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**Overall remarks, tips & tricks** 

Update Index Version 0.9.6.3

SpecWeb related: <u>#Update\_0963\_01</u>, <u>#Update\_0963\_02</u>, <u>#Update\_0963\_03</u>

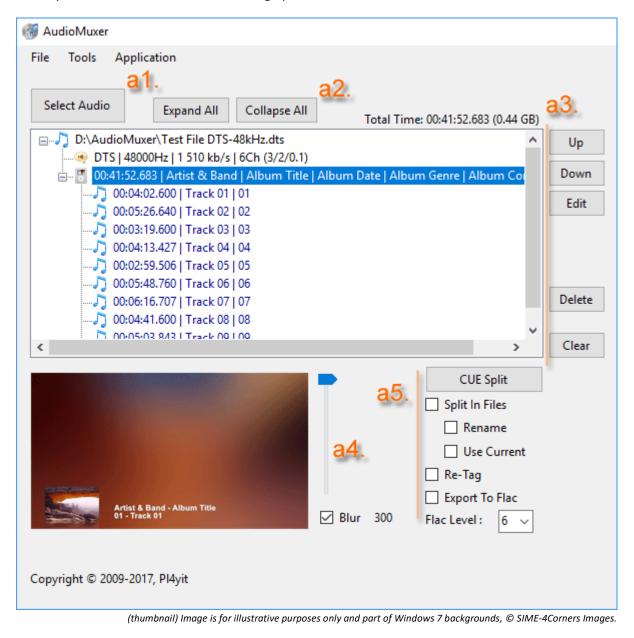
Update Index Version 0.9.6.4 & 0.9.6.5

No functionality update compared to previous version

Changes compared to the previous version will be highlighted

AudioMuxer is a tool that will allow you to mux AC3, TrueHD, DTSWav, DTS (or CPT), DTSHD (DTS Master Audio and DTS High-Resolution), LPCM, Flac, AAC, ALAC and MP3 audio tracks together with a series of images to, where applicable, a DVD-Video output or an MPG file, or to an MKV file and AVCHD/Blu-ray/Flac/Wav/DTSWav/CDWav/AAC/ALAC output.

During the installation AudioMuxer will check whether you have AviSynth 2.5 installed and it will ask you to install it should that not be the case. AviSynth is a scripting tool that is used in the video encoding part of AudioMuxer. AudioMuxer uses the .Net framework (version 4 Client Profile) and can therefore only run on Windows XP (as of SP2), Windows Vista, Windows 7 and Windows 10.



When you start AudioMuxer, the following options are available:

On the left-hand side of the application you can select with the **"Select Audio"** button (**[a1]**) the audio files that you would like to mux to DVD/MKV.

- Instead of clicking the "Select Audio" button, you can also drag and drop files from Windows Explorer right into the list. This drag and drop functionality is available in all parts of AudioMuxer where it makes sense.
- When you start with a new muxing compilation then be aware that you can only mux audio tracks together of the same type, i.e. it is not possible to combine a mix of for example AC3, DTS and LPCM tracks together in one compilation. You will then have to create different muxing compilations for each different type of audio. The end-result of AudioMuxer is always 1 audio track combined with 1 video track (and subtitles, in case the Blank Video option was selected).

With the buttons in **[a2]**, you can collapse or expand all the specific information of the audio files that have been loaded in the list.

With the buttons in **[a3]**, you can move audio tracks **"Up"** and **"Down"**, **"Delete"** them or **"Clear"** the complete list, moreover the audio tags like Artist, Album, Track Title and Track Number can be edited with the **"Edit"** button (see example further on in this guide).

The image in **[a4]** shows the result that will be displayed during the playback of the audio track. You can click on the image to enlarge it and also to **save** then the **background image**, i.e. image without the text and thumbnail. This option is useful when you like the result of a certain blur effect (see below) and you want to save the output.

There is a **"Blur"** option that can blur the background image for creating a visual effect, as shown in the example here below. When the Blur option is enabled, the same blur value will be used for all images present in the image list.

