v.2025

KABOOM ANIMATION FESTIVAL
DIY DCP MANUAL

You can create DCPs with multiple software packages these days. For instance, with: Easy-DCP Creator (www.easydcp.com) or DCP-o-matic (www.dcpomatic.com), which works on Windows, Mac and Linux.

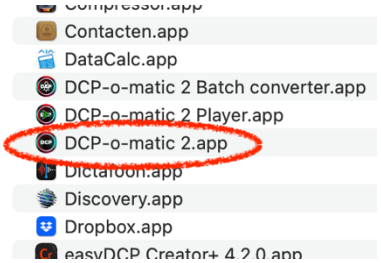
Viewing your created DCPs is also possible with EasyDCP player or see the DCP-o-matic player which you can download here.

DCP-o-matic has a more comprehensive manual on their website. Below is our shortcut guide for creating a DCP with DCP-o-matic. This is a free program without advertisements, but feel free to donate to the developer here ☺.

DCP-o-matic consists of multiple modules you can install separately, for example:
DCP-o-matic – The main software (The minimum you need to install)
Player – To view your DCP (You need some processing power to play fullscreen)
Batch Converter – To encode multiple DCPs in a queue.

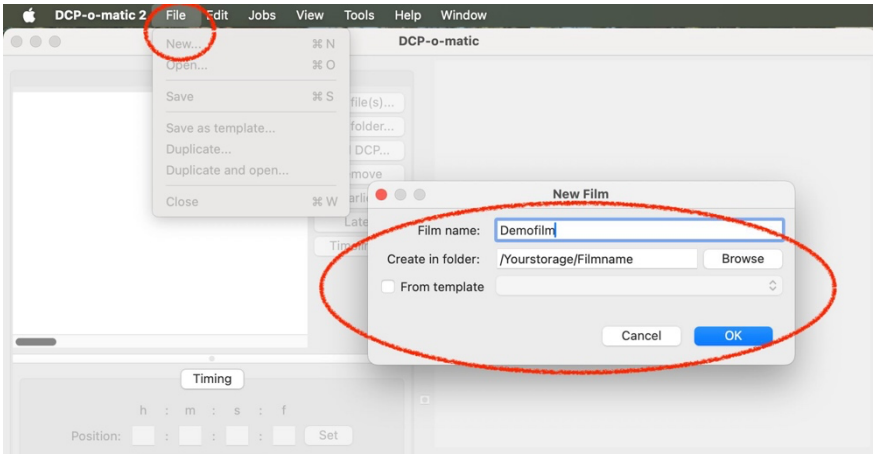
Starting a project

After installation, find and start your DCP-o-matic.



If you have the newest version, a dialogue window will appear asking if you want to use the simple or advanced interface. This manual is about the advanced interface.

After startup you will find that the “Add files” button is still grey. You will now have to create a new project first to continue.

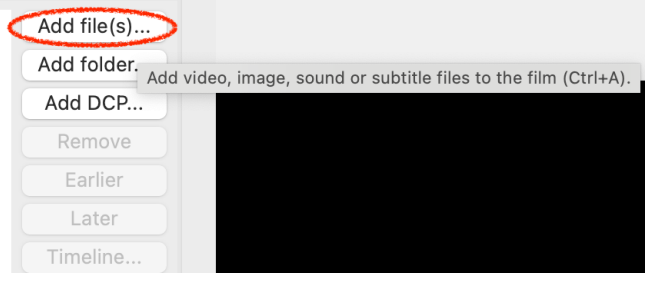


- Click File > New.

A dialogue screen will open.

- Enter the title of your project and press “Browse” to select the destination folder.
  Don’t place your folders in a / path / longer(deeper) then 256 characters, this can give trouble reading the DCP later on.

