. Instead you need to place these clips on separate tracks, and then you add a Kdenlive transition for combining these clips in some clever way.

1. Clip-to-Clip Transitions

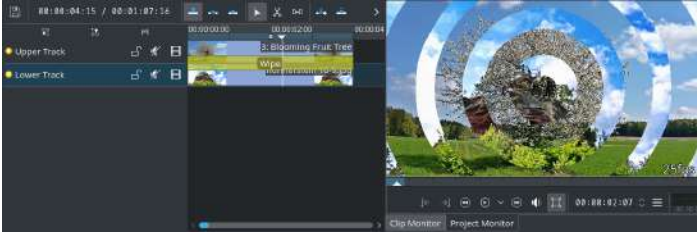
Let's start with those **archetypical transitions** most users would probably expect when they hear the word *transition*: the dissolve, slide, and wipe transitions. See for yourself...



Dissolve: gradually transitions from one clip to another. So it's kind of fading between the two clips. (See also the Wikipedia article on [Dissolve](https://en.wikipedia.org/wiki/Dissolve_%28filmmaking%29). [https://en.wikipedia.org/wiki/Dissolve_%28filmmaking%29])



Slide: gradually replaces one clip by another clip, by traveling from one side of the frame to another (See also the Wikipedia article on [Wipe](https://en.wikipedia.org/wiki/Wipe_%28transition%29). [https://en.wikipedia.org/wiki/Wipe_%28transition%29].)



Wipe: one clip gradually replaces another clip, often in form of some shape. (See also the Wikipedia article on [Wipe](https://en.wikipedia.org/wiki/Wipe_%28transition%29) [https://en.wikipedia.org/wiki/Wipe_%28transition%29].)

These three transitions don't offer any (user-) keyframes. Instead, their *start* and *end* keyframes are *implicit* and fixed to the *start* and *end* of the transition respectively.

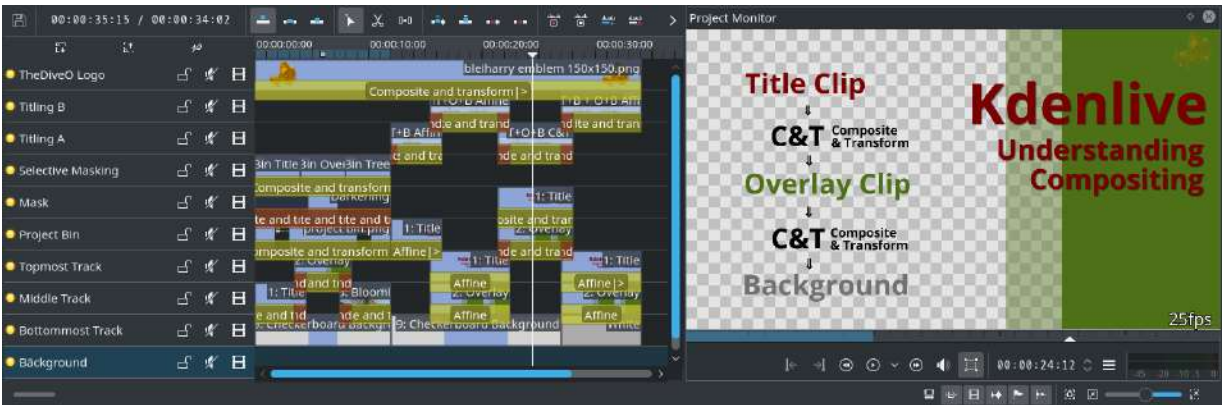
Because Kdenlive always uses two separate tracks for transitions, there's a peculiarity to note: normally, as time moves forward in the timeline, these transitions change (or kind of fade) from the clip on the upper track to the clip on the lower track. The somewhat strangely named transition parameter **Reverse** allows you to switch the track roles: if **Reverse** is checked, then these transitions change from the lower track to the upper track, as time progresses.

Simply put:

▼ **Reverse off:** transition from upper track to ▼ lower track.

▲ **Reverse on:** transition from lower track to ▲ upper track instead.

2. Dynamic Compositing Transitions



To some degree, Kdenlive supports (simple) compositing in its timeline. Actually, even this simple compositing can get you a long way in many projects (as the above screenshot may hint at). Kdenlive currently offers the following (keyframable) compositing transitions:

- **Affine** – allows to size, rotate, skew, and position. Together with keyframes, this transition is really versatile. Its only drawbacks are: it is slower than other complex transitions (due to the affine transformation), and it doesn't support wipes (which only **Composite** and **Region** support in this class of transitions).
- **Cairo Blend** – a simple compositing transition, supporting several compositing modes. In addition, the opacity of the upper frames can be controlled. This transition also supports keyframes.
- **Cairo Affine Blend** – this has the functionality of both **Affine** and **Composite**: position, rotate (you can even control the center of rotation!), and finally skew. And all this is keyframable.
- **Composite** – allows keyframed dissolves, wipes, and swipes; and all this in the same transition. In contrast to Affine, it does not support rotation or skewing. The downsides of Composite are: luma bleed, and less precise position control. When compared to Affine, the Composite transition is much faster, albeit at the cost of luma bleed.
- **Composite & Transform** – this is a rather new transition that made its debut with Kdenlive 16.04. It allows to easily composite clips onto each other (supported several compositing modes), as well as to move the upper track clips. However, there is neither support for scaling, nor for rotation, but for dynamic opacity. But

keyframes are supported. In those situations, use **Affine** or **Cairo Affine Blend** instead.

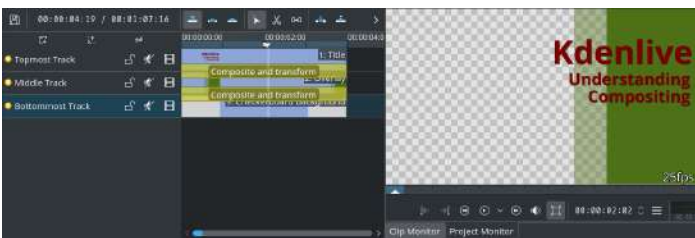
- **Region** – like **Composite**, but restricted to a region in form of a matte. In the **Region** transition properties, this matte is called the **Transparency clip**.

Fun Fact: Admittedly, MLT and Kdenlive offer a lot of choice here; probably too much choice. A non-representative poll in our official Kdenlive G+ community showed that **Composite is used the most often**, followed by **Composite & Transform** and **Affine**.

Compositing with Transparency

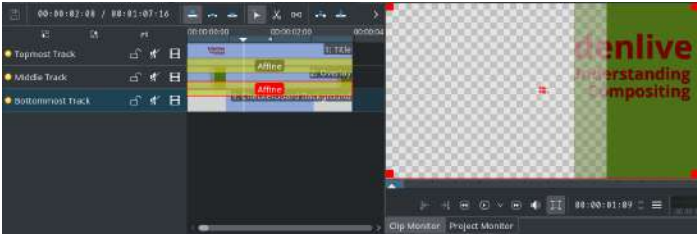
Composite & Transform is Kdenlive's new darling, as it will make life much easier for many, if not most Kdenlive users. When compared to **Affine**, this new transition is also faster in the standard compositing cases.

Moreover, **Composite & Transform** defaults to the alpha compositing mode (paint) *over* – which is what probably most users need when compositing. In contrast, **Affine** uses the atop alpha compositing strategy that can drive unexpected users mad. But see for yourself...



Composite & Transform: whatever semi or non-transparent is in the frame from the upper track, it will be painted over the frame from the lower track. Hence the name of this compositing mode: over. Please note: in the transition properties, this mode is to be found as **Compositing: Alpha Blend** instead.

In addition, **Composite**, **Cairo Blend**, and **Cairo Affine Blend** also use the same over compositing strategy, as **Composite & Transform** does. For **Cairo Blend** and **Cairo Affine Blend** this **Blend mode** is called **Normal** instead.



Affine: as the simple rule of thumb, transparency is solely controlled by the *lower* track. Any transparency information from the upper track simply gets completely ignored. In consequence, if your lower frame has regions of full transparency, whatever falls within them on the upper frame will be invisible! You can see this result also in the screenshot.

At least at this time, **Composite & Transform** does not support this alpha handling as **Affine** does.

Please see also for further information:

- our separate Kdenlive article on [Compositing with transparency](#).
- the Wikipedia article on [alpha compositing](#)
[https://en.wikipedia.org/wiki/Alpha_compositing].
- the SVG Open 2015 paper by Craig Northway on [understanding compositing and color extensions in SVG 1.2 in 30 minutes!](#)
[<http://www.graphicalweb.org/2005/papers/abstractsvgopen/index.html>] – especially the Porter Duff operator table in chapter 6 with resulting alpha calculation column.

3. Layer Compositing Transitions

This third kind of Kdenlive/MLT transitions mostly **work similar to layer modes in image editors** (such as *GIMP* <<https://www.gimp.org/>> `). **These static layer compositing transitions do not have any parameters at all.** This category actually has the most Kdenlive transitions to offer:

Layer Compositing

- Addition

- Addition Alpha
- Burn
- Color Only
- Darken
- Difference
- Divide
- Dodge
- Grain Handling: Extract / Merge
- Hardlight / Overlay
- Hue
- Lighten
- Multiply
- Overlay / Hardlight
- Saturation
- Screen
- Softlight
- Subtract
- UV Map
- Value
- Video Quality Management

Alpha Compositing

- Alpha atop
- Alpha in
- Alpha out
- Alpha over
- Alpha XOR
- Matte

Note

Kdenlive's (or, MLT's) fixed compositing transitions don't have a transparency parameter. To some extent, you may substitute the **Cairo Blend** transition, which has an opacity parameter.

Note

Users are often asking for **Kdenlive support of in-track transitions** (Dissolve, Slide, Wipe). Unfortunately, due to the way Kdenlive's multimedia engine MLT works, this requires a large amount of code rewrite, not to mention extensive testing afterwards to ensure the expected stability. Due to our limited developer resources, **in-track transitions are thus not on our near-term roadmap**. We will gladly accept coding help, so if you are willing to accept this challenge, please let us know!

New in version 21.08.

In-track or same-track transition is implemented with Kdenlive 21.08.

Library clips with image sequences, Titles, Color clips

New in version 16.12.0.

Kdenlive 16.12.0 will see **further improvements to its library clip expansion** (and, in consequence, to MLT playlist import). Not every Kdenlive user will notice the improved functionality, as it affects only library clips where the same image sequence or title is used multiple times.

In particular, if you (re) use the same image sequence clip, title clip, or even color clip multiple times **in the same library clip**, such image sequences and titles **will only be added once to your project bin**. Before Kdenlive 16.12.0, multiple instances of the same clip in the timeline unfortunately resulted in these clips getting added multiple times to the project bin. To emphasize, this undesired behavior only affected image sequences, titles, and color clips.

When expanding a library Kdenlive 16.12.0 will now check image sequences, titles, and color clips in the timeline for their content, clip name, and original bin folder location. If there is a match, then such a timeline clip will be added only once to your project bin.

Note

A “library clip” is a clip with the “.mlt” suffix, and in particular, a clip that has been added to your personal Kdenlive library. They show up in Kdenlive’s library pane.

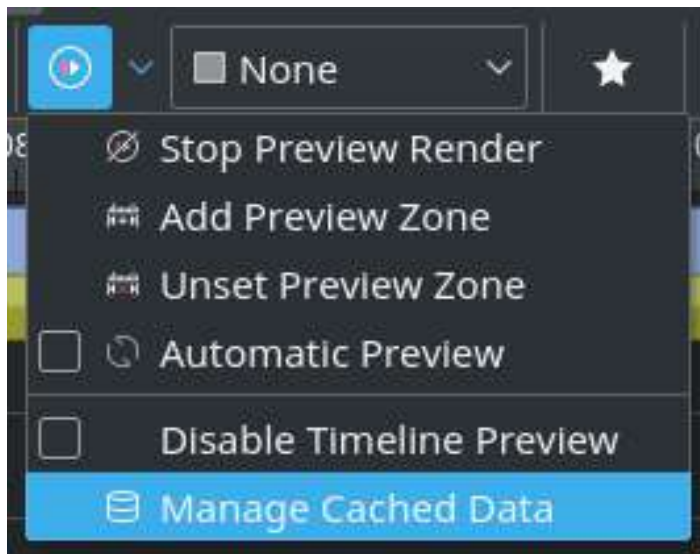
Internally, when you select some clips & transitions from the timeline and add them to Kdenlive’s library, these clips and transitions are stored in the file system in a “.mlt” file (which is an MLT playlist to be precise), and shown in the library widget as a new library clip.