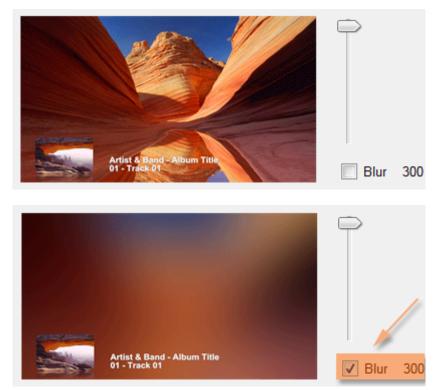


Image is for illustrative purposes only and part of Windows 7 backgrounds, © Stone/Getty Images. (thumbnail) Image is for illustrative purposes only and part of Windows 7 backgrounds, © SIME-4Corners Images.

With the "CUE Split" button ([a5]) you can split the audio using a Cue sheet or an Ogg-type of chapter file. The latter looks like the example shown here below.

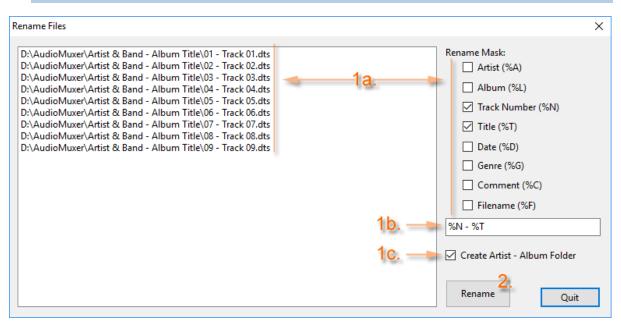
CHAPTER01=00:00:00.000 CHAPTER01NAME= CHAPTER02=00:03:00.000 CHAPTER02NAME=

In this way you can assign different images to one audio file, one for each track point found in the Cue file (see example later on).

Moreover there is the possibility with the "Split In Files" option to physically split the audio file and to create separate audio files for each of the track points in the Cue file. For this to take place, first select the "Split In Files" option and then click on the "CUE Split" button and select the CUE file that you want to use to split the audio file. If you have selected the "Use Current" option then the CUE split that has already been loaded for the audio file will be used instead and no CUE file will be asked.

Since the splitting in physical files will take some time, it is better to "test" first without • enabling this option to ensure that you have selected the right Cue file for the audio file that you want to split.

Enabling the "Rename" option will give the possibility to rename the files after the split. As you can see here below, you can click on one or more of the information attributes (see [1a]) and you will automatically see what the result will look like in the renaming result list. You can also edit the rename mask (see [1b]) or to create a folder per Artist/Album combination ([1c]).



0 For identical entries in the renaming result list, only the first occurrence will get renamed and the original filenames for the other ones will remain untouched.

With the "Re-Tag" option you can change the information that will get displayed for a given track or for multiple tracks (in the event the "Split In Files" option was selected).

The Album Artist, Album, Year, Genre, Comment, Track Title and Track Artist can be updated (see [1]). Track Titles/Artists can be edited individually by clicking on the cell and then to edit the

4

contents of the cell. Right-clicking on a given cell or cells will allow you to copy/paste one or multiple cells within the current table or to/from the clipboard. Ctrl-C or Ctrl-V can also be used as shortcuts for Copy or Paste.

In the event that the output is in FLAC, AAC or ALAC format, this tag information will also be added to the file itself.

For Album Art (see **[2]**), a picture can be selected by clicking somewhere in the picture area and moreover the picture can be resized proportionally to the width provided (in pixels). A picture can also be loaded from the clipboard using the clipboard button (see **[3]**).

Providing a picture here is only useful if the output is FLAC, AAC or ALAC, since these formats support picture tagging.

There is the option (see [4]) to store the information as a CUE file. Remind that the picture information will not be kept in that CUE file.

In addition to the CUE file, a Ogg-format chapter file will be created under the same name as the CUE file, but suffixed with 'oggfmt.txt'. Only the Track Titles together with the chapter times will get stored in that type of file.

