

Cinelerra-GG Version Infinity



User Manual

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<https://www.cinelerra-gg.org>



Contents

Contents	1
1 Introduction	2
1.1 Cinelerra Overview	3
1.2 Chapters Overview	6
2 Installation	11
2.1 How to Build Cinelerra-GG Infinity from Developer's Git Repository	11

Introduction

Cinelerra is a software program NLE, Non-Linear Editor, that provides a way to edit, record, and play audio or video media. It can also be used to retouch photos.

This manual covers Cinelerra-GG Infinity version. The author of the original Cinelerra, Adam Williams, as well as many different people worked on Cinelerra over the years. The software and this manual were merged in from various sources and each person is to be thanked and commended for their efforts. Numerous software modifications were made by William Morrow. These are all under GPLv2+ license. Refer to: <https://www.gnu.org/licenses/old-licenses/gpl-2.0-standalone.html>

This is a copy of the header from the original source code.

```

/*
 * CINELEERRA
 * Copyright (C) 1997-2012 Adam Williams <broadcast at earthling dot net>
 *
 * This program is free software; you can redistribute it and/or modify
 * it under the terms of the GNU General Public License as published by
 * the Free Software Foundation; either version 2 of the License, or
 * (at your option) any later version.
 *
 * This program is distributed in the hope that it will be useful,
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```

This is a copy of the information in the Cinelerra-CV manual.

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1.1 Cinelerra Overview

Presented briefly here is an overview of Cinelerra-GG Infinity and information provided in this manual. The GG version of Cinelerra has been improved for *stability*, *modernized* to accommodate the *current state* of Linux software, enhanced with additional *basic features*, and enriched with *new features* imagined by dedicated users and then implemented by professional programmers.

Website <https://www.cinelerra-gg.org>

The website for the cinelerra-gg software is a good place to start for information, help, and documentation. It is professionally maintained and continuously updated with more language translations ongoing.

Stability

Software programs that “just work” are a #1 priority in order to be of use for producing quality videos. A large amount of time has been invested in debugging problems and resolving crashes. And in a continuous process to do so, a chapter on Troubleshooting is included in order to easily provide sufficient information for users to capture issues and crashes so that they can be analyzed and quickly fixed to avoid repeat problems.

Modernization

Artistic creativity has been applied to modernize the Cinelerra-GG plugin icons for video and audio to even include the ffmpeg plugins. The Cinfinit set of plugin icons come in square or roundish versions — your choice. In keeping up with the current expectation of users for a certain “look and feel”, a very modern Neophyte theme recent addition provides an alternative to the already existing 9 themes. These 10 themes give the user the choice to get the look they like best for their own eyes.

Current and up-to-date

For today’s software, included thirdparty libraries are kept up to date in a

timely manner and effort is made to always use a relatively recent version of FFmpeg, if not the latest. This is a big deal because there is a whole set of separate programmers continuously working diligently to cover all of the old and newly created formats. Thus Cinelerra programmers can be dedicated to working solely on Cinelerra rather than just trying to keep up with many formats.

FFmpeg usage integration

By using FFmpeg with Cinelerra there is the advantage that users can directly convert videos via pre- and post-processing, without the need for command lines to be executed manually before or afterwards.

Import and Export formats

Listed here are only a few of the supported Import and Export formats:

- several standard native formats, such as mpeg, ac3, flac, exr and jpeg/png/ppm/tiff sequences
- FFmpeg's over 400 decoders and 150 encoders accessible from within Cinelerra to include: mp4, mkv, mpeg, mov, m2ts, mp3, dvd, ogg, theora, prores, tiff, webm, flac, opus, vorbis, quicktime (div, dnxhd, jpeg, mjpeg, mp4, rle, v308, v410), h264 & h265 usage, avc, hevc, and recently released AV1 and WebP
- raw image format for over 700 supported cameras, courtesy Dave Coffin DCraw

Standard Features

- Program window for video and audio tracks, navigation, popups, playing and seeking functions.
- Editing via track manipulation with either drag and drop editing or cut and paste editing.
- Patchbay tools: fader, gang, arm, enable output, expanders, mixers, and blending operations.
- Undo and Redo capability for many editing functions.
- Drag handle functionality for Ripple, Roll, Slip, Slide, Edge, and No Effect.
- Dynamic Keyframe support with curve, toggle, automatic, compositor, and editing capabilities.

- Proxy editing support to speed up editing for large formatted files or slower computers.
- Compositor window with masking, zooming, cropping, projector and camera capabilities.
- Viewing window for quickly viewing/playing audio, video, clips, or proxies.
- Resources window with Media, Proxy, Clips, Video and Audio Effects/-Transitions.
- User defined bins/folders for a project.
- Expandable Video/Audio effects for grouping selections such as Color Correction or Motion plugins.
- Included are over 400 Plugins – audio and video native, FFmpeg, plus expandable to include others.
- LV2 and Ladspa plugins audio support.
- Mouse over Media or Proxy folders to get a 5 second real time preview of the media.
- Single or multiple files rendering; background rendering, batch rendering, command line rendering, and use of a Render Farm to take advantage of multiple computer CPUs.