Technically, Kdenlive projects are also MLT playlist files. When you add a clip from the library pane to your project this simply adds the underlying MLT playlist file to your project. But in contrast to other clips, such as an MP4 video, you can “expand” library (that is, MLT playlist) clips to get back the individual clips and transitions inside it.

Manage Cached Data

New in version 16.04.1.

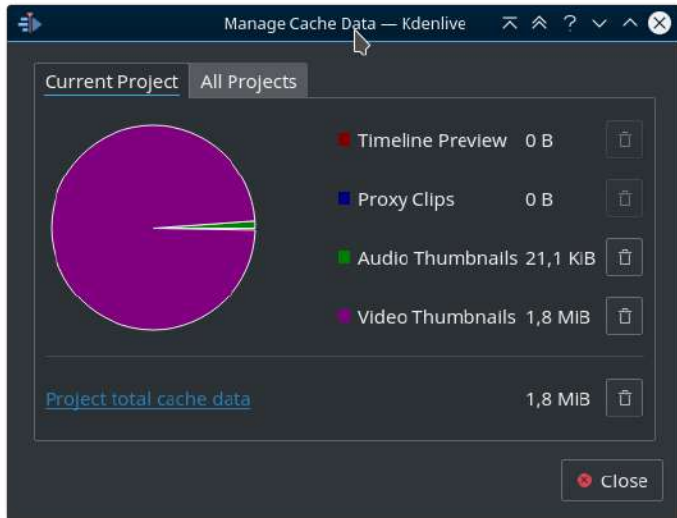
Kdenlive 16.04.1 rather quietly introduced a useful new dialog, to be found in the timeline toolbar: *manage cached data*. This dialog allows you to see how much disk space your projects each eat up. You can then also selectively clean up project-cached data when you don't need it anymore after finishing a project.



You'll reach this new dialog via the timeline toolbar *preview render* button, then *Manage Cached Data*.

This dialog then features two tabs: cached data for the current project, as well as an overall view on all projects.

Current Project Tab



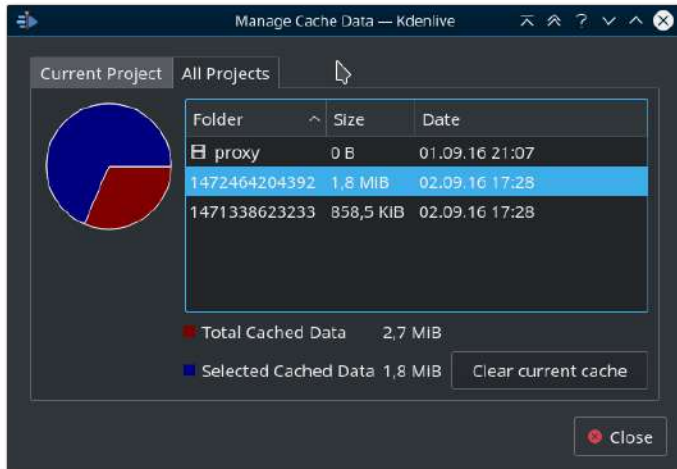
The *Current Project* tab gives a detail view on your currently loaded project, with a nice pie chart. It shows you at a glance how much space individual elements of your project need for caching; such as: the timeline preview rendering cache, proxy clips, audio and video thumbnails.

Here, you can selectively delete only some cached data by simply clicking on the corresponding *trash can* buttons.

To remove all cache data for the currently loaded project, click on the bottom *trash can*.

Finally, when you click on the link which is left to the bottom trash can, the folder containing the project cache will open in your file manager.

All Projects Tab



The *All Project* tab gives a detail view on your currently loaded project, with a nice pie chart. It shows you at a glance how much space individual elements of your project need for caching; such as: the timeline preview rendering cache, proxy clips, audio and video thumbnails.

Here, you can selectively delete only some cached data by simply clicking on the corresponding *trash can* buttons.

To remove all cache data for the currently loaded project, click on the bottom *trash can*.

Finally, when you click on the link which is left to the bottom trash can, the folder containing the project cache will open in your file manager.

Restoring Audio Mixing

New in version 16.08.

Nobody's perfect. So yes, once in a while you may experience unexpected odd audio mixing in Kdenlive projects. While audio from some tracks will mix properly, audio from certain other tracks mutes all remaining tracks. Rejoice! Kdenlive 16.08 now comes to your rescue.

Restoring proper audio mixing is easy:

1. **Load your project** into Kdenlive 16.08 (or later).
2. **Add a new track** to your timeline; whether it's an audio or video track doesn't matter.
3. Then you may **delete** this track again, if you don't plan to use it anyway.
4. Check playback.
5. **Save** your project.

No, I'm serious – even if this sounds exactly like clueless support advice. If you now play your project in the timeline, automatic audio mixing across all timeline tracks should work again normally.

Note

This upgrades your Kdenlive projects to the most recent project version. So you won't be able to edit it again in an older or ancient Kdenlive version.

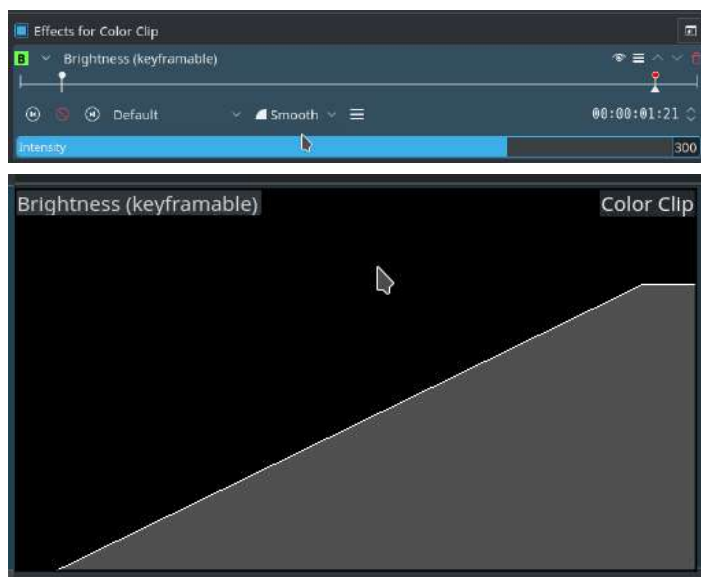
As a few of my very own projects had issues with audio mixing I could successfully fix them using Kdenlive 16.08. Enjoy!

The “Smooth” Keyframe Interpolation

Did you ever wonder why Kdenlive’s **smooth interpolation mode** may **overshoot** between keyframes? And how to tell Kdenlive to avoid such situations?

I did wonder, and so I was starting to look behind the scenes and were introduced to the strange world of smoothness. Don’t worry, there won’t be any mathematics for you to learn and understand. Just watch the figures. We’ll also show you how to avoid such overshoots in those situations you don’t want it. And for the really curious what the mathematics behind “smooth” interpolation are: just see the end of this toolbox post.

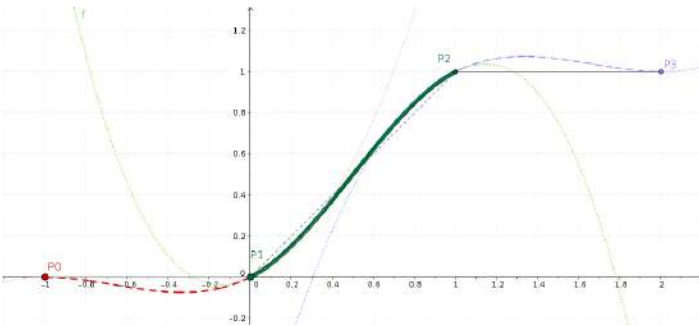
The Fade-In Ramp



Let’s start with a simple ramp, as shown here. We use two keyframes, one with a low value setting, and the other with a high value setting. The particular values don’t matter. We set both keyframe to the interpolation mode smooth.

The effect display inside the timeline clip looks like a straight ramp. But if you watch the interpolated values closely while scrubbing the timeline, you should notice that the slope of the ramp varies. At the end and beginning the slope is smaller than in the middle, where it is higher.

But what exactly is going on here?



So I discovered this sweet tool [GeoGebra](https://www.geogebra.org/) [https://www.geogebra.org/] (Open Source) for trying out the Mathematics inside Kdenlive's MLT engine.

Eh, no panic!

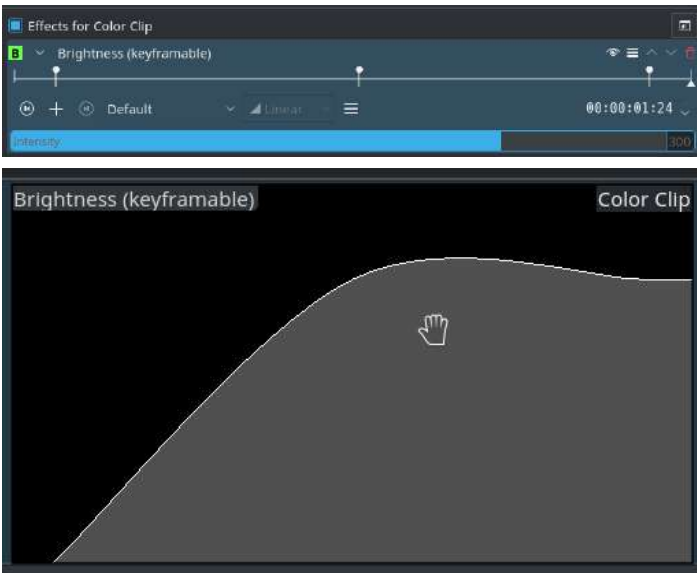
This figure shows two keyframes $P1=0$ and $P2=1$, which is a fairly typical ramp up setting. In case you already wonder: it doesn't matter at which exact frames the individual keyframes are. If that sounds odd, it probably is. But this is how the underlying math works (you know: see the end for details).

The smooth interpolation that MLT will calculate is drawn as a thick green line. It's bend a little bit like the capital letter S, but then, not really too much.

And if you look closely, then beginning and ending slope of the green line aren't horizontal – at least what I expected at first.

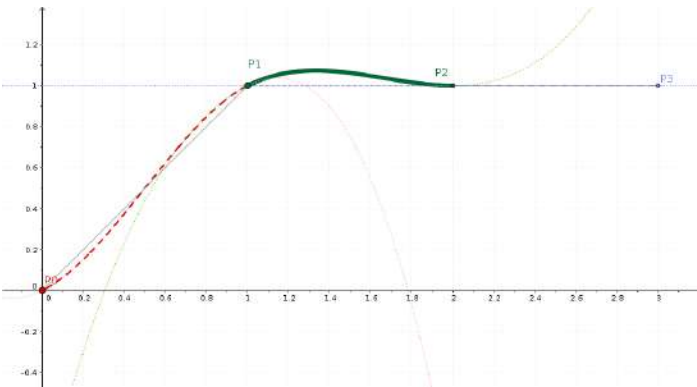
You may wonder what the two other keyframes $P0$ and $P3$ are good for? Well, the math underneath always require four keyframes in order to interpolate segment-wise between any two adjacent keyframes. And if there is no preceding ($P0$) or trailing ($P1$) keyframe, then we'll simple repeat the left ($P1$) or right ($P2$) keyframe.

Ramp-Up, and ... Overshoot



Now let's add a third keyframe, so this looks like a ramp with a plateau. This is shown in the screen shots.

