

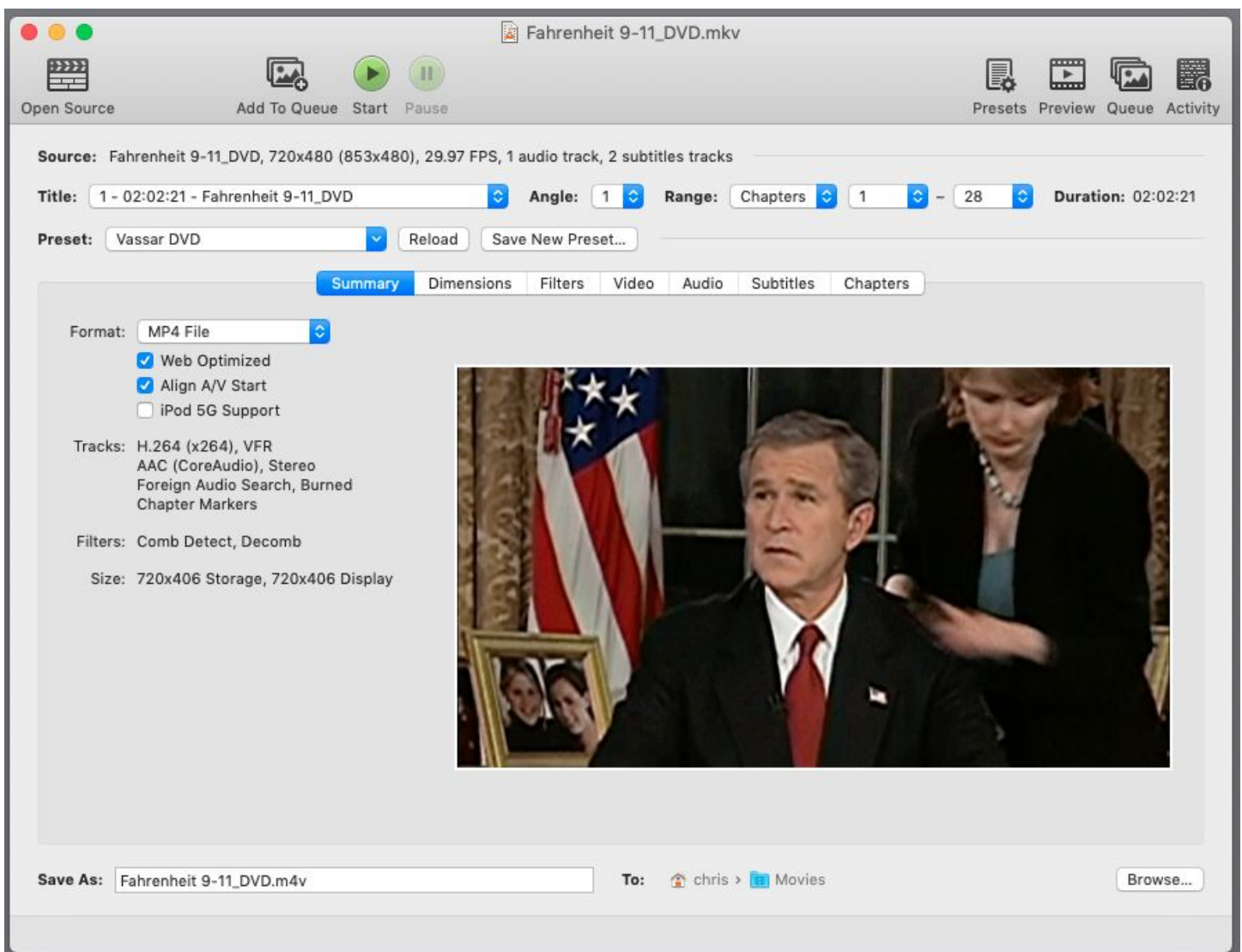
Handbrake - DVD Settings for SD Sources

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



The screenshot shows the Handbrake application window titled "Fahrenheit 9-11_DVD.mkv". The interface includes a top toolbar with buttons for "Open Source", "Add To Queue", "Start", and "Pause", and a right-side toolbar with "Presets", "Preview", "Queue", and "Activity".