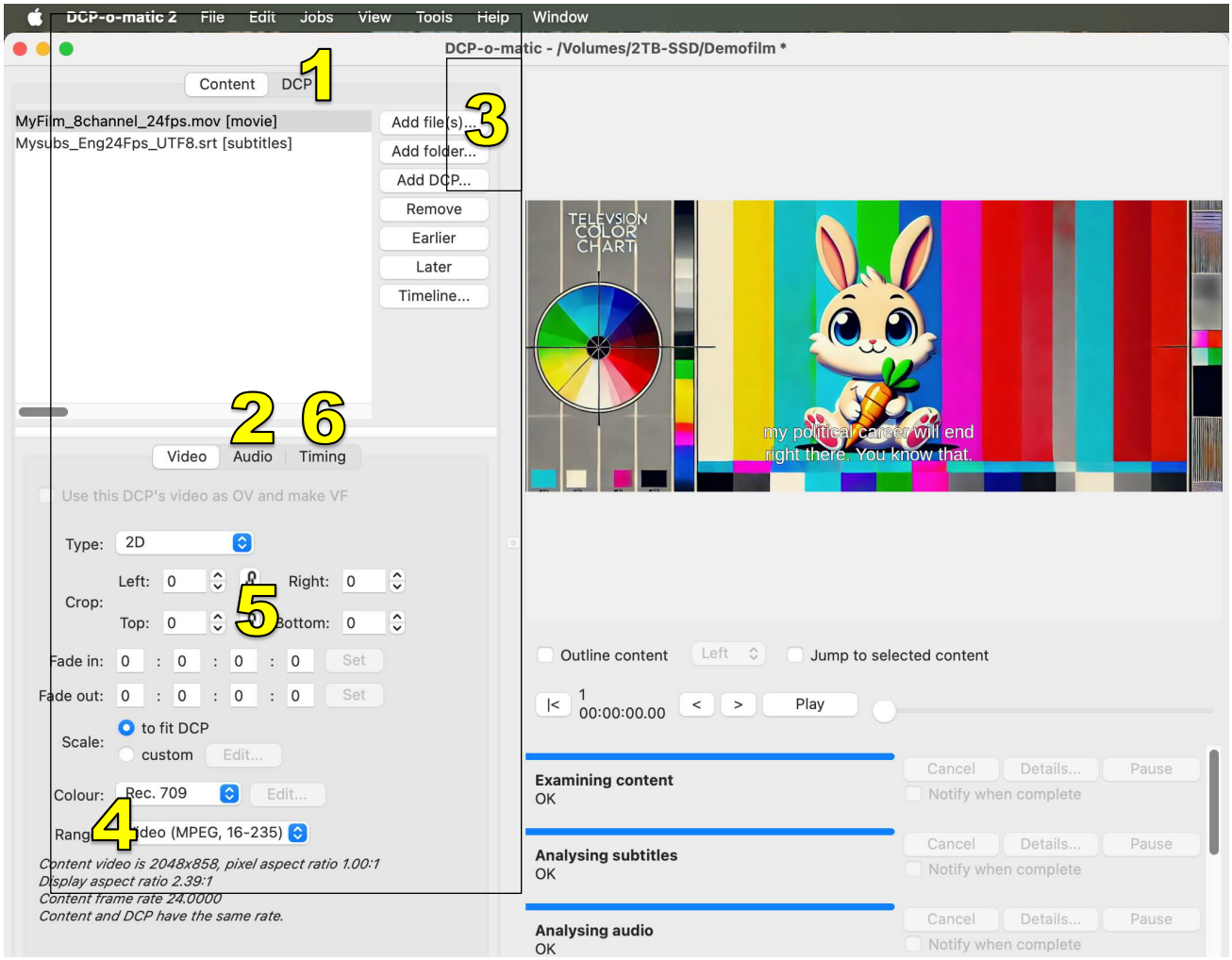
- Once the project is created, click on “Add files” and add your film file. Preferably add a high-quality master movie file like ProRes422HQ, DNxHR or better. The better the file you start with, the better your final film will look.



You can also add a subtitle file (for example an .srt) this will be placed over your video.