And now, the ramp gets a clearly visible bump instead of a sharp bend. Well, this looks smooth, but not exactly what we may have intended? So why is this the way it is?



This is now our ramp with a plateau: $P_0=0$, $P_1=1$, $P_2=2$. Don't worry about the keyframe numbering, though.

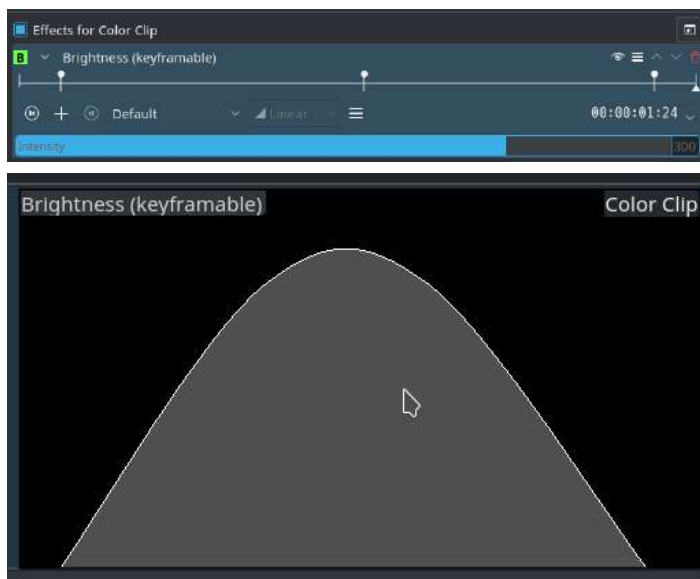
Did you expect the plateau to be, well a *straight* plateau? Me too. But you may have already notice that Kdenlive doesn't exactly behave like this.

Instead, the interpolation math causes the interpolated values to overshoot, as you can easily see in the figure.

What the underlying math does is this: the interpolation is smooth, so that the slope to the *left* of P1 is the same as to the *right* of P1. Yeah, that's a slightly different "smooth" from what you might have been expecting.

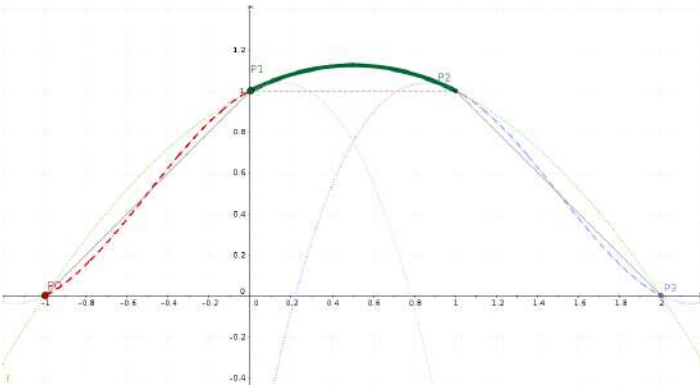
If you want the plateau to be straight instead, then you must set the interpolation mode of the keyframe P1 to *linear* instead. By the way, this doesn't change the *previous* smooth segment in any way. And this results in a "rough bent" at P1, but luckily you probably won't notice in most situations.

Ramp Up-Flat-Down



Let's add another, fourth keyframe, so we have: ramp-up first, then flat, then ramp-down. A fairly typical fade-in and fade-out keyframe template.

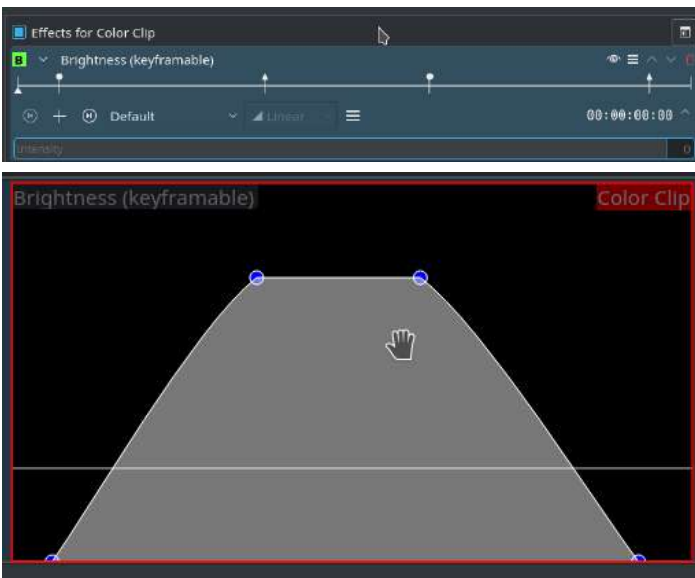
And look, what's happening: we've good a hunch-back, but not a nice and flat middle section. Gosh!



This time, we look at the middle section P1-P2. To the left, we see the up ramp, to the right, the down ramp.

Again, smooth now means that there is no sharp bend in the segments. Instead, the left+right slopes are continuous at P1 and P2; that is, in the middle section. And this causes our interpolated value to overshoot. So awful. So sad. Shhh.

Make Flat Great Again



Now, how do we get a flat top? Fortunately, that's easy to achieve, as you can see from the screenshots.

1. first keyframe: smooth,

2. second keyframe: interpolated(!),
3. third keyframe: smooth,
4. fourth keyframe: interpolated (albeit that does not really matter if there are no further keyframes).

So great!

For the Curious (Furious?)

As you may (or rather may not) remember, Kdenlive's rendering engine is the [MLT Multimedia Framework](https://www.mltframework.org/) [https://www.mltframework.org/]. While [MLT has smooth interpolation](#)

[https://www.mltframework.org/blog/v0.9.0_released_with_new_property_animation_api/] since around mid-2013, Kdenlive only later caught up and now supports all three interpolation modes linear, discrete, and finally smooth. As can be seen from the MLT [source code](#)

[https://github.com/mltframework/mlt/blob/e8b92affcafb206a5af0d446c446ed339d79a8b/src/framework/mlt_property.c#L1087], smooth interpolation is done using a [Catmull-Rom spline](#) [https://en.wikipedia.org/wiki/Centripetal_Catmull%E2%80%93Rom_spline]. In particular, MLT uses the so-called “uniform” variant, because it is so simple. The downside is that this smoothing sometimes has the unwanted property of overshooting, especially when you least expect it.

Editing Surround Sound with Kdenlive

Contents

- [Editing Surround Sound with Kdenlive](#)
 - [External Tools Used Here](#)
 - [Creating New Surround Sound](#)
 - [Create and Edit Surround Sound with Audacity](#)
 - [Muxing Video and Audio Together](#)
 - [Editing Existing Surround Sound](#)
 - [Extract and Split the Audio Track](#)
 - [Import Audio Tracks into Kdenlive](#)
 - [Rendering the Project](#)
 - [Compose a Surround Sound Audio File](#)
 - [Muxing Video and Audio Together](#)

At the time of writing, **Kdenlive** only supports rendering a project to a video containing stereo audio. It is not possible to render to more audio channels or to explicitly map audio tracks to channels in the rendered audio. In order to edit and create surround sound, some manual steps, including external tools, are required.

This guide is using a 6 channel 5.1 surround sound as example.

External Tools Used Here

- [Audacity](http://audacity.sourceforge.net/) [http://audacity.sourceforge.net/] - Free Audio Editor and Recorder
- [avconv](http://libav.org/avconv.html) [http://libav.org/avconv.html] - A Video and Audio Converter

Note

Kdenlive uses ffmpeg, while on (k)ubuntu, ffmpeg is deprecated and avconv is used instead. So these (and possibly other) distributions already have avconv installed.

[Creating New Surround Sound](#)

This guide describes one possible workaround using **Audacity** to create and render a 5.1 surround sound audio track that can be added to the video rendered by **Kdenlive**.

Note

More advanced features such as surround panning (i.e. let a sound move from rear to front) are beyond the capabilities of Audacity - but it is possible to create similar effects manually.

[Create and Edit Surround Sound with Audacity](#)

The following example of a simple 5.1 surround sound is used in this guide:

- Some original field recording from the front (stereo)
- Some voice from the (front) center (mono)
- Some music from the rear (stereo)

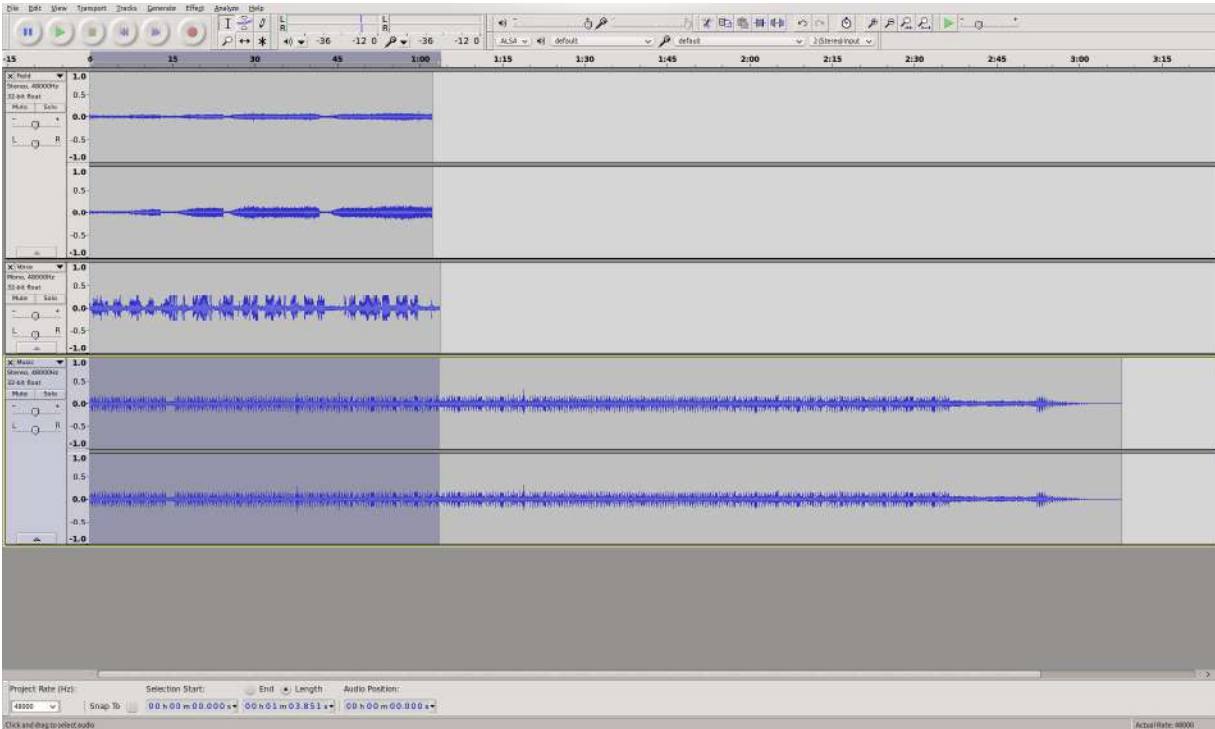
If, like in this example, some original field recording from a video clip is supposed to be used to create the surround sound audio track, it can be easily extracted using Kdenlive with *Extract Audio* ▶ *Wav 48000Hz* from the context menu of the clip. This creates a WAV audio file in the same folder where the video clip is located.

The audio clips to be used in this example are:

- `Field.wav` (stereo) for Front L+R
- `Voice.wav` (mono) for Center

- Music.mp3 (stereo) for Surround L+R (rear)

In a new Audacity project, they can be imported in the above order with *File* ▶ *Import* ▶ *Audio...*, the project should now look something like this:



The channel mapping for 5.1 surround sound is:

- 1 - Front Left
- 2 - Front Right
- 3 - Center
- 4 - LFE
- 5 - Surround Left
- 6 - Surround Right

Note

LFE (Low Frequency Effects) is often referred to as “subwoofer channel”, which is not quite correct. A surround sound speaker setup is perfectly valid without subwoofer. In this case the surround sound system will redirect the LFE channel to “large” speakers, usually the front speakers.