The main content area displays the following information:

- Source:** Fahrenheit 9-11_DVD, 720x480 (853x480), 29.97 FPS, 1 audio track, 2 subtitles tracks
- Title:** 1 - 02:02:21 - Fahrenheit 9-11_DVD
- Angle:** 1
- Range:** Chapters 1 - 28
- Duration:** 02:02:21
- Preset:** Vassar DVD

The "Summary" tab is selected, showing the following settings:

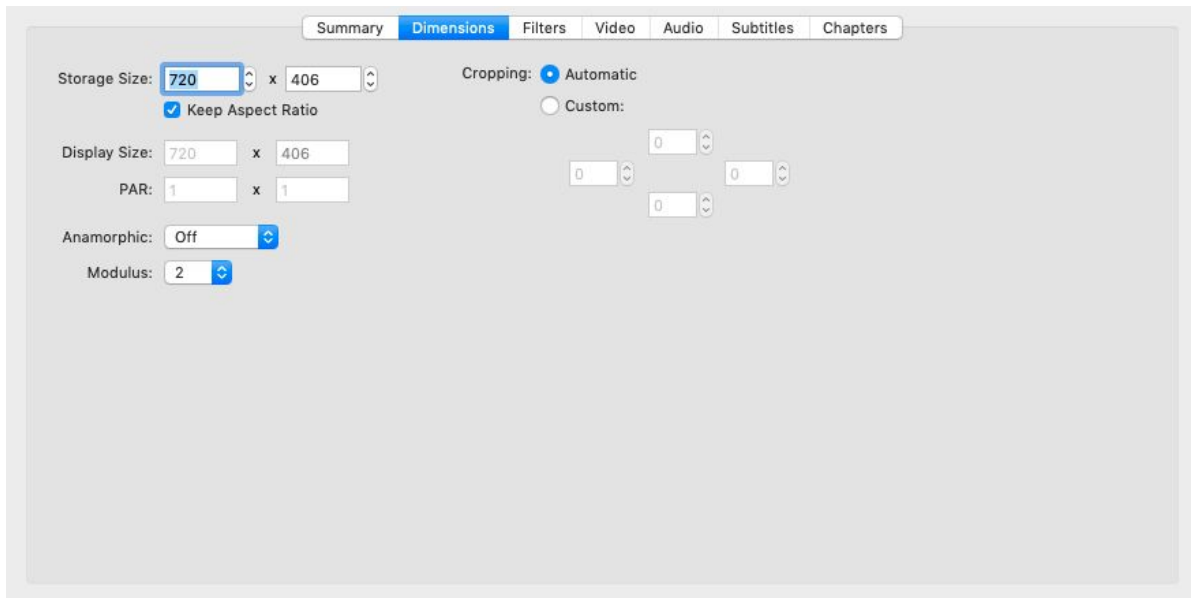
- Format:** MP4 File
- Web Optimized
- Align A/V Start
- iPod 5G Support
- Tracks:** H.264 (x264), VFR; AAC (CoreAudio), Stereo; Foreign Audio Search, Burned Chapter Markers
- Filters:** Comb Detect, Decomb
- Size:** 720x406 Storage, 720x406 Display

A video preview window shows a scene from the movie "Fahrenheit 9-11" featuring George W. Bush and a woman. The "Save As" field is set to "Fahrenheit 9-11_DVD.m4v" and the destination is "To: chris > Movies".

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



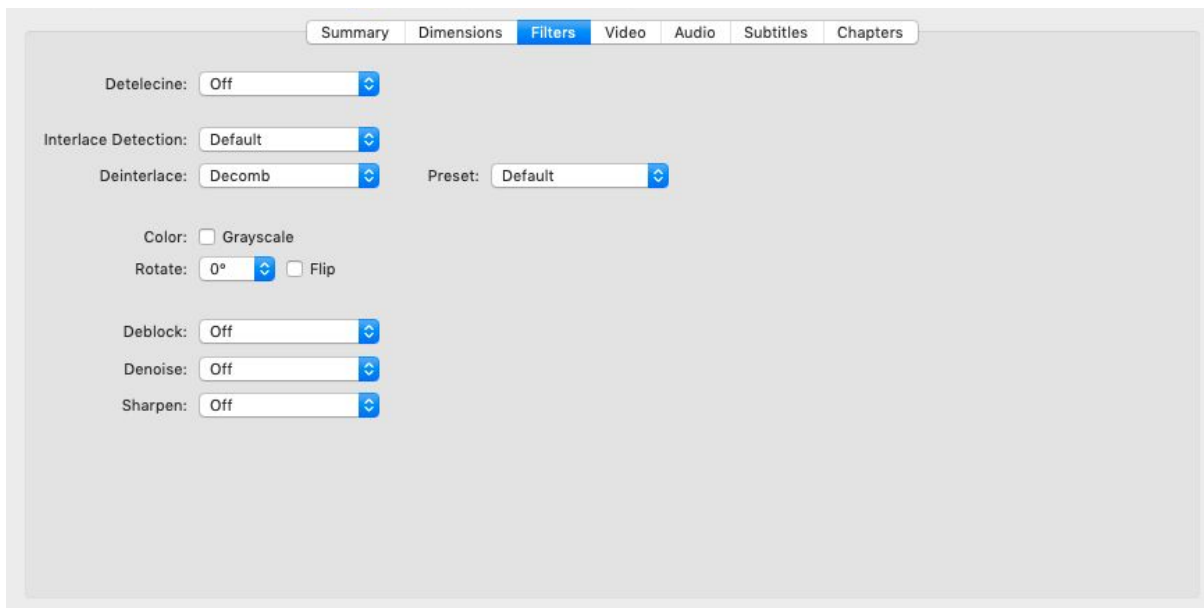
The screenshot shows the 'Dimensions' tab in a software interface. At the top, there are tabs for 'Summary', 'Dimensions', 'Filters', 'Video', 'Audio', 'Subtitles', and 'Chapters'. The 'Dimensions' tab is active. The settings are as follows:

- Storage Size: 720 x 406
- Keep Aspect Ratio:
- Cropping: Automatic, Custom
- Display Size: 720 x 406
- PAR: 1 x 1
- Anamorphic: Off
- Modulus: 2

There are also several empty input fields for custom cropping settings, all containing the value '0'.

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.



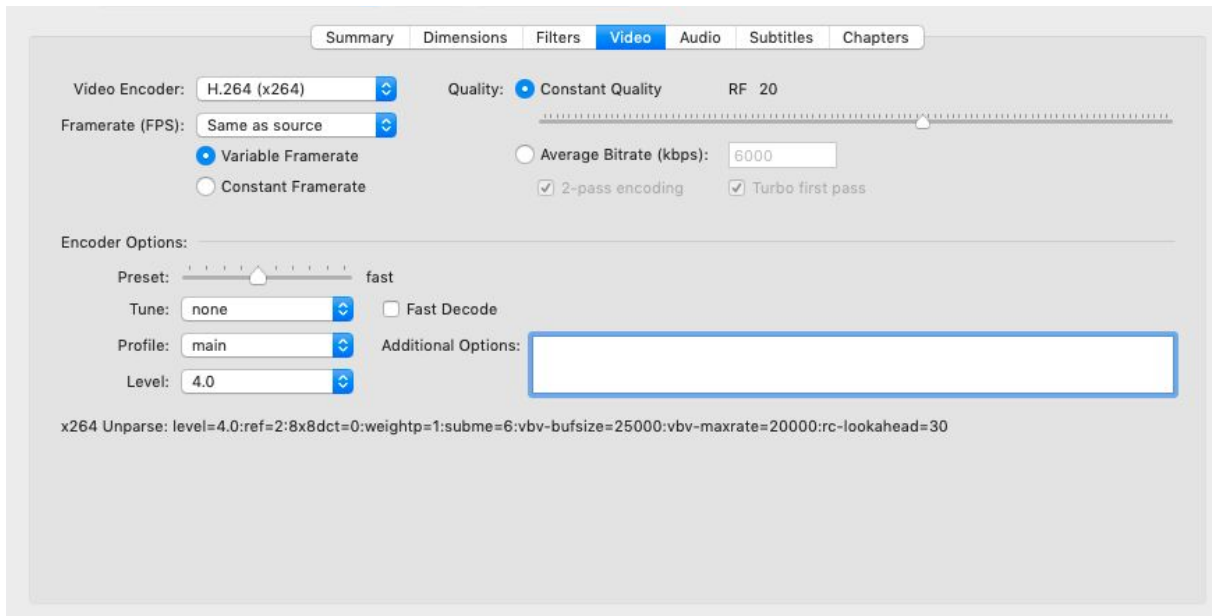
The screenshot shows the 'Filters' tab in the same software interface. The 'Filters' tab is active. The settings are as follows:

- Detelecine: Off
- Interlace Detection: Default
- Deinterlace: Decomb
- Preset: Default
- Color: Grayscale
- Rotate: 0° Flip
- Deblock: Off
- Denoise: Off
- Sharpen: Off

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 but adjusted the "Quality" setting to a lower compression to achieve better picture quality. Since most standard 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.

- **Video Encoder:** h.264 (x264)
- **Constant Quality:** RF 20
- **Framerate:** Same as Source
- **Encoder Options:** Leave as set by Handbrake (ie. Tune: none, Profile: main, Level: 4.0)



The screenshot shows the Handbrake Video settings tab. At the top, there are tabs for Summary, Dimensions, Filters, Video (selected), Audio, Subtitles, and Chapters. The Video Encoder is set to H.264 (x264). The Quality is set to Constant Quality with a slider at RF 20. The Framerate (FPS) is set to Same as source, with Variable Framerate selected. The Average Bitrate (kbps) is set to 6000, with 2-pass encoding and Turbo first pass checked. Under Encoder Options, the Preset is set to fast, Tune is none, Profile is main, and Level is 4.0. The Fast Decode checkbox is unchecked. The Additional Options field is empty. At the bottom, the command line for x264 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.