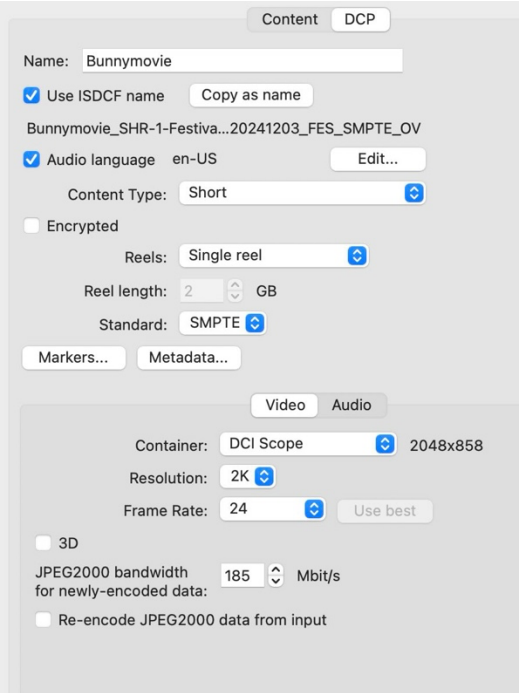
After adding the film, your interface will look something like this (depending on the version you are using).

The letters over this picture will guide you to the next steps on the following pages.

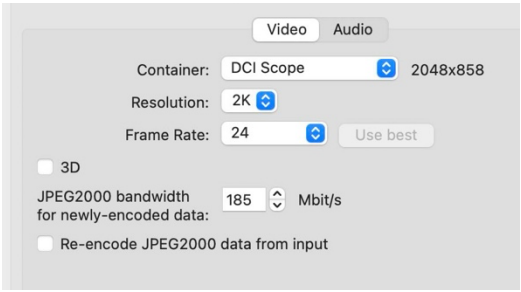


1. DCP-settings in the DCP-tab

Select the DCP tab. In the “Name” field, enter the title of your film. Note that the number of characters is limited.
In general, enter as much information as possible. Under “Content Type,” select the type of film (e.g., “Short”). In the “Metadata” section, enter your initials in the “Studio” field and/or your company name in the “Facility” field. Also, specify your film’s audio language. The subtitling language can be set on another page; see later in this manual for details.



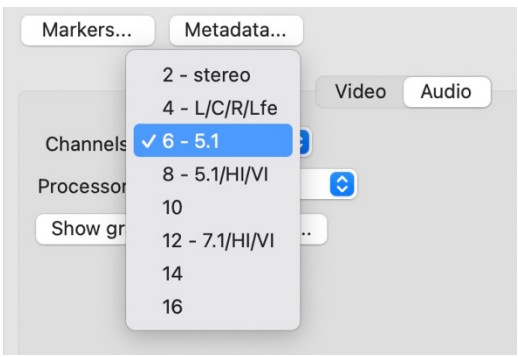
Below the “ISDCF Name” checkbox, the name of your DCP will appear as you adjust variables on this page. Keep “Use ISDCF Name” selected to create an official DCP name. To disable auto-naming and manually edit the information, click “Copy as name,”. Make sure you follow the naming convention rules. See: https://registry-page.isdcf.com/illustratedguide/



Below, you will see the Frame Rate, which is automatically detected based on your movie file, so no need to adjust this setting.