The stereo track “Field” can now be mapped to Front L+R, “Voice” to Center and “Music” to Surround L+R. There is just one problem: the Surround (rear) speakers of a surround speaker system are usually “small” and not able to reproduce low frequencies. So it would be necessary to map the low frequency range of the “Music” track to the LFE channel, otherwise the music might sound a little “thin”.

To do this, the “Music” track can simply be duplicated with *Edit ▸ Duplicate* after selecting it, and then *Split Stereo to Mono* from the context menu of the third track. Then one of the two mono tracks can be deleted; the other one can be renamed to “LFE”.

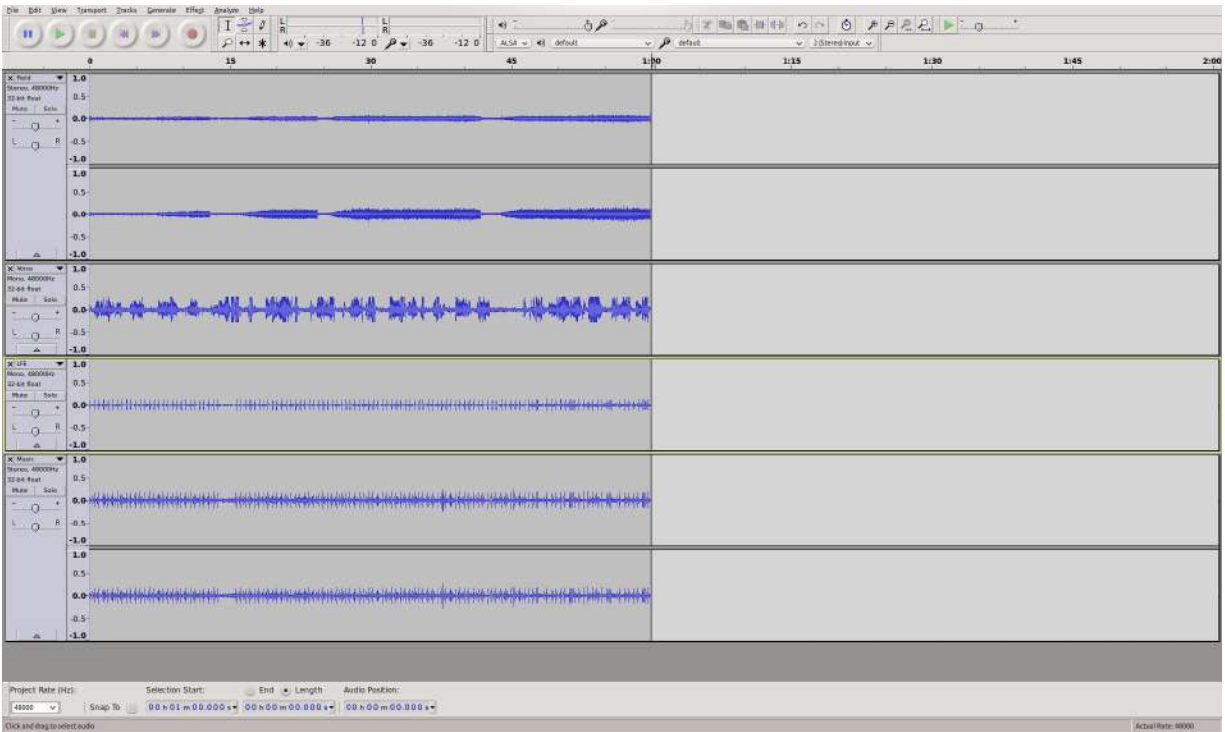
Now the “Equalization...” effect could be used to cut off frequencies above around 100Hz from the “LFE” track, and reverse, cut off frequencies below around 100Hz from the “Music” track.

Note

Creating technically perfect surround sound is a science all its own and thus beyond the scope of this guide - please refer to respective resources on the web for details.

What remains for now is to make sure that the surround sound track has the same length as the video track it should be added to. The video track used in this example has a length of 1:00 minute, so the lengths of the audio tracks in Audacity are adjusted accordingly:

The Audacity project should now look something like this:



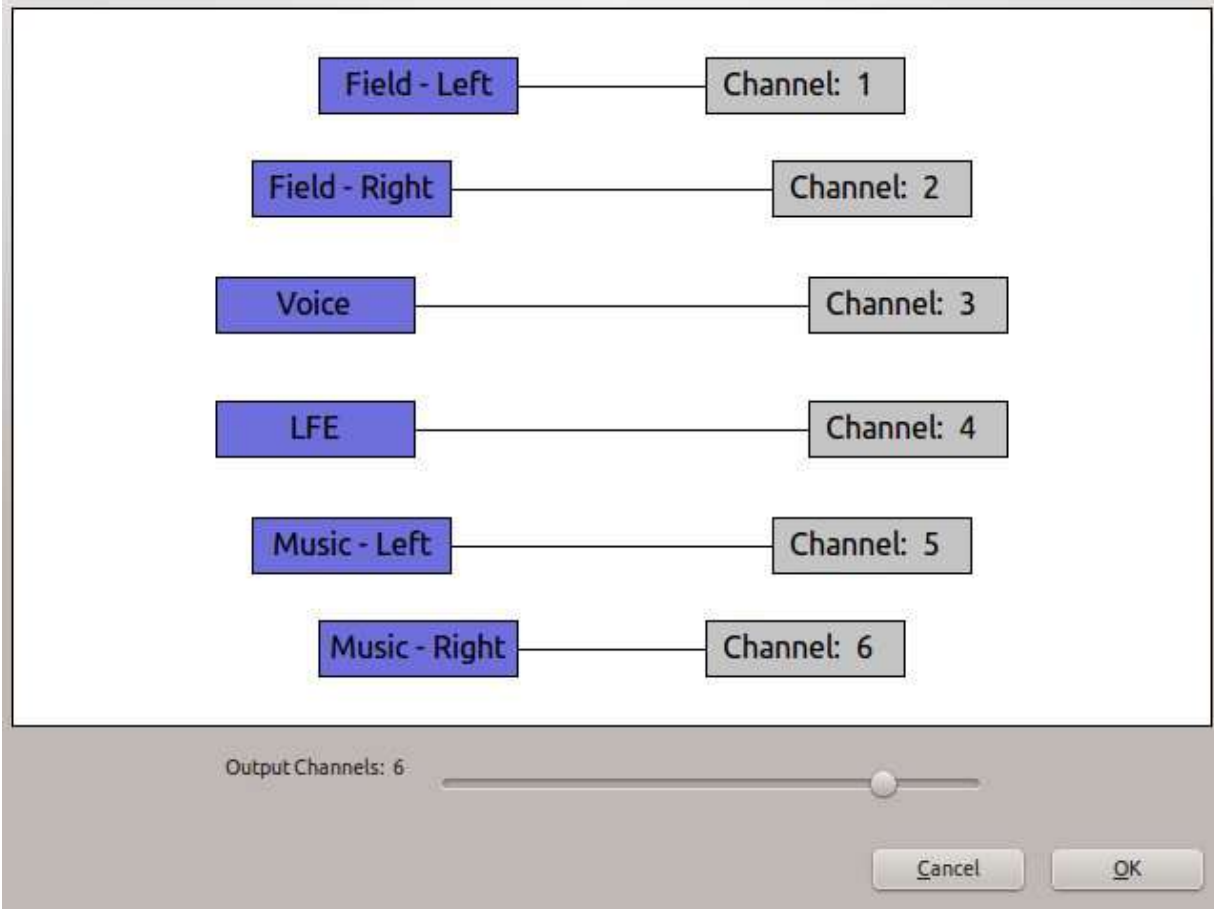
The next thing to do is to export the project to a multichannel 5.1 surround sound audio file. The format used here is AC-3 (Dolby Digital).

Before exporting, Audacity needs to be configured to allow exporting to a multichannel audio file: In *Edit* ▶ *Preferences*, under *Import/Export*, select “Use custom mix (for example to export a 5.1 multichannel file)”.

The project can now be exported into a 5.1 surround sound audio file:

- Select *File* ▶ *Export...*
- Provide a name for “Name” and select “AC3 Files (FFmpeg)”
- Click *Options...* and choose “512 kbps” as “Bit Rate”

The “Advanced Mixing Options” dialog should show up. The number of “Output Channels” should be 6 and the channel mapping should already be correct:



The result of the export should be an *.ac3 file which is playable with e.g. **VLC** or **Dragon Player**.

[Muxing Video and Audio Together](#)

The final step is to add the surround sound audio track to the video track, assuming the video was rendered without audio.

Note

When muxing audio and video files into one file, the actual streams are just copied, and not transcoded. So there is no quality loss to either the audio or the video streams. Also, because the streams are just copied, muxing is very fast.

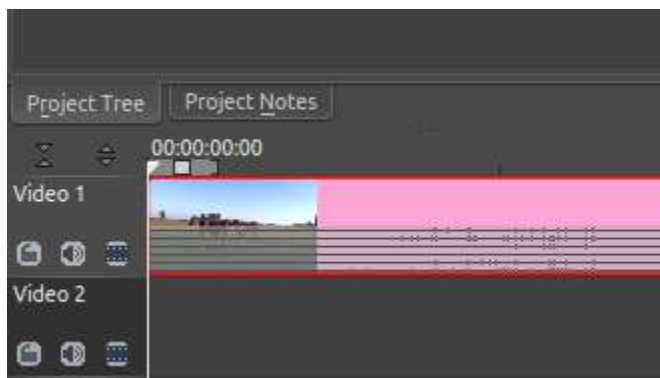
Assuming the video track was rendered to `Video.mkv` and the surround sound was exported to `5.1.ac3` the command to mux both to `Video-5.1.mkv` with **avconv** would be:

```
avconv -i Video.mkv -i 5.1.ac3 -c copy -map 0:0 -map 1:0 Video-5.1.mkv
```

The result should be an MKV video containing a Dolby Digital 5.1 surround sound audio track.

[Editing Existing Surround Sound](#)

When adding a clip with more than two channels to a project, **Kdenlive** creates an audio thumbnail that correctly shows all audio channels:



The clip can be edited and (audio) effects applied to it, and all appears to work just fine - but once rendering the project, it turns out that the audio track in the resulting video file is 2 channels (stereo) only.

The following steps provide a manual workaround for this issue.

[Extract and Split the Audio Track](#)

The first step is to extract the audio track from the video clip. This can be done in **Kdenlive** with *Extract Audio* ▶ *Wav 48000Hz* from the context menu of the clip. This creates a WAV audio file in the same folder as where the video clip is located.

The extracted WAV audio file can then be opened in **Audacity**, it should show all 6 channels, these are:

- 1 - Front Left
- 2 - Front Right
- 3 - Center
- 4 - LFE
- 5 - Surround Left
- 6 - Surround Right

Note

LFE (Low Frequency Effects) is often referred to as “subwoofer channel”, which is not quite correct. A surround sound speaker setup is perfectly valid without subwoofer. In this case the surround sound system will redirect the LFE channel to “large” speakers, usually the front speakers.