- Numerous pre-defined output formats automatically available and allowance for user-defined formats.
- Capture and Recording capability to include Broadcast TV recording, editing, and viewing.
- Hundreds of Shortcuts are defined which are easily viewed using the shell commands pulldown.
- PorterDuff operations are available in the patchbay of the main timeline window for alpha blending.
- Color correction + 8-bit and 10-bit color space.
- Up to 8K video supported.
- ShuttlePro and ShuttleXpress functionality.
- International language support.
- Multi-screen, Multi-viewers, Multi-session, Multi-pane capability.
- Menu bar shell commands with reference to some manuals and user-definable additions.

- Video stabilization, Motion tracking, Motion Graphics.
- Blade Cut / Hard Edges, Snap/Cut editing and Snap Dragging.
- OpenGL support as well as Direct X11 speedup.
- Advanced Trim Features and Grouping.
- Asset and Title colors selection including Alpha slider adjustment.

Innovative New Features

- Inter-View mode as invented through a collaborative effort by a user and the developer.
- Proxy settings for large formatted media with the coveted Scalar option and proxy quick switch.
- Multiple cameras / Mixer Viewer with the number of cameras only limited by the resources on the user's computer (on a large system, 50 are known to work).
- DVD/bluray creation, editing, and copying for non-commercial media greatly enhanced for usability.
- Title plugin virtually unlimited script size with many changeable attributes such as size, blink, color.
- Motion Graphics using the Sketcher plugin to create elements such as ellipses, rectangles and shapes for simpler motion graphics.

1.2 Chapters Overview

Below is listed a brief overview of each chapter to help you to decide which chapters you should pay the most attention to and read more thoroughly. And which chapters are important for beginning to learn to use Cinelerra-GG. At the end of the descriptions is a list of the sections to read for beginners.

Chapter 2 [Installation](#).

If you just want to get started using the program, you can safely skip this chapter and instead go to: <https://www.cinelerra-gg.org> and simply download a pre-built linux version for your Operating System. If you would like to do your own builds so that you always have the latest, refer to this chapter to learn how. But if you are already familiar with doing your own builds, you can just refer to this chapter if you encounter issues.

Chapter 3 The 4+ Windows.

It is important to understand the window setup in Cinelerra-GG and what each of them is used for. In addition this chapter covers some basic navigation functions that you will need to know. However, if you have used an NLE before and don't mind experimenting to learn how to execute certain functions, probably there is no need to peruse this chapter.

Chapter 4 – Project and Media Attributes.

This chapter is helpful for basic understanding of setting up your session but it can easily be skipped.

Chapter 5 Load, Save, and the EDL.

Since this is important to not losing your work, you should read this chapter for some basic usage concepts and for some lesser used functions that may come in handy. Besides how to Load and Save files, there is also information on using raw camera formats. Helpful hints on working with image sequences, such as a bunch of pictures from your camera all loaded at once, is a time saver.

Chapter 6 Editing.

New and occasional users will find it necessary to read this chapter. However, you can decide which editing mode you prefer and concentrate on reading that section. Even seasoned users will want to read this chapter in order to take advantage of features that have been newly implemented or may be less familiar due to infrequent usage. Anyone who wants the editing capabilities that comes with use of the Shuttle Jog Wheel, will initially need to read that section to become familiar with its usage.

Chapter 7 Rendering.

Minimally most users will need to read the section on single file rendering to get started; since after all the whole purpose of using an NLE is to create your own media. The end of this chapter includes some helpful specific rendering scenarios which could prove quite useful. You might also want to consider using batch rendering and background rendering for performance reasons. And, of course, render farm usage to take advantage of multiple computers can be a real boost.

Chapter 8 Keyframes.

This is a more advanced topic but extremely useful to know. Keyframes are data values that have been associated to the timeline that affect the media

presentation. You can go for years without knowing all of the nuances but you will most likely have a need to use and understand them sooner or later.

Chapter 9 Ffmpeg Interactions.

Skip this chapter if you are just getting started. Skip this chapter if you just want to use common formats that are already set up for you. Experts may want to refer to this chapter in order to set up their own option files.

Chapter 10 Effect Plugins.

Use this chapter as a reference to add an audio or video plugin in order to correct color or add some fancy effect. You will not want to read about each and every plugin, most of which you will never use. On the other hand, going over the section on “some specific details concerning plugins” might come in handy.

Chapter 11 Transition Plugins.

Everyone who does not know about using transitions should read this chapter because you will want to use transitions between cuts in your video for smoothly changing scenes. It is short and easy reading.

Chapter 12 Overlay Modes, Alpha Blending, and Porter Duff.

Experts can really use the information in this chapter to spiff up their editing work through some blending type techniques. A lot of information and possibilities are described here.

Chapter 13 Capturing and Recording Media + DVD/Bluray Creation.