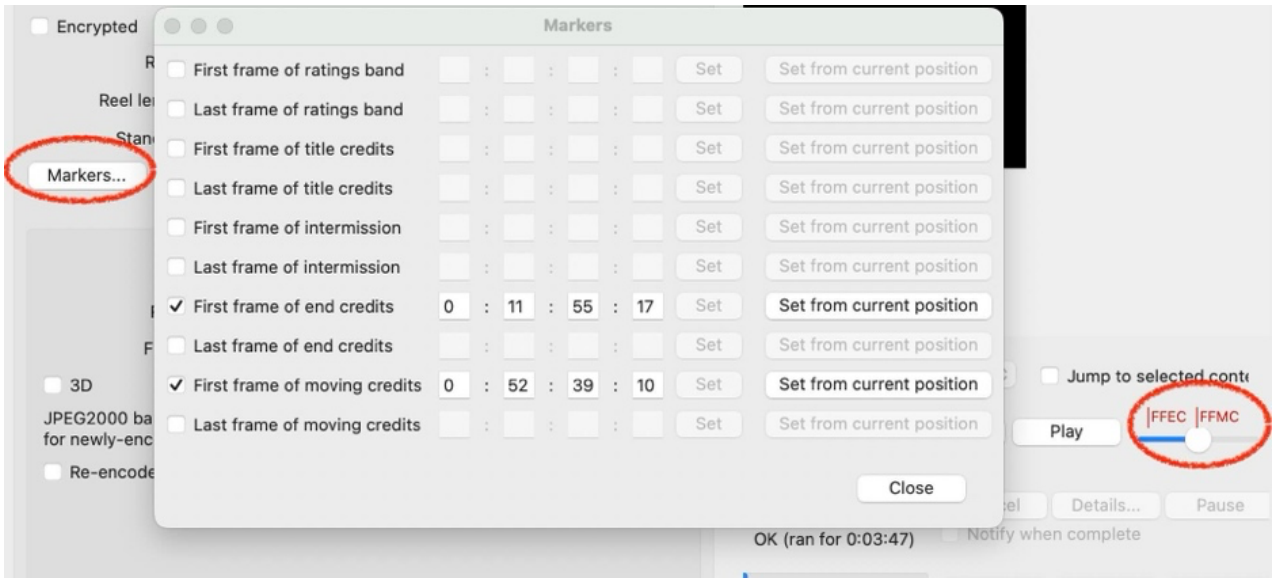
Under “Container,” select the aspect ratio of the film: Flat for regular (1.85) or Scope for super-wide (2.39). Typically, this is also automatically detected when you add your film. For other aspect ratios, such as 16:9 (1.78) or 4:3 (1.33), select Flat to letterbox or pillarbox the film within Flat.

Under “JPEG2000 Bandwidth,” select a value that is neither too high nor too low. A setting of 185 Mbit/s is roughly equivalent to ProRes422HQ quality.



Now go to the Audio tab. Under “Audio,” select the number of audio channels for your film, typically 2 (stereo) or 6 (5.1 surround). HI and VI are tracks for Hearing Impaired and Visually Impaired audiences if these options are available.

In the “Markers” setting, you can define the moments for end credits (**FFEC**) and moving credits (**FFMC**). This information is used in cinemas to automatically adjust the fade-up of the lights during the end credits. Entering **FFEC** and **FFMC** is the bare minimum recommended.

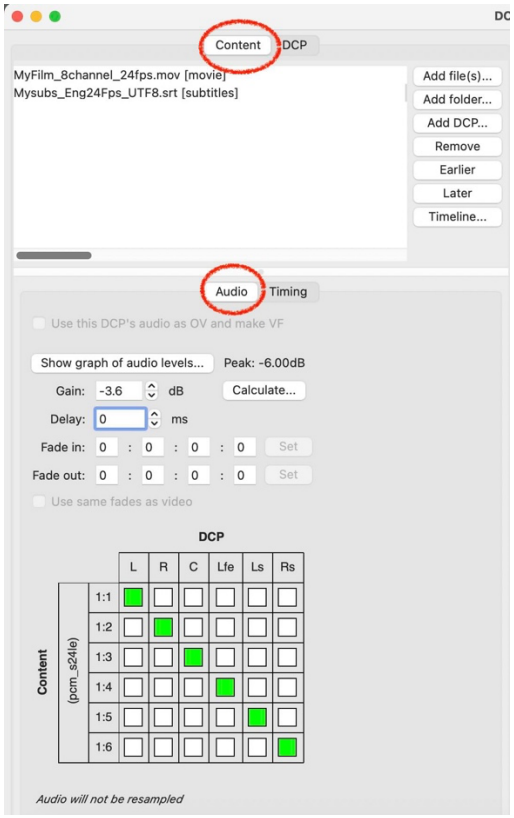


2. Audio

Go back to the main “Content” tab, and then click on the “Audio” tab. Here, you can see how many audio channels are in your audio stream. Depending on your film, this might be 2, 6 (5.1), or 8 (7.1) channels, with or without HI/VI tracks.

The horizontal and vertical layout must match to ensure the DCP has the same number of audio channels as your film.

If you see no green dots, or only one, the auto-interpretation of your audio may have failed. In this case, you need to manually select the correct layout and ensure the green dots are spread and connected to the corresponding audio channels.