Click on the **"Tag"** button ([4]) to continue with using the information provided, or **"Quit"** to continue without using the information.

			intuge is jo	or mustru	nive purp	uses only and	i part oj vvi	nuows 7 b	аскgrounas, © SIME-4Co	mers images.
Tag Files										×
Album Artist:	Artist 8	د Band							Album Art (click on pictu	re):
Album:	Album Title					3.				
Year:	2017	Genre:	Classic Roc	k	~					
Comment:	Album	Comment								and the second
Tracks:	#	Title				Artist		^	Statement At	
	01/09	Track 01		Сору	Ctrl+C		1		And and	
	02/09	Track 02		Paste						
	03/09	Track 03				_				
	04/09	Track 04							×	
	05/09	Track 05						2.	(Size Original - W: 1920 x I 1351.15 KB)	H: 1200
	06/09	Track 06						4.	10011101100	
	07/09	Track 07							Resize Width (in px) :	600
	08/09	Track 08						4.	Generate CUE File	
		L D: 1						v	Tag 5.	0.1
	TRACK IN	umber Digits:	2 ~	Add	iotai lo Ir	ack Number			,	Quit

With the **"Export To Flac"** option you can export the result as a Flac file (+ tags, if that option was enabled) and the result will replace the original file in the AudioMuxer audio list (for that reason only the original file can be initially in the audio list, and after a warning, all other files will be removed).

Remark that some files cannot be converted directly to Flac such that a conversion to a temporary Wav file will be necessary. AudioMuxer will give a warning though because that conversion process can be quite lengthy.

Image is for illustrative purposes only and part of Windows 7 backgrounds, © SIME-40	Corners Images.
—	×
Select Images i1.	i2.
D:\AudioMuxer\Web\Wallpaper\Landscapes\img7.jpg   D:\AudioMuxer\Web\Wallpaper\La D:\AudioMuxer\Web\Wallpaper\Landscapes\img8.jpg D:\AudioMuxer\Web\Wallpaper\Landscapes\img10.jpg D:\AudioMuxer\Web\Wallpaper\Landscapes\img11.jpg D:\AudioMuxer\Web\Wallpaper\Landscapes\img12.jpg	Up Down Copy
< >	Delete Clear
Mux To       MKV       ✓ m2.         HD 720p (1280x720)       ✓ Blank Video / Text As Subtitles         Split By       Main Audio Track         Save Images       ✓ Export To         4Gb Split       8.3 File Formation	∽ ∽ SO

On the right-hand side of the AudioMuxer application you can select with the **"Select Images"** button (**[i1**]) the images that you want to combine with the audio tracks. Image 1 will be linked to Audio Track 1, Image 2 to Audio Track 2, and so on. If there are fewer images in the list compared to the number of audio tracks, then the last image will be repeated for the remaining audio tracks. Also here you will have the option to change the order of the image files, to copy an image 1 or multiple times, to delete them or to clear the list (see buttons on **[i2]**).

Clicking the **"Copy"** button (see **[i2]**) will add 1 copy of the selected image to the image list. Clicking the **"Copy"** button while holding down the **"Shift"** key, will bring up the dialog to create multiple copies of the selected image. The new copy/copies will always be added after the selected image.

Сору		×
01 Time(s)	OK	Cancel

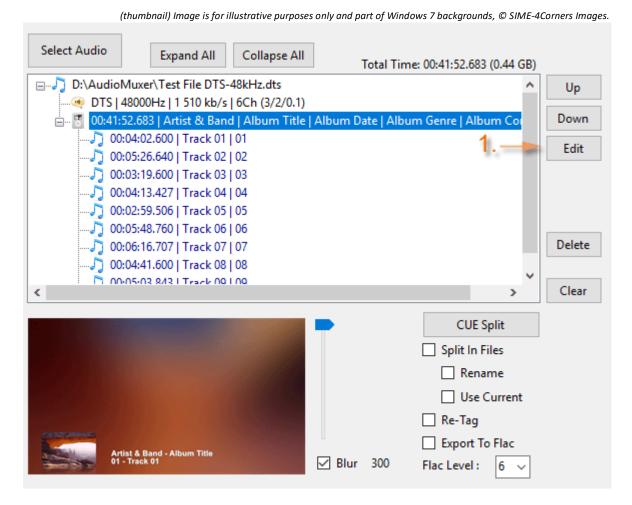
The selected image is show in **[i4]**, and clicking on it will give you an enlarged view.