If this is what you want to do, then read this chapter. In the case of DVD media creation it includes many examples and lots of tips for checking your methods. A section on using cinelerra with broadcast TV is especially useful if that is something you want to do.

Chapter 14 The 5 Multi-s.

For using multiple cameras in your video creation, this chapter is a must to read. Otherwise, just refer to the section that becomes pertinent as you familiarize yourself with using Cinelerra.

Chapter 15 Shortcuts with Keyboard and the Mouse.

Everyone will want to use this chapter to speed up their editing sessions. Once you find yourself doing the same thing over and over again, you will want to know if there is a shortcut. Then look here!

Chapter 16 Configuration, Settings, and Preferences

Refer to this chapter when you want to change some setting or preference. Otherwise if a new user, you should make sure to read the first page which includes some important basic information.

Chapter 17 How Some Stuff Works.

Only read this chapter if you are confused about a specific covered topic and how it works.

Chapter 18 Troubleshooting.

Use this chapter for diagnosing a problem and find out what to report to get the best resolution or help.

Chapter 19 Performance Tips and Other Tips.

There are a few performance tips in this chapter that may eventually prove useful.

Chapter 20 Language Translations.

If you want to help by providing translations for a specific language, there is a complete description of how to do this and what to do.

Chapter 21 Licenses.

Appendix A QuickStarts

Here you go! If you hate to read, just go over the quick start guide or the youtube video creation and simply be on your way.

Appendix B Developer's Section.

Some extra information that developers may or may not find useful.

Appendix C Auxiliary Programs

This is a catch-all for any useful programs that may need to be included, mostly for analysis.

In summary, “must” reads for a new user would be these chapters or sections:

- Chapter 3 - The 4+ Windows
- Chapter 5 - Load, Save, and the EDL

- Chapter 6 - Editing; read all sections except emphasize only either Cut&Paste or Drag&Drop
- editing to suit your purpose and then skim the editing mode that is not your preference as some operations work in either mode. Skip the Shuttle section unless you have this jog wheel in hand.
- Chapter 7 – Rendering; minimally read the “single file rendering” section.
- Chapter 10 – Effect Plugins; read the section on “how to use plugins”.
- Chapter 11 – Transition Plugins
- Chapter 16 – Configuration, Settings and Preferences; read at least the first couple of paragraphs.

Installation

This manual covers features or areas of Cinelerra that are different or new in the Cinelerra-GG Infinity version. Many of the new features were created by a lot of different people to include the original author and were merged in from various sources and each person is to be commended for their efforts. The content of this manual also came from various people/places/email and thanks to all.

The standard Cinelerra Manual covers “The Secrets of Cinelerra” and can be found at:

https://cinelerra-cv.org/docs/cinelerra_cv_manual_en.html

2.1 How to Build Cinelerra-GG Infinity from Developer’s Git Repository

These are generic build instructions for building Cinelerra-GG Infinity. Known to work on ubuntu, mint, suse, fedora, debian, centos, arch, and 32-bit slackware. It has not been tested on every single possible distro yet so you might expect to have to make some minor changes. It has failed miserably on FreeBSD. At least once, a Gentoo version was successfully created.

Alternatively, there are some pre-built dynamic or static binaries which are updated on a fairly regular basis (as long as code changes have been made) available at link below. See Section 1.2.

<https://cinelerra-gg.org/download/> There are 2 kinds of builds, the default system-build and a single-user build. A system build has results which are installed to the system. The majority of the files are installed in the standard system paths, but some customization is possible. The single user build allows for running completely out of a local user directory so it doesn’t affect the system.

We recommend the single-user version when possible. It makes it very easy to install a new version without having to delete the older version in case you want it for backup – once you are happy with the new version, all you have to do is delete the entire old directory path. Also, if you install a new Operating System version and if you have Cinelerra on separate disk space that is preserved, you won’t have to

reinstall Cinelerra. In addition for purposes of having the ability to interrupt or to see any possible error messages, if you start the application from a terminal window command line you will have more control to catch problems. The system builds can be useful in a university lab setting where there are possibly multiple users, or multiple versions.

There are two notable differences between “standard” views of Cinelerra and this implementation for the system builds. Both of these can be configured during installation. These differences make it possible to have several different versions installed without having them “walk” on each other. ault system-build an

1. application name can be set during installation and defaults to: “cin”
2. the home configuration directory can also be set and defaults to:
“\$HOME/.bcast5”

To do a system build, you should read the README that is at the top level after you get the source.

1. You need at least 2.5GB of disk storage to operate a build. Need to have “git” installed.
2. Obviously in order to install into the system, you must run as root.
3. The "git" step has to download a bunch of stuff (approx 100MB) so allow time.
4. Run the following commands (this takes awhile):