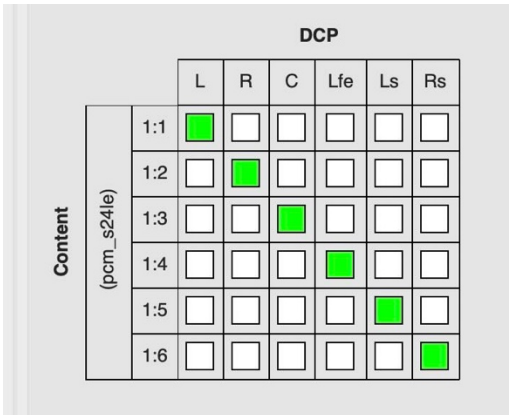


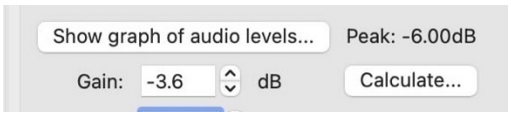
If you have 5.1 (6-channel) audio or more and want to create a 5.1 or 7.1 DCP, make sure to select 6 or 8 channels under the DCP – Audio tab as explained in step 1. Otherwise, you won't be able to assign all channels properly, as shown in the example picture.

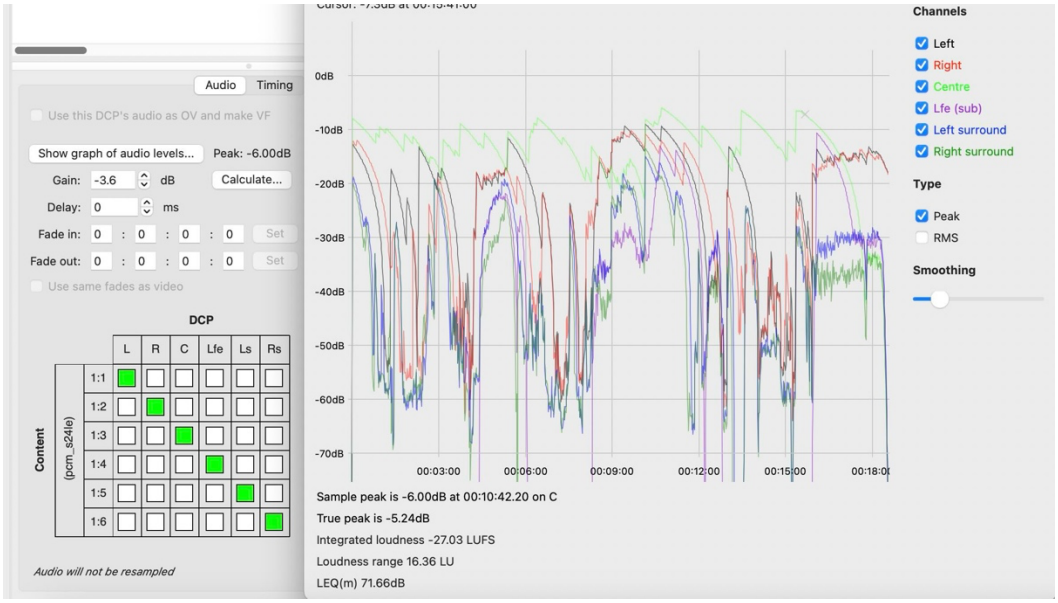
We won't go into "mastering audio for cinema" here, but it's important to ensure your film isn't too loud. Click "Calculate," wait for the process to finish, and then click "Show graph of audio levels." The audio will be analysed, and this graph is useful for checking if all audio channels are correct and for observing how sound levels are distributed throughout the film. Feel free to explore its features.

If you see any red dB indicators under "Peak," it means the film is too loud. Lower the volume using the "Gain" setting until no red peak is displayed. To be safe, ensure your film doesn't peak louder than -6.00dB, and -9.00dB is even safer. In the example on the right, we lowered the volume by -3.6 dB to achieve a peak value of -6 dB.

If the analysis shows a very low value, such as -20.00 dB, your film is likely very quiet OR has been mixed at a very low audio level.





