

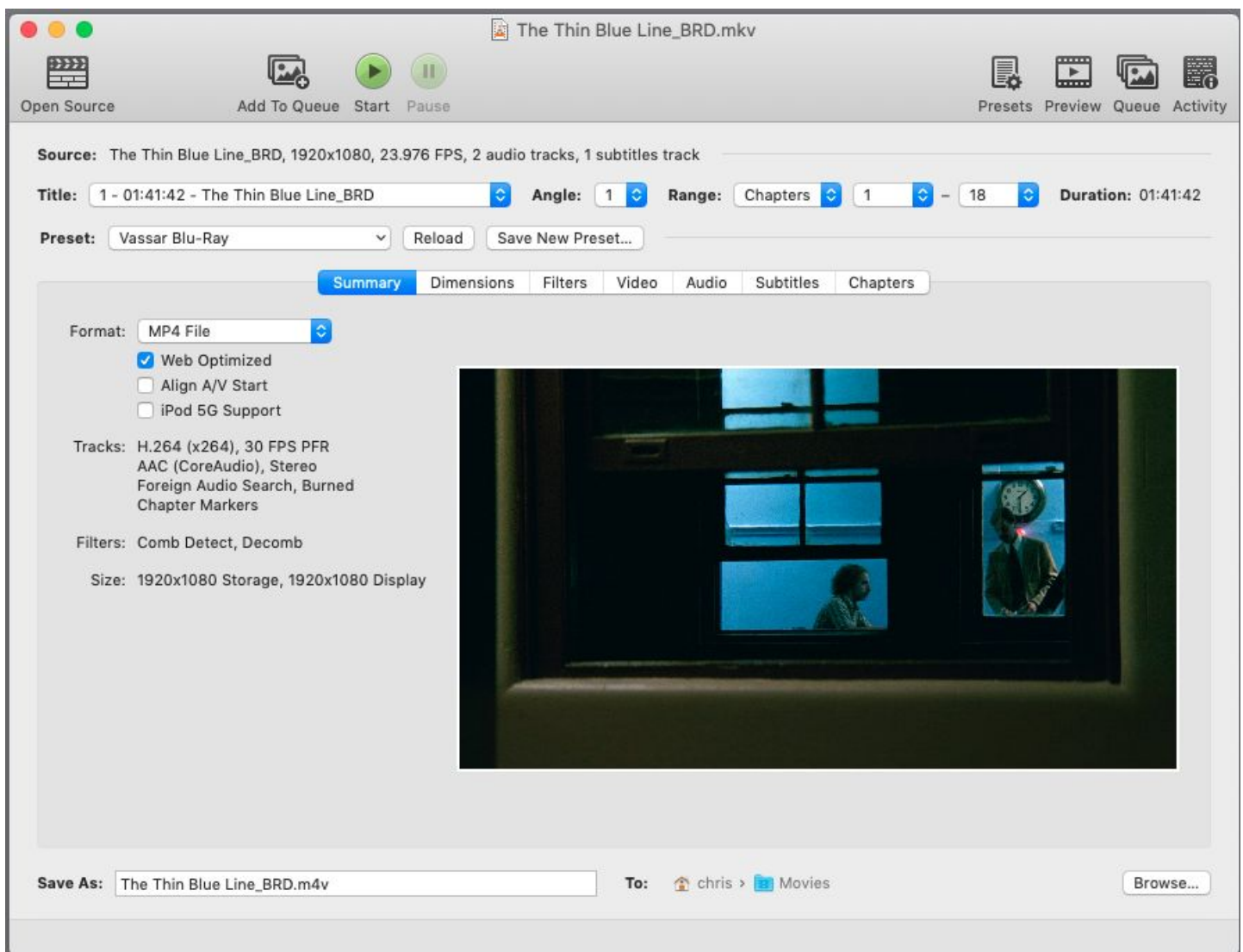
Handbrake - Blu-Ray Settings for HD & UHD Sources

First, create an MKV file with MakeMKV. This format contains the entire program, all audio versions, as well as subtitles. It makes sense to keep these on hand as they function as “masters” for future possible exports. These settings reflect a compromise between quality, ability to stream online, and file size.