The idea now is to split the surround sound into four separate (stereo/mono) audio files that **Kdenlive** can handle:

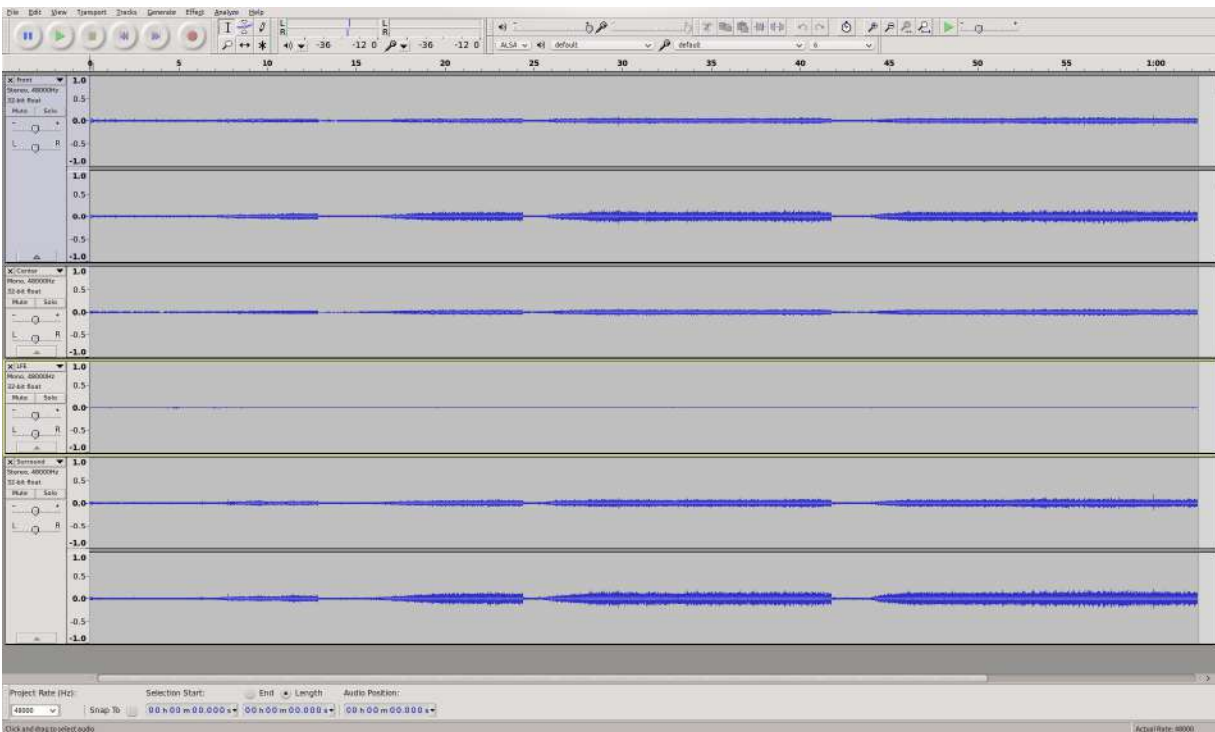
- Front (stereo)
- Center (mono)
- LFE (mono)
- Surround (stereo)

First, Audacity needs to be configured to not always export to stereo audio files: In *Edit* ▸ *Preferences*, under *Import/Export*, select “Use custom mix (for example to export a 5.1 multichannel file)”.

Now, tracks 1+2 and 5+6 should be turned into stereo tracks by choosing *Make Stereo Track* from the context menu of the 1st and the 5th track, respectively. This should result in 4 tracks, two stereo and two mono.

Next, the 4 tracks should be renamed to “Front”, “Center”, “LFE” and “Surround” starting from the top, using *Name...* from the context menu of each track.

The tracks now look like this:



After all this hard work, exporting the four tracks to four separate audio files is easy with *File* ▶ *Export* ▶ *Export Multiple...* Use “WAV” as “Export format”, the rest of the settings should already be okay: “Split files based on: Tracks” and “Name files: Using Label/Track name”.

The “Edit metadata” dialog might pop up for each track. It is fine to just say *OK*. At the end there should be a confirmation dialog and four audio files should have been exported: *Front.wav*, *Center.wav*, *LFE.wav* and *Surround.wav*.

[Import Audio Tracks into Kdenlive](#)

The previously created audio files can now be added to the Kdenlive project using *Project* ▶ *Add Clip*.

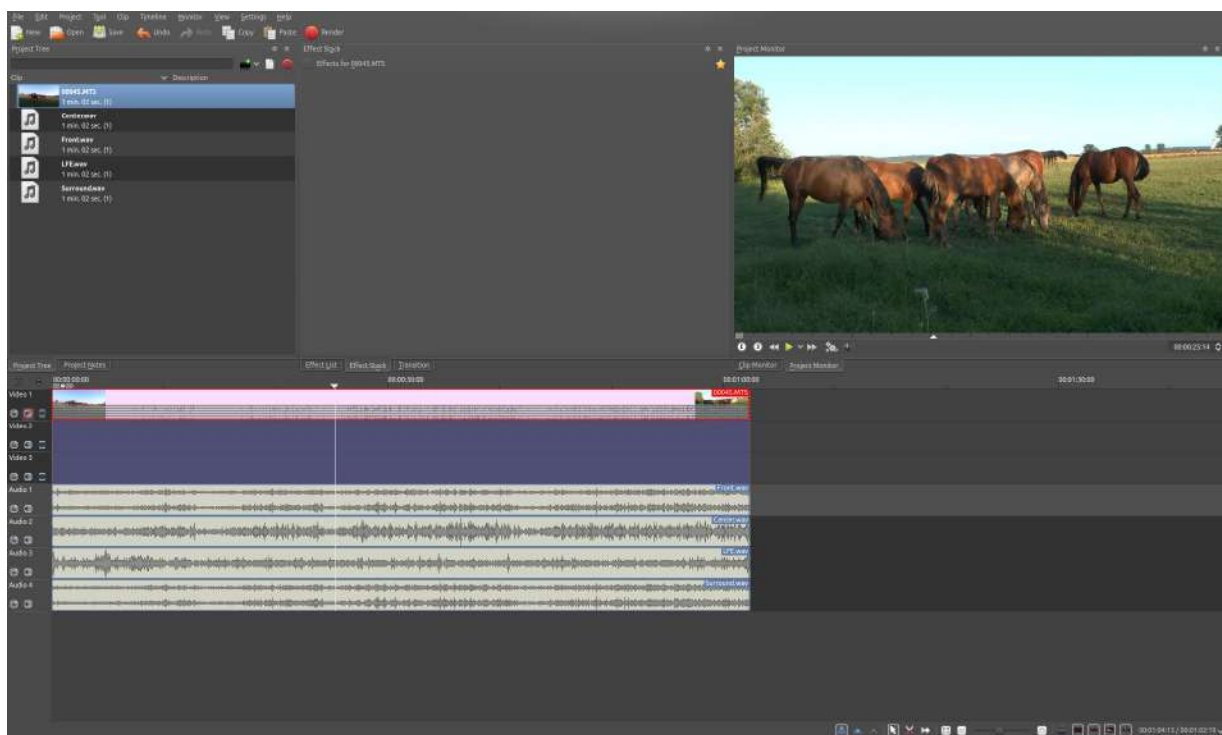
Since there are only two audio tracks in a project by default, it is necessary to add two more using *Project* ▶ *Tracks* ▶ *Insert Track* before adding the four audio tracks to the timeline.

The next thing to do is to group the four audio tracks with the video clip by selecting all of them and then choosing *Timeline* ▸ *Group Clips*.

Note

Don't forget to mute the original audio track in the video clip if necessary!

The **Kdenlive** project should now be ready for the usual editing, like cutting clips and adding effects, and should look something like this:



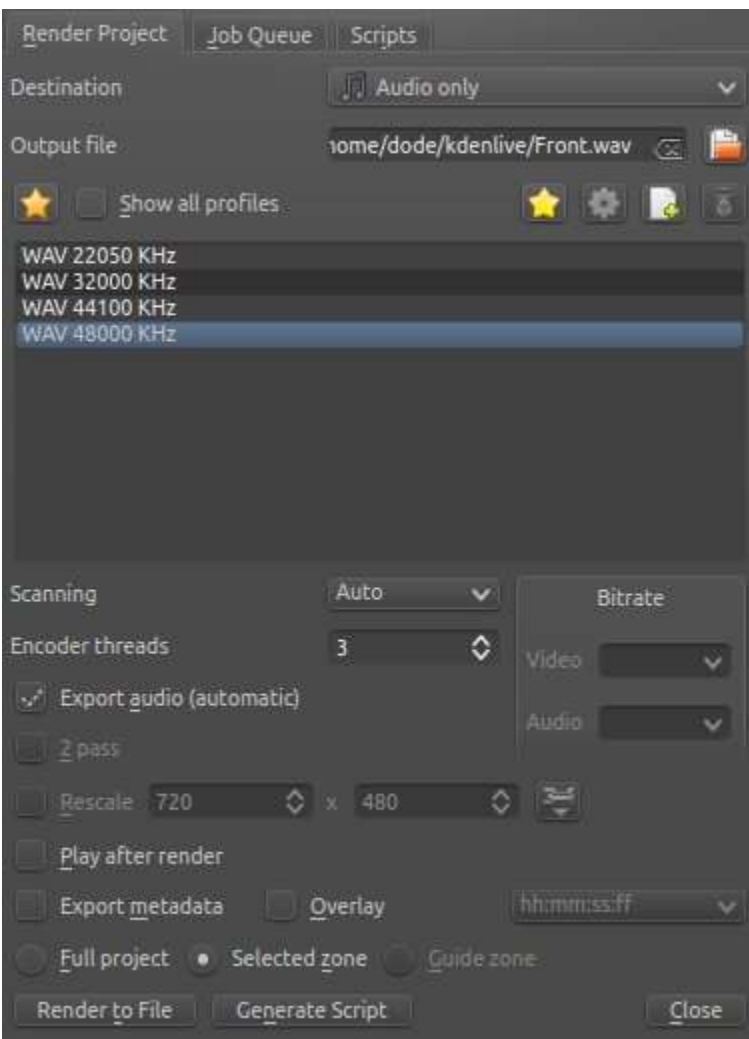
Rendering the Project

Since it is not possible to render the project with a surround sound audio track, some manual steps are necessary to work around this.

First, the video track needs to be rendered without audio. This is simply done by rendering the project as it would normally be done, but without audio, by deselecting the “Export audio” checkbox.

Then, each of the four surround sound audio tracks `Front.wav`, `Center.wav`, `LFE.wav` and `Surround.wav` needs to be rendered into a separate audio file. For each of them, do the following:

- Mute all other audio tracks
- Enter a respective file name for “Output file”
- Select *Audio only* as “Destination”
- Select profile “WAV 48000 KHz”
- Make sure *Export audio* is checked



Note

Unfortunately, the mono tracks `Center.wav` and `LFE.wav` are rendered as stereo tracks, and there seems to be no way to avoid this. But this can be

handled later in Audacity.

Compose a Surround Sound Audio File

Now the separate audio tracks rendered by **Kdenlive** need to be “merged” into a single multichannel 5.1 surround sound audio file. This is again done in Audacity:

- Import `Front.wav`, `Center.wav`, `LFE.wav` and `Surround.wav` (in this order!) using *File* ▶ *Import* ▶ *Audio...*

“Center” and “LFE” are now stereo, which is not what is needed. This can be fixed by selecting *Split Stereo to Mono* from the context menu of each track, and deleting one of the two resulting mono tracks.