With the **"Thumbnail..."** option (see **[i3]**) you can, amongst others, add a small thumbnail on the background slide. Left- or right-clicking the **"Thumbnail..."** button will give the following menu options:

	Add
	Add On Default Background
	Сору
	Copy To All Below
	Delete
	Clear All
	Auto Generate

- "Add" will add a thumbnail image of your choice to the currently selected image in the list
- **"Add On Default Background"** will add a thumbnail on a background slide made from the default background color selected in the Application Settings dialog screen (see next chapter).
- **"Copy"** will copy the thumbnail from the currently selected image to the next image in the list.
- **"Copy To All Below"** will copy the thumbnail from the currently selected image to all images below that selected image in the list
- "Delete" will delete the thumbnail from the currently selected image in the list.
- "Clear All" will clear the thumbnails from all images in the list.
- **"Auto Generate"** will add as thumbnail the same image as the image itself (useful when blurring the background image).

With the **"Mux To"** button (**[m1]**) you will start the muxing operation to the output format selected in **[m2]** (DVD or MKV). There is a shortlist of settings (see **[m3]**) that you can change on-the-fly. More on these settings later on in this guide. Remark that these settings are not saved contrary to the ones that you can select through the Application/Settings menu option.



If you have split a track with a Cue list (without physically splitting the files), the list will be changed as displayed here above. For each of the track entries, a separate image can now be assigned. With the **"Edit"** button (see **[1]**) you can change the Audio tags like Artist, Album, Title and Track Number (see below).

The following dialog will then be opened and changes can be made to the tags, were appropriate. The **"Previous"** / **"Next"** buttons (see **[1]**) will let you navigate to the previous / next track and will save the changes to the current track. **"Exit"** will exit the Edit option, also with saving the current track; **"Quit"** will exit without saving the changes of the current track.

Audio Track Prope	rties	×
Album Artist :	Artist & Band 2.	
Album :	Album Title	
Date :	Album Date	3.
Genre :	Album Genre	
Comment :	Album Comment	
[Track] Title : Artist : Number :	Track 01 4.	
Save and Previous	1. Next Exit	Quit

You can easily copy/paste (see **[2]**) between tracks since the cursor will remain positioned on the selected input field when navigating from one track to the other with the "Previous" / "Next" buttons.

With enabling the checkbox for Album Artist, Album, Date, Genre and Comment (see **[3]**), the current text will be locked when navigating to another track. This will facilitate the copying of similar information to multiple tracks.

The Track Title and (if necessary, i.e. when different from the Album Artist) the Track Artist can be updated accordingly (see [4]).

For the Track Number there is a possibility to automatically number (see checkbox [5]) the next tracks starting from the number that was present before the auto-numbering checkbox was selected.

You can add manual line breaks by inserting **%cr%** anywhere in the text. These line breaks will only be taken into account when creating the slide that accompanies a given audio track.

# "Application/Settings" Menu Option

Ар	olication
	Settings 🔪
	Show Logfile
	About

Select "Settings..." of the Application menu and the following window will be displayed.

Application Settings ×
<b>1</b> 0 <b>- are bound</b>
1a. Slide Background Color
Text Color : : : Text Outline Color
Text Outline Style : Shadow ~
Text Orientation : Bottom ~
Text Alignment : Center 🗸
1d %arlast% %.% %album% %tracknumber% %.% %title% Thumbnail Settings 1C.
Template : Width : 150 Px V Rnd V Refl
Enabled     The second se
Edit %artist% %-% %album%
%tracknumber% %-% %title%     DVD Default Settings     2.
NTSC (720x480) - 16:9
Delete < Encode Images to Video ISO
Font Auto-Size Arial, 36pt, Bold Show Encoder Progress
Audio Settings 6. MKV Default Settings 3.
DTS Test HD 720p (1280x720)
ArcSoft DTSHD Decoder MKVMerge Options
SurCode DTS DVD (+ DTS CD) Encoder