Summary:

The first pane in Handbrake allows you to choose export format and gives you basic information about the source file.

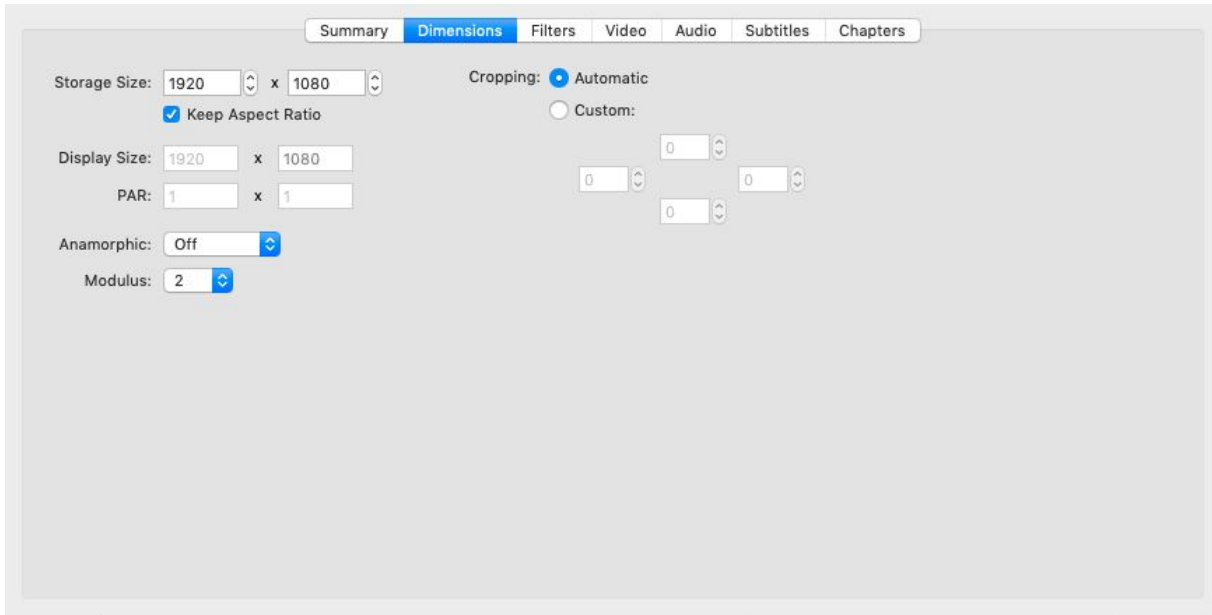
- **Format:** MP4
- **Web Optimized:** Checked
- **Align A/V Start:** Checked



Dimensions

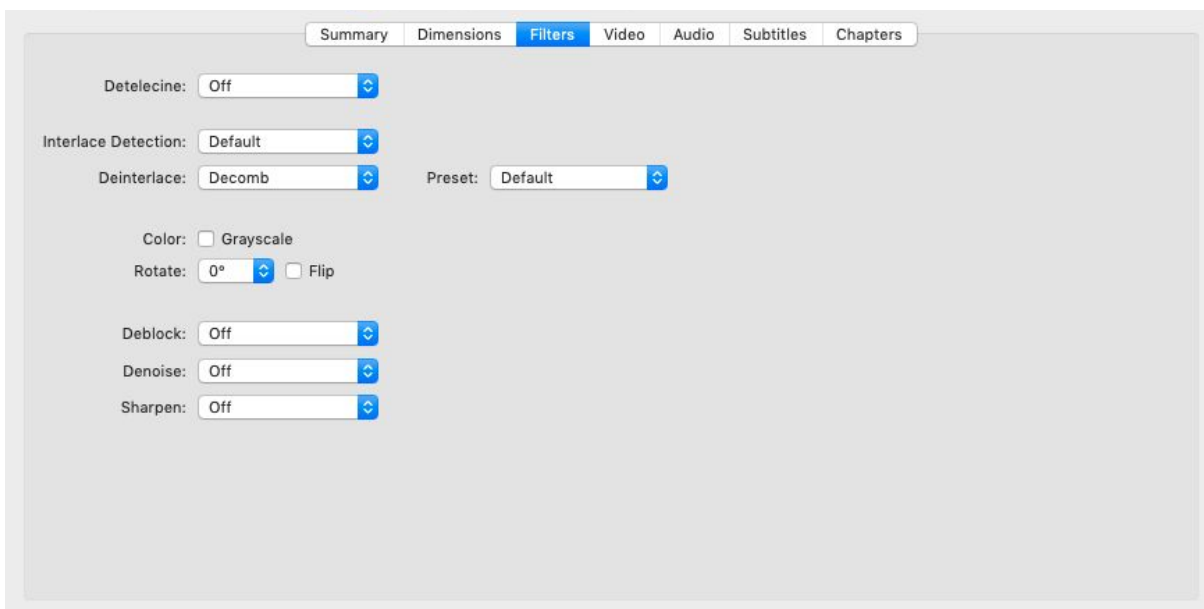
The dimensions pane is where you can choose the aspect ratio and size of the export. Typically, we recommend letting the source dictate size here.

- **Keep Aspect Ratio:** Checked
- **Cropping:** Automatic
- **Anamorphic:** Off



Filters

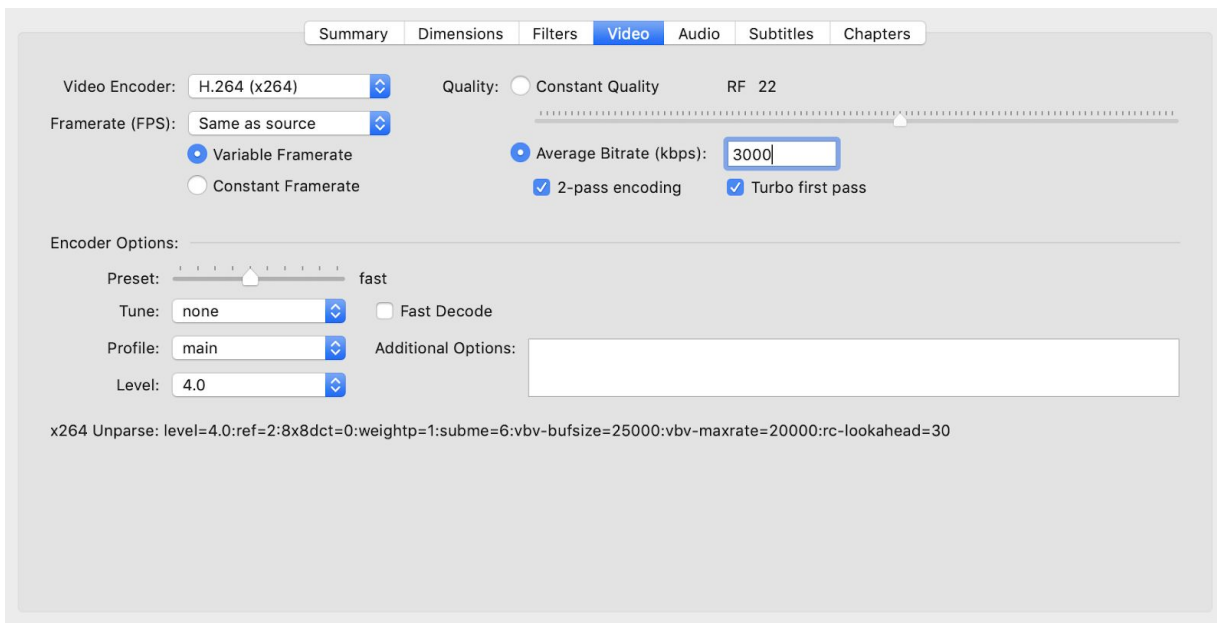
With new HD and UHD titles, there is little need to detelecine or deinterlace your source files. Older formats may need these options, but we normally do not select any filters.



Video

These are the most important of the options you will choose for ripping discs. We've gone with h.264 for wide compatibility and convenient file size. Since most high definition commercial titles use 8-bit compression, the normal version of h.264 will suffice. HDR, UHD and 4K titles would benefit from a higher bit depth. These settings are specific for streaming. You can choose a higher bitrate for local storage and playback.

- **Video Encoder:** h.264 (x264)
- **Average Bitrate (kbps):** 3000
- **2-pass recording:** Checked
- **Turbo First Pass:** Checked
- **Framerate:** Same as Source
- **Encoder Options:** Leave as set by Handbrake (ie. Tune: none, Profile: main, Level: 4.0)



The screenshot shows the 'Video' tab in the Handbrake settings. The 'Video Encoder' is set to 'H.264 (x264)'. The 'Quality' is set to 'Constant Quality' with a 'RF' value of 22. The 'Framerate (FPS)' is set to 'Same as source'. Under 'Framerate', 'Variable Framerate' is selected. Under 'Average Bitrate (kbps)', the value '3000' is entered in the text box. '2-pass encoding' and 'Turbo first pass' are both checked. Under 'Encoder Options', the 'Preset' is set to 'fast'. 'Tune' is set to 'none' and 'Fast Decode' is unchecked. 'Profile' is set to 'main' and 'Level' is set to '4.0'. The 'Additional Options' field is empty. At the bottom, the command line string is displayed: 'x264 Unparse: level=4.0:ref=2:8x8dct=0:weightp=1:subme=6:vbv-buFSIZE=25000:vbv-maxrate=20000:rc-lookahead=30'.

Audio

With titles that have surround sound (usually 5.1 or 7.1) we will use a combination of outputs that includes both stereo and surround. This allows functionality with devices like Apple TV to utilize a surround mix while keeping stereo available for streaming and mobile devices. For older titles, surround mixes are usually unavailable.

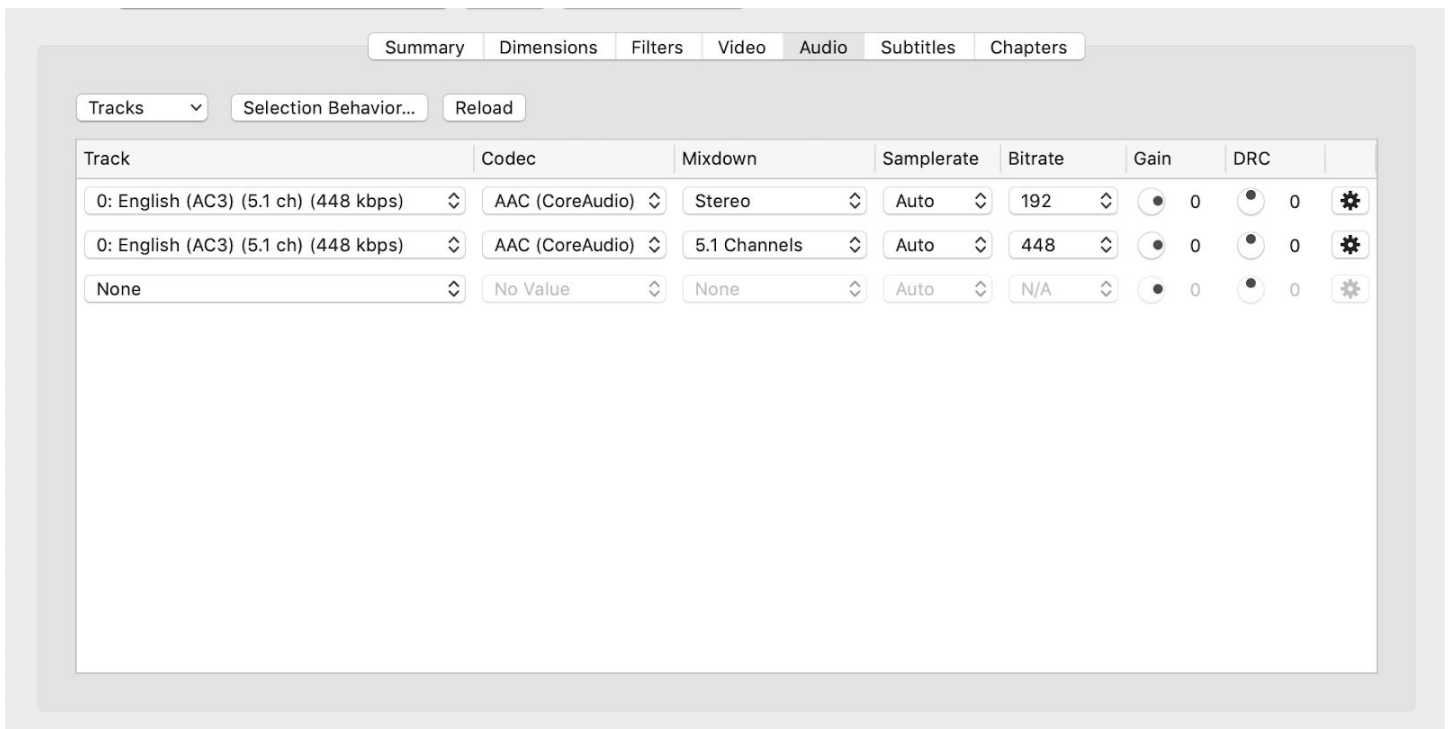
Select only a “Stereo” mixdown if the source mix is mono or stereo. **These settings must be confirmed, even when using a Preset.**

Stereo

- **Track:** Select Stereo or Surround Mix
- **Codec:** AAC (CoreAudio)
- **Mixdown:** Stereo
- **Samplerate:** Auto
- **Bit Rate:** 192
- **Gain:** 0

Surround Sound

- **Track:** Select Source Surround Mix (usu. Something like “English (DTS-HD) (5.1 Ch)”)
- **Codec:** AAC (CoreAudio)
- **Mixdown:** 5.1 Channels
- **Samplerate:** Auto
- **Bit Rate:** 448
- **Gain:** 0



The screenshot shows a software interface for audio settings. At the top, there are tabs for 'Summary', 'Dimensions', 'Filters', 'Video', 'Audio', 'Subtitles', and 'Chapters'. Below the tabs, there are buttons for 'Tracks', 'Selection Behavior...', and 'Reload'. The main area is a table with columns for Track, Codec, Mixdown, Samplerate, Bitrate, Gain, and DRC. The table contains three rows of audio tracks.

Track	Codec	Mixdown	Samplerate	Bitrate	Gain	DRC
0: English (AC3) (5.1 ch) (448 kbps)	AAC (CoreAudio)	Stereo	Auto	192	0	0
0: English (AC3) (5.1 ch) (448 kbps)	AAC (CoreAudio)	5.1 Channels	Auto	448	0	0
None	No Value	None	Auto	N/A	0	0

Subtitles

Theoretically, the subtitle metadata track is exportable to streaming files. However, we have not found a reliable way to have subtitles as a selectable option during playback. If a title needs subtitling, it is best to burn it in on the video track. These cannot be hidden as they are part of the video image.

- **Track:** English
- **Forced Only:** Unchecked
- **Burned In:** Checked (should be checked by default when you uncheck “Forced Only”)