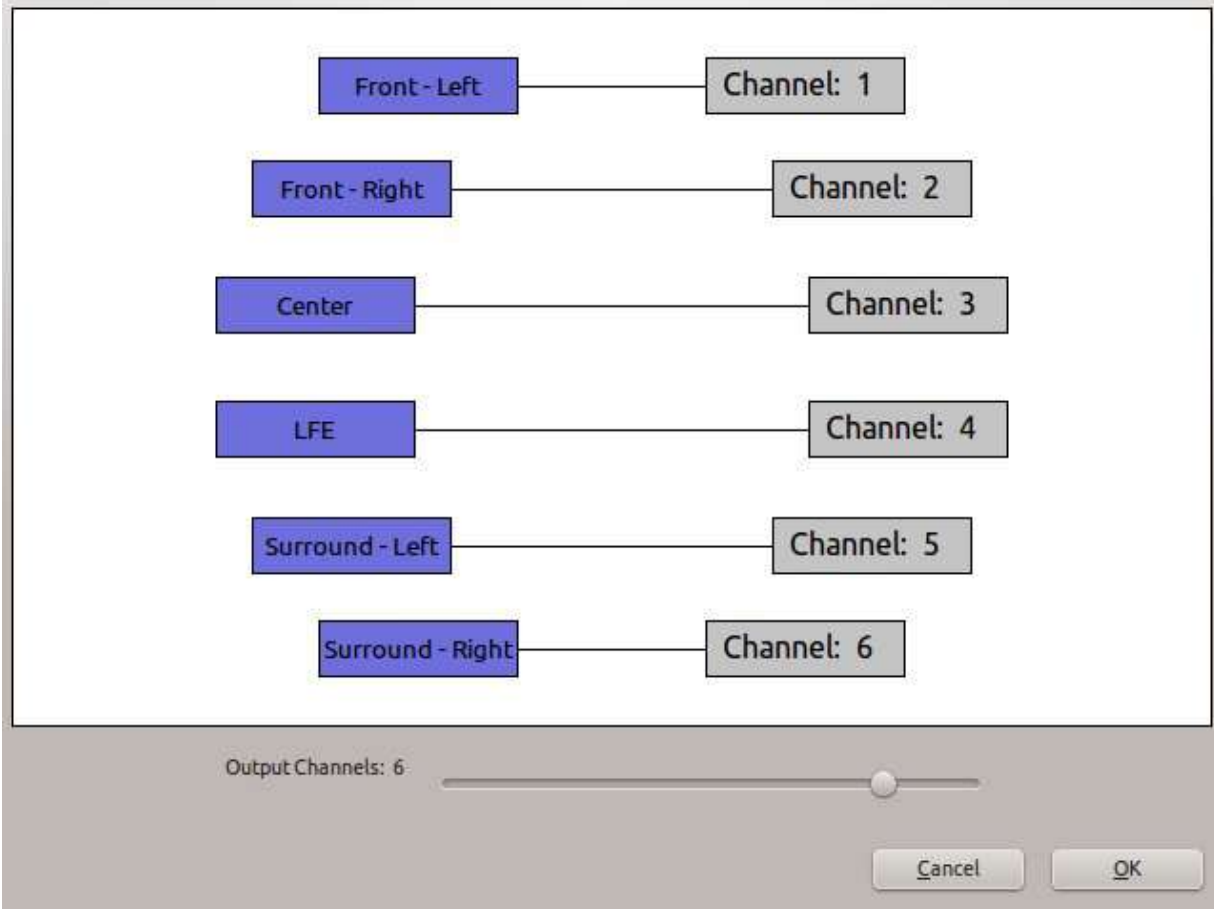
Eventually, there should be four tracks in the Audacity project:

- Front (stereo)
- Center (mono)
- LFE (mono)
- Surround (stereo)

The project can now be exported into a 5.1 surround sound audio file:

- Select *File* ▶ *Export...*
- Provide a name for “Name” and select “AC3 Files (FFmpeg)”
- Click *Options...* and choose *512 kbps* as “Bit Rate”

The **Advanced Mixing Options** dialog should show up. The number of **Output Channels** should be 6 and the channel mapping should already be correct:



The result of the export should be an *.ac3 file which is playable with i.e. **VLC** or **Dragon Player**.

[Muxing Video and Audio Together](#)

Since video and audio was rendered separately, both need to be multiplexed into a single file containing both the video and audio stream.

Note

When muxing audio and video files into one file, the actual streams are just copied, and not transcoded. So there is no quality loss to either the audio or the video streams. Also, because the streams are just copied, muxing is very fast.

Assuming the video track was rendered to `Video.mkv` and the surround sound was exported to `5.1.ac3`, the command to mux both to `Video-5.1.mkv` with **avconv** would be:

```
avconv -i Video.mkv -i 5.1.ac3 -c copy -map 0:0 -map 1:0  
Video-5.1.mkv
```

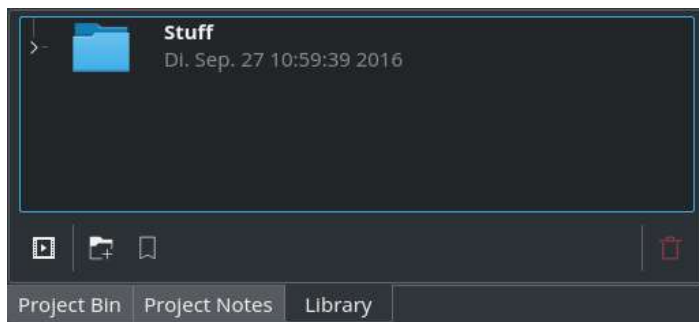
The result should be an MKV video containing a Dolby Digital 5.1 surround sound audio track.

The library: copy paste between projects

New in version 16.12.0.

The **Library** is Kdenlive's way to copy and paste sets of clips and transitions between different projects. As its name already hints at: it is not just a clipboard, but instead it is a library for all the things you in more than a single project. The Library came to life around Kdenlive 15.04 or so. Let's right dive into **how to use the library** in your daily Kdenlive workflow!

Step 1: Copy Stuff to Your Library



The **Library** is Kdenlive's central place for copying and pasting between projects.

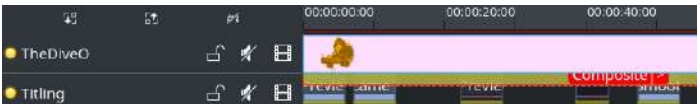
If you don't see yet the library pane, make sure to display using *View ▸ Library*.

Attention

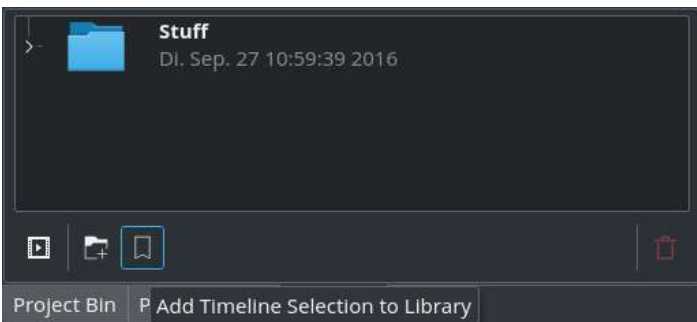
The library should look slightly familiar, as it looks similar to the project bin. However, while the project bin changes with each project, the library is independent of your projects. It's always the same library, there's only one of it.

Tip

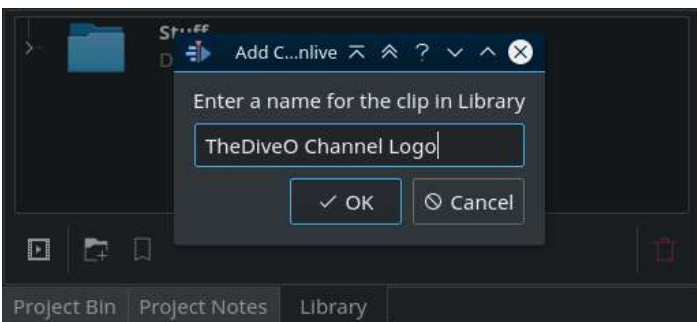
A quite useful Kdenlive window layout is to group the library together with the project bin, and optionally the project notes. This way, you don't need extra screen space for the library, yet it is no further away than just a single click.



Next, **select some timeline clips (together with their effects), as well as transitions, in the timeline.** You can load an existing project and select some timeline clips and transitions at any time in order to copy it into your library. There is no separate import. Simply load a project or create a new one.

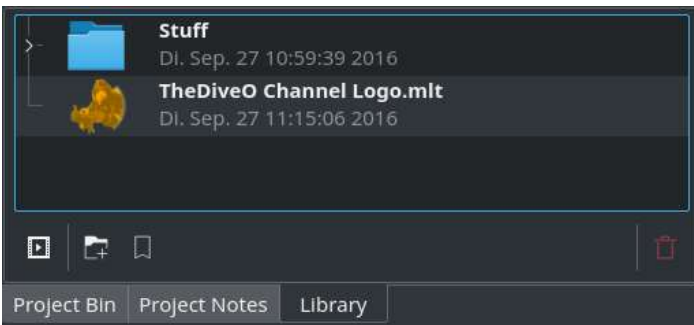


Switch to the library pane, if you haven't yet done so. Then press **the bookmark** button (Add Timeline Selection to Library), which is located at the bottom of the library pane. It's the third button from the left.



Kdenlive now asks you to **name your new library item**. Give it some name, and click *OK* to copy the selected timeline clips (with effects) and transitions into your library.

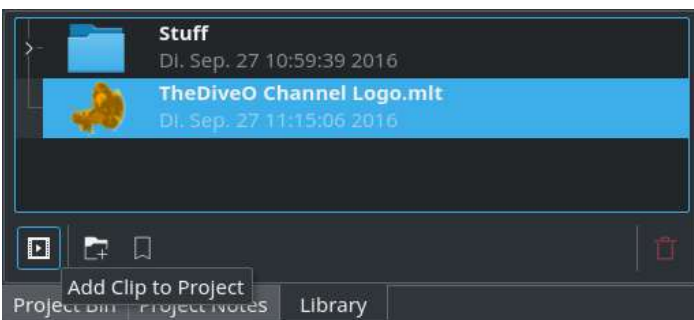
Please note: at this time, the names of library item need to be valid filenames.



Of course, you can even **neatly organize** your library items **into folders**, and subfolders. This is similar to what you may have come to know from Kdenlive's (project) bin, where you also can use folders to organize your project (source) clips.

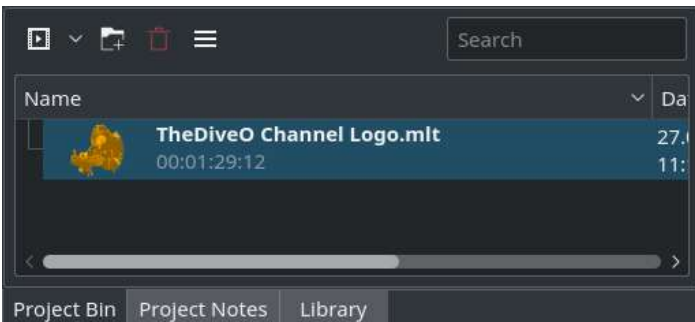
Use the *Add Folder* button at the bottom of the library to create a new folder. You can rearrange library items and folders at any time by simple dragging them into their new place.

Step 2: Paste Library Item into (New) Project



Now switch to another Kdenlive project by loading it, or alternatively start with a fresh project from scratch. Next, go to the library pane and **select the library item** you want to paste into your project. Then, press the *Add Clip to*

Project button (up to Kdenlive 16.08.1 this is instead the + button, located in the same place).



Your project bin now contains the new library item you've just added.

You can rename library items at any time: *right click* ▶ *Rename Library Clip*.

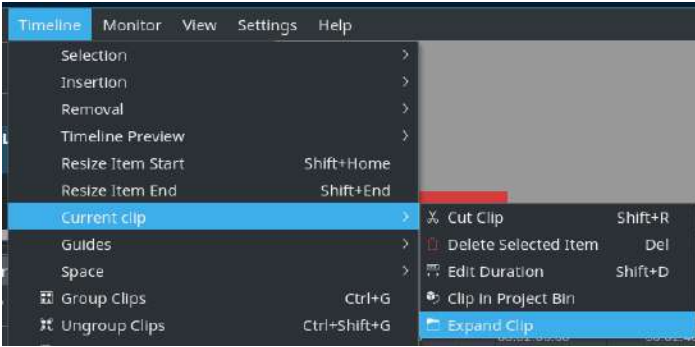
Step 3: Drag Library Item into Timeline



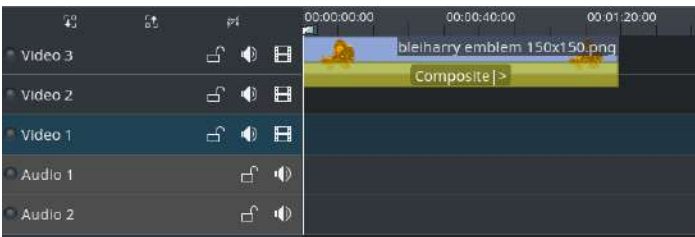
The selected library item has now been added to your (project) bin. You'll see this by switching to the (project) bin pane. You still have only a **single (library) clip** at this stage. You can now drag it into the timeline, wherever you want.

Please note: you cannot directly drag a library item from the library into your timeline. You always need to add it to your project bin first.

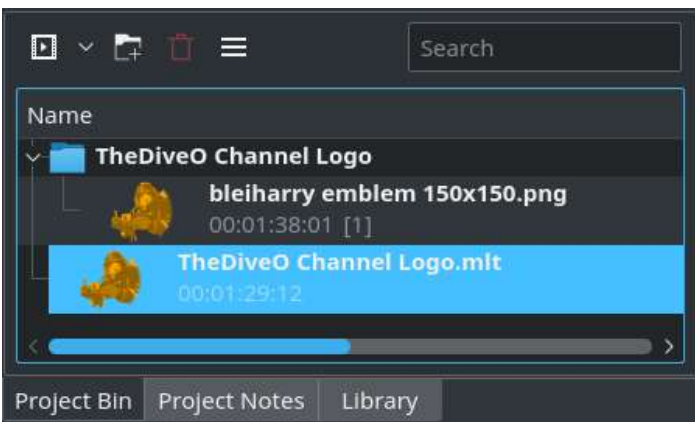
Step 4: Expand Library Clip



Often, you next want to edit the contents of a library clip after you've placed it on the timeline. Expanding means that you want to break up a library clip into its contents for further editing. So, simply **select the library clip** in the timeline. Then choose *Timeline* ▶ *Current Clip* ▶ *Expand Clip*.



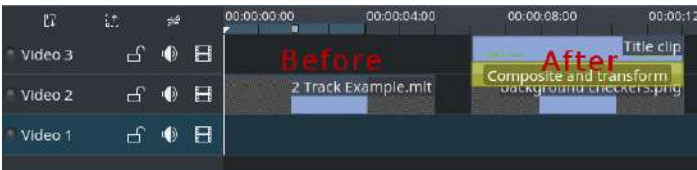
Done! You can now edit the expanded contents as you would edit any other timeline content.



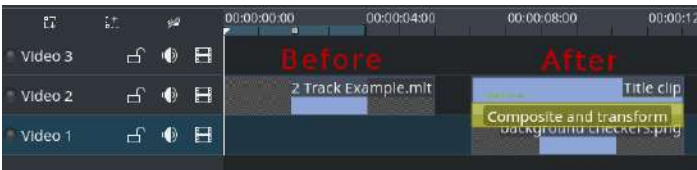
Kdenlive has expanded all the clips inside the library item into its own bin folder. This bin folder has the same name as the library clip, but without the .mlt extension.

After successful expansion, you may now **remove the original library clip from your bin**. It's not needed anymore (as you can also tell from the missing reference count).

Clip Expansion Details



Before Kdenlive 16.12.0, library clips will be expanded **from the bottom up**; which may be counter-intuitive (depending on your point of view). Here, bottom up means that in case a library clip contains multiple tracks, then you need to place the library on a lower track so there is room above for the clip to expand.



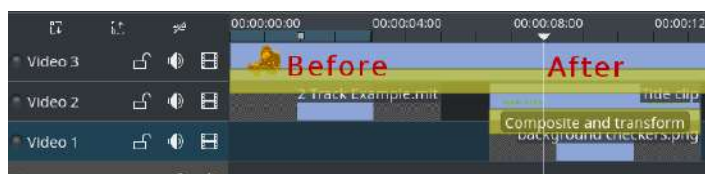
From Kdenlive 16.12.0 on, the contents of the **library clip will be expanded down** from the track where it has been placed on and below. That is, place your library on an upper track with suitable room below.

Anyway, if there aren't enough tracks below the library clip, yet there are enough tracks in the timeline, then Kdenlive will attempt to **shuffle the library clip up** a number of tracks, before then expanding it.

Attention

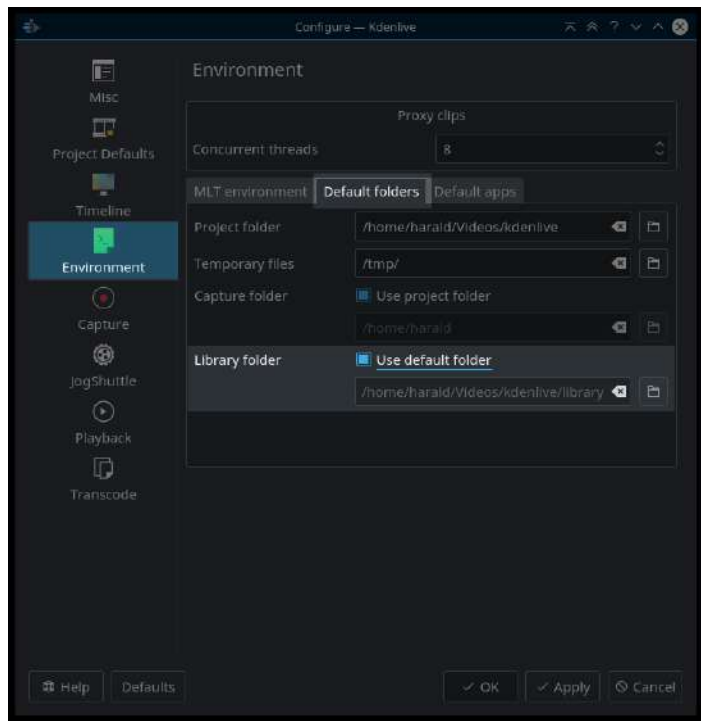
In any case, to expand a library clip into its contents, you'll always need **necessary free space in the timeline**. This means that there cannot be any clips or transitions within the start and end of the library clip on as many adjacent tracks as to be needed when expanding a multi-track library item. Simply put: just make sure that the library item has room to expand,

otherwise there can be other clips and transitions above and below the library clip, they just need to be out of the area of expansion.



Please note: starting with Kdenlive 16.12.0, you can also **expand a library immediately below a transition**; that is, the library clip is on the next lower track in the timeline. This is useful for such cases where you, for instance, have a clip running the full length of your project on the topmost track and showing your company logo, channel logo, or something similar. If you then use an explicit transition added to this clip over compositing, you can still correctly expand the library clip on the second-topmost track.

Configuring Your Library Storage Location



All items in your Kdenlive library are stored in a user-configurable place inside your file system. The default location, unless configured otherwise, is where your other semi-temporary caching data is stored. Typically, this is *\$HOME/.cache/kdenlive/library*. Your library clips are then stored inside this directory, as well as in subdirectories in case you also use library folders.

To change the location of your library, go to *Settings* ▶ *Configure Kdenlive*. Next, select the section *Environment*. Switch to the *Default folders* tab. Locate the part titled *Library folder*, and deselect the option *Use default folder*. Select or enter another location for your Kdenlive library.

Note

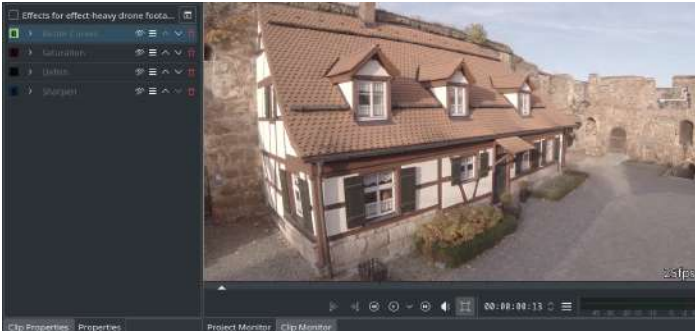
Please note: Kdenlive won't move existing library files to the new location you've set. You'll need to do this manually using a file browser or from the command line.

Timeline preview rendering

New in version 16.08.

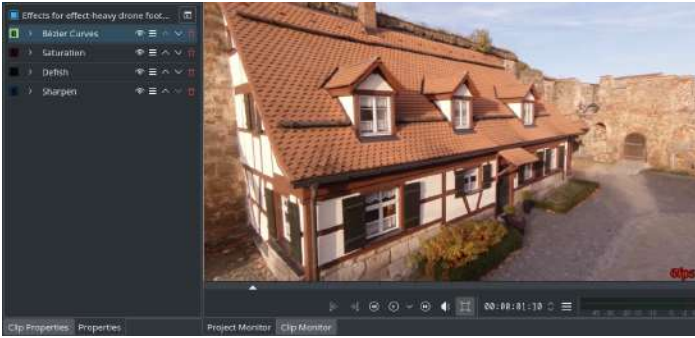
Timeline preview rendering is an outstanding feature of Kdenlive. It officially debuted in version 16.08. Preview rendering allows you to render parts or your complete timeline in the background, so you can smoothly play it back. This is especially useful when you work with complex track compositions or use effects that are computationally intensive. Instead of stuttering playback, you now get smooth playback. This way, you can check that your timing of keyframes and effect is working out nicely. And you don't need to leave Kdenlive, as you would need when rendering your timeline to an traditional video file.

Full-FPS Preview of Effect-Heavy Timeline Stuff



Raw source footage: a good example for Kdenlive's new timeline preview rendering is this: say, you have some FullHD source footage. Raw, your system easily plays this clip back at its original frame rate of 25fps. This isn't even a job for proxy clips on a decent system.

But you may have already suspected: this raw footage is in dire need of some serious processing before it can be shown to any audience...



Now let's get effects-heavy. For production, we need to de-fish this footage (action cams, you know). After defishing, we need some sharpening. And then, we also have to decompress the tonal curve (Protune, y'know). Wait, there's more: saturation needs to be corrected too (again, Protune).

With these innocent four effects applied, look at the playback rate that's shown in the bottom right corner of the monitor: dismal six frames per second! It crawls.

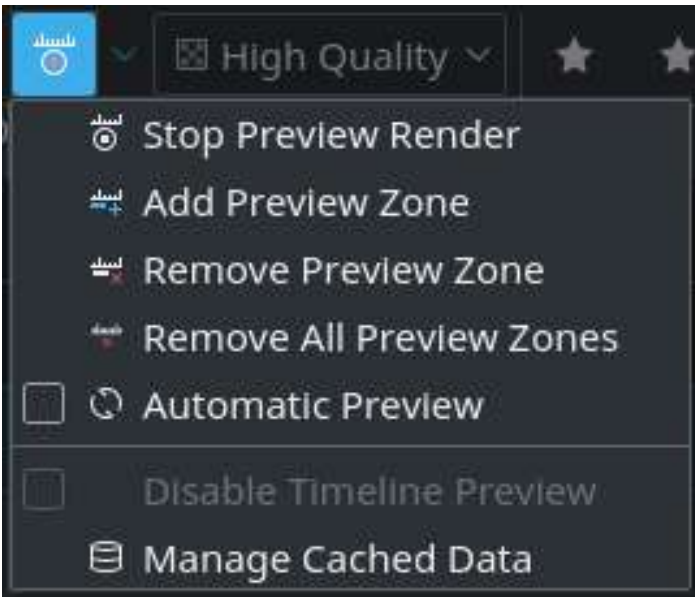
Unfortunately, proxy clips don't help in this situation: proxy clips are low-res and low-quality variants of the source clips, without any effects applied. So our effects will slow down also proxy clips considerably.

You need timeline preview rendering.

HowTo: Timeline Preview Rendering

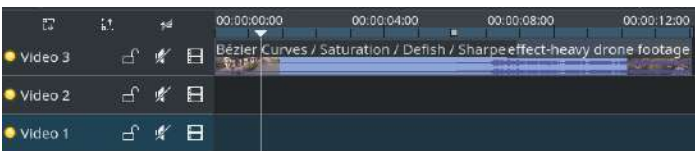
Please note: timeline preview rendering does **not** speed up timeline editing. It speeds up the timeline playback. Why should you need that? For instance, to check the correct timing of keyframed effects and transitions.

Preview rendering solely covers rendering the video part of the timeline. In contrast, Kdenlive renders audio always independent of the preview rendering. In particular, you can make audio changes at any time without affecting preview rendering.



Timeline preview rendering is best controlled using the dedicated *Timeline Preview* menu in the timeline toolbar. In addition, you can find most of the menu items also in the main menu *Timeline* ▶ *Timeline Preview* ▶ ...

Step 1: Set Preview Zone



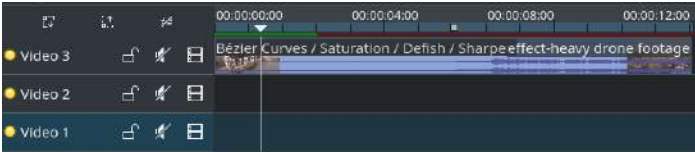
Set the timeline zone in (I) and out (O) points for the zone you want to render for preview.


Next, select *Add Preview Zone* (alternatively, *Timeline* ▶ *Timeline Preview* ▶ *Add Preview Zone*).

Note

For the first time, you won't see any change yet.

Step 2: Render Preview Zone in Background



Select Start Preview Render (*Timeline* ▶ *Timeline Preview* ▶ *Start Preview Render*). Or press `Shift + Return`. Or click on .

Note

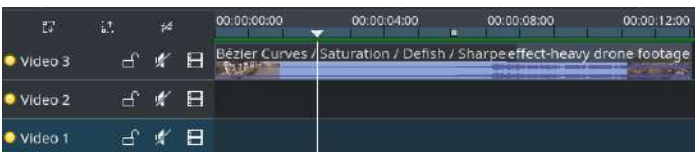
You can even add multiple, non-continuous preview rendering zones.

A red bar appears (if it has not already been shown): it's located right between the timeline ruler and the topmost track. As background rendering progresses, this bar will slowly turn green, chunk by chunk.

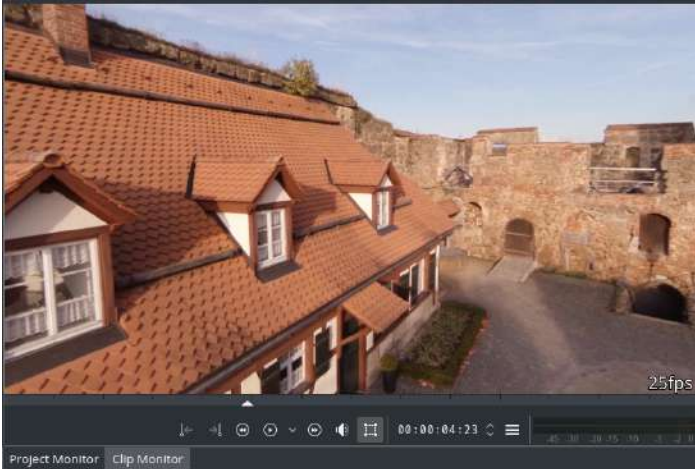
You can continue to work at any part of your timeline while preview rendering is active. However, as soon as you edit clips or transitions that touch your preview zones, rendering will stop, and the affected preview zones turn back to red. Simply restart rendering, if you need.

The preview is divided into chunks, where each is 25 frames in size; this corresponds with 1s of playback length for 25fps projects.

Step 3: Enjoy Smooth Timeline Preview!



All green chunks of your timeline will now play back at full speed. You should immediately notice that scrubbing such timeline zones will be much faster too.



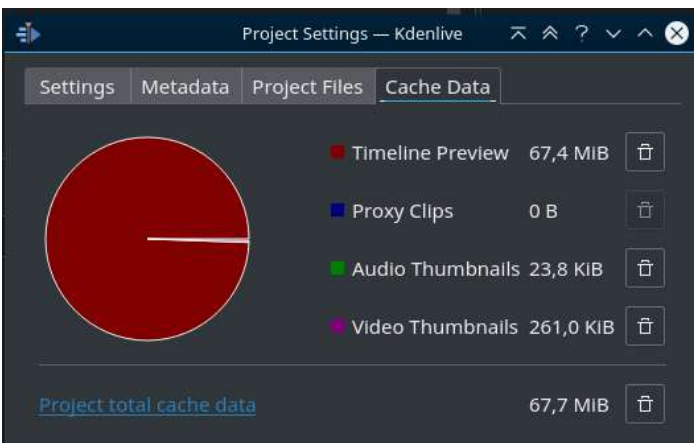
Timeline playback is now full 25fps, even as the corresponding timeline clip makes heavy use of effects (especially de-fish is computational intensive).

Notes

Smart Preview Undo/Redo

Kdenlive is smart enough to support some levels of undo and redo. So you can check out the results of a two different effect settings by quickly undoing and redoing the effect change without having to render anew the preview.

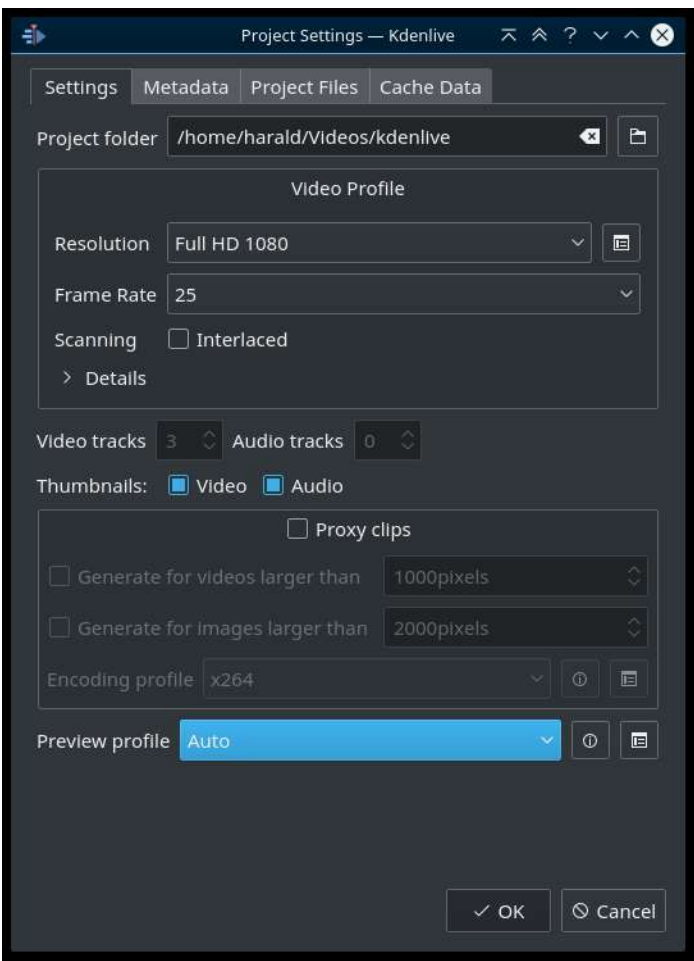
Preview Cache Storage



You can easily find out how much storage you are currently using for the timeline preview. Use *Project* ▶ *Project Settings*, then select the tab *Cache Data*.

You'll now see a neat figure illustration cache data disc space consumption. At any time, you can quickly remove the cache data used for the timeline preview: simply click on the *trash* button next to row **Timeline Preview**.

Preview Profiles



Most of the time, it should suffice to leave the preview profile set to *Auto*. Kdenlive then will select a suitable preview profile based on your project profile.

In some rare cases, as with unusual frame rates, or when you want to control the preview rendering encoding quality, then you can change the preview profile, or create your own preview profile. Use the *Manage timeline preview profiles* button next to the preview profile selection.

De-synchronized Preview

If for some reason the rendered preview should get out of sync with your timeline editing, simply remove the corresponding preview zone (*Remove Preview Zone*) or all preview zones (*Remove All Preview Zones*). This gets you back to a sane preview state. Then add the zone back again (using *Add Preview Zone*), and rerender.

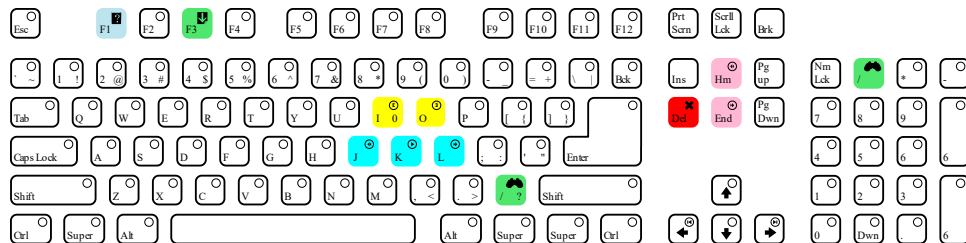
Useful Resources

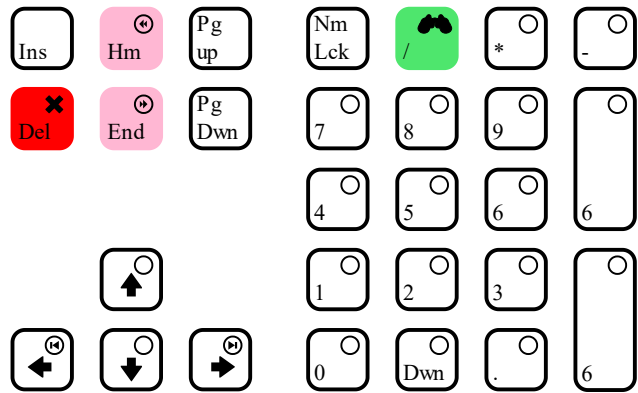
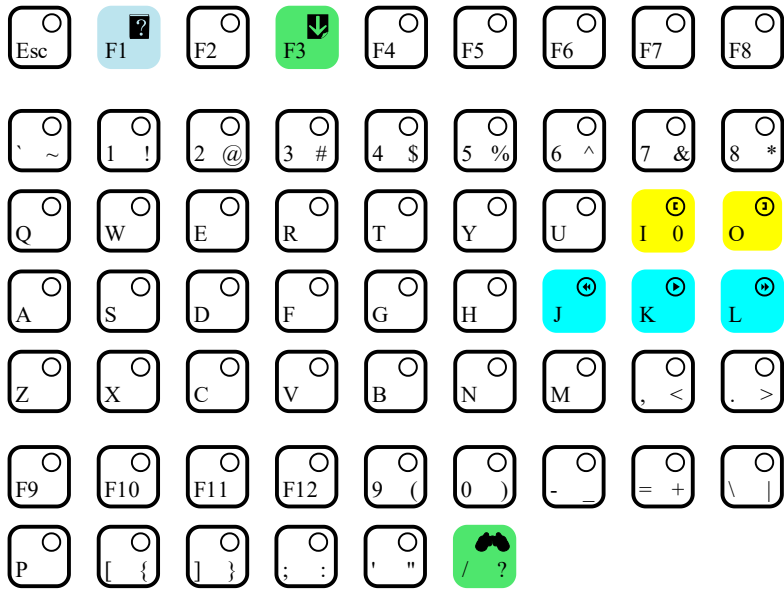
Contents

- [Useful Resources](#)

- Another Kdenlive manual: [flossmanuals](http://www.flossmanuals.net/how-to-use-video-editing-software/) [http://www.flossmanuals.net/how-to-use-video-editing-software/]
- [Cutting and Splicing Video in KDenlive](http://www.linuceum.com/Desktop/KDENliveVideo.php) [http://www.linuceum.com/Desktop/KDENliveVideo.php] by Linuceum
- [opensource.com tutorial](http://opensource.com/life/11/11/introduction-kdenlive) [http://opensource.com/life/11/11/introduction-kdenlive]
- [Kdenlive Forum](https://forum.kde.org/viewforum.php?f=262) [https://forum.kde.org/viewforum.php?f=262]
- Kdenlive [Developer Wiki](https://community.kde.org/Kdenlive/Development) [https://community.kde.org/Kdenlive/Development]

Keyboard Stickers - courtesy of Weevil





Get involved

Contribute to this Manual.

<https://community.kde.org/Kdenlive/Workgroup/Documentation>

Index

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- The page has been deprecated.
- Or a simple typo in the URL.

In all cases, you might be able to find the page you're looking for by using the search in the left hand navigation.