```
1 cd /<build_path>/
2 # this is where you need the 2.5GB of disk space
3 git clone --depth 1 "git.cinelerra-gg.org/goodguy/cinelerra.git"
  cinelerra5
4 cd cinelerra5/cinelerra-5.1 # toplevel directory
```

NOTE: if your system has never had Cinelerra-GG Infinity installed, you will have to make sure you have all of the compilers and libraries necessary. So on the very first build you should run:

```
1 ./blds/bld_prepare.sh <os> # where <os> represents the Operating System of centos,
  fedora, suse, leap, ubuntu, debian.
2 ./autogen.sh
3 ./configure --prefix=/usr
4 # optional parameters can be added here
5 make 2>&1 | tee log
```

6 # make and log the build

5. Check for obvious build errors:

```
1 grep "\*\*\*error" -ai log
```

If this reports errors and you need assistance or you think improvements can be made to the build s, email the log which is listed below to cin@lists.cinelerra-gg.org:

```
1 /<build_path>/cinelerra5/cinelerra -5.1/log
```

6. If there are no build errors, finally just run:

```
1 make install
```

7. If it all worked, you are all setup. Just click on the “blue lady” cinelerra desktop icon.

To do a single-user build, read the README that is at the top level after you get the source.

1. You need at least 2.5GB of disk storage to operate a build. Need to have “git” installed.
2. Recommend you build and run as root, just to avoid permission issues initially.
3. The "git" step has to download a bunch of stuff (approx 100MB) so allow time.
4. Run the following commands (this takes awhile):

```
1 cd /<build_path>/
2 # this is where you need the 2.5GB of disk space
3 git clone --depth 1 "git://git.cinelerra-gg.org/goodguy/cinelerra.git"
  cinelerra5
4 cd cinelerra5/cinelerra -5.1
```

NOTE: if your system has never had Cinelerra-GG Infinity installed, you will have to make sure all the compilers and libraries necessary are installed. So on the very first build you should run as root:

```
1 ./blds/bld_prepare.sh <os> # where <os> represents the Operating System of
2 centos , fedora , suse , leap , ubuntu , debian .
3 ./autogen.sh
4 ./configure --with-single-user
5 # the "with-single-user" parameter makes it so
6 make 2>&1 | tee log
7 # make and log build (check for errors before proceeding)
8 make install
```

Then just start the application by keying in: `./cin` in the bin subdirectory OR add a desktop icon by using the appropriate directory to copy the files to, run as root, and edit to correct the directory path.

```
1 cd /cinelerra_directory_path
2 cp -a image/cin.{svg,xpm} /usr/share/pixmaps/
3 cp -a image/cin.desktop /usr/share/applications/cin.desktop
4 change the "Exec=cin" line to be "Exec=<your_directory_path>/bin/"cin
```

The preceding directions for doing a single-user build has been meticulously followed to build and run on a newly installed ubuntu 15 system WITHOUT BEING ROOT except for the `bld_prepare.sh` and creating the desktop icon.