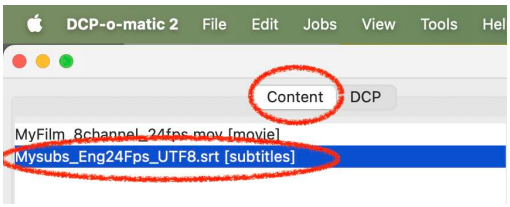


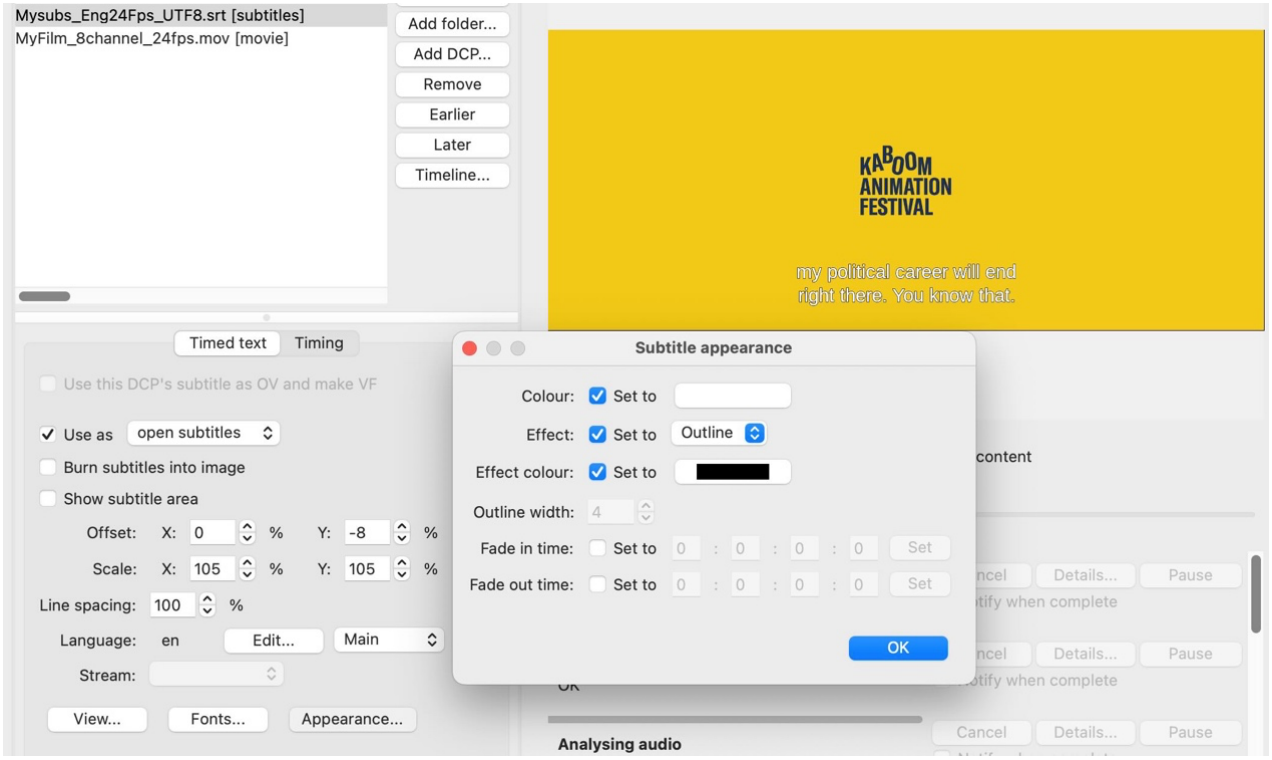
3. Adjusting subtitles

When in the “Content” tab, click on your subtitle track to display the subtitle settings in the main interface. (If you did not already burn subtitles in your master movie).

Use “Appearance” to ensure subtitles have an outline and are easily distinguishable on bright backgrounds.
Use “Edit” to set the subtitle language.

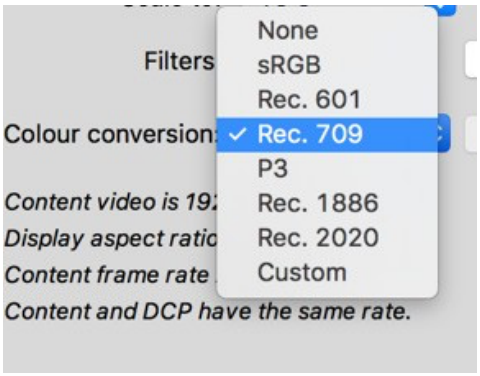
“Scale” and “Offset” can be used to ensure the height and size are correct. Subtitles should be not too far below the film safety margins or they might fall off the screen. Subtitles also shouldn’t be in the black bar/letterboxed area of a film.





4. The colour space menu

DCP-o-matic automatically detects the colorspace and levels of your film when you add the files. Commonly, at the time of writing, this is mostly REC709 for video. If you are certain that DCP-o-matic has detected it incorrectly, you can adjust it here. You can also change the studio-limited levels vs fullrange levels if desired.



5. Cropping

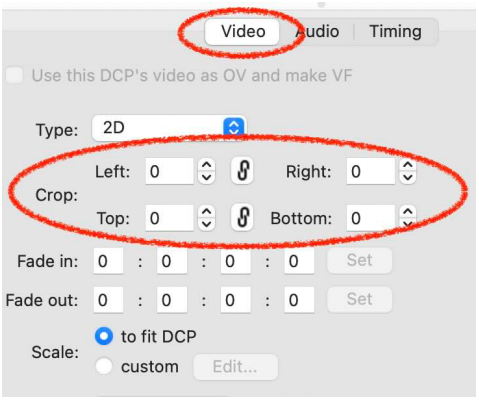
Cropping involves removing unwanted parts of an image. Cropping can for example be useful if your master movie contains black bars (letterboxes or pillar boxes) that need to be cut off, so the image covers the whole screen/DCP. 'What you see is what you get' is the rule here.

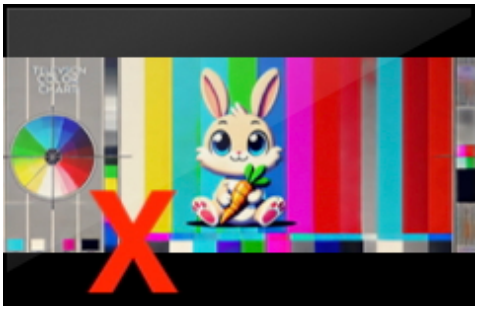
If you followed this manual correctly, you should have already selected a FLAT or SCOPE aspect ratio (or container size) in step 1. Check if your film looks okay now in the preview window in the top right. DCP-o-matic will auto-detect the scale of your movie! In most cases you're good to go.

If you have a 16:9 (1.78 aspect) video in a FLAT DCP container, you will see black bars on the left and right of the video. This is normal (and can't be cropped) because standard Flat DCPs for cinema have a slightly wider (1.85 aspect) format than regular full HD (1920x1080) video.

Official cinema video formats that fit seamlessly in the cinema are:

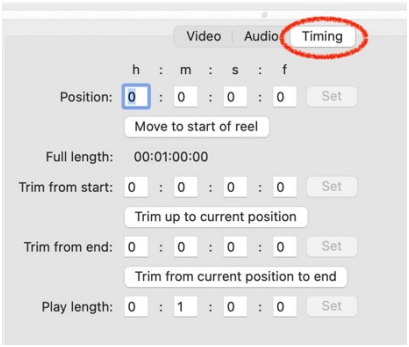
- 2K Flat: 1998x1080 pixels
- 2K Scope: 2048x858 pixels
- 4K Flat: 3996x2160 pixels
- 4K Scope: 4096x1716 pixels





6. Timing

You can create a clean cut with this option, such as removing unwanted black bars, slates, tone, etc at the beginning of a film. If you leave them in, they will be displayed in the cinema, as they cannot be removed once the DCP is finished.



To finish:

Make sure you save the project. And then choose “Jobs” under the menu to “Make DCP”, to render the DCP. Depending on the speed of your computer, rendering can take some time.

Once the DCP is ready you can find it in the destination folder you selected earlier. There are multiple project files in there, but you can recognize the DCP folder by the DCP title, which looks something like this: *Name_SHR_185_2K_20171204_SMPTE_OV*

Only take this folder from your project and send this entire folder to the film festival. Keep the naming as it is, don’t change anything, this might break the DCP! You may zip the folder if desired.