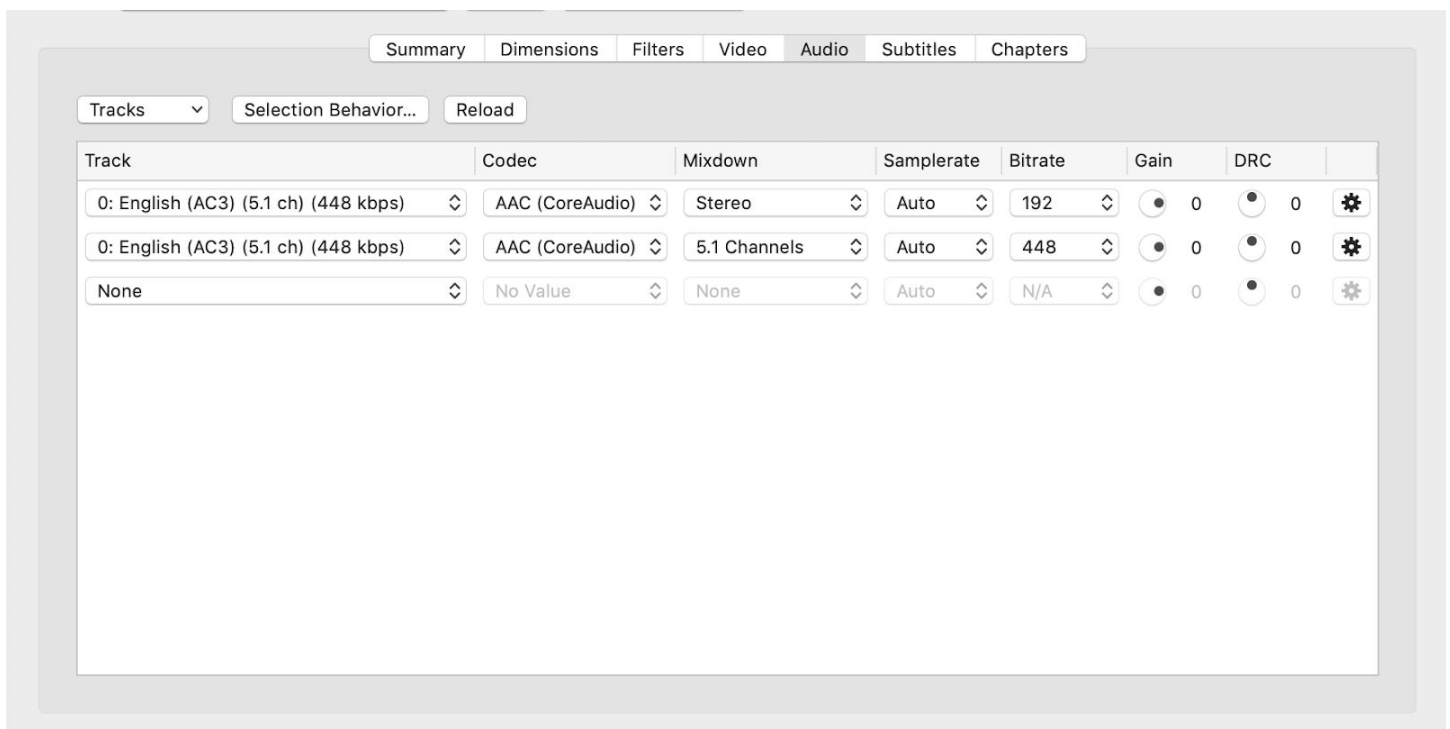
Select only a “Stereo” mixdown if the source mix is mono or stereo. **These settings must be confirmed, even when using a Preset.**

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 contains a table with columns for Track, Codec, Mixdown, Samplerate, Bitrate, Gain, and DRC. The table lists three tracks: '0: English (AC3) (5.1 ch) (448 kbps)', '0: English (AC3) (5.1 ch) (448 kbps)', and 'None'. Each track has a dropdown menu for Codec, Mixdown, Samplerate, Bitrate, Gain, and DRC. The first two tracks are set to AAC (CoreAudio), 5.1 Channels, Auto, 448, 0, and 0 respectively. The third track is set to No Value, None, Auto, N/A, 0, and 0. There are also gear icons for each track to access more settings.

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 (might be checked by default when you uncheck “Forced Only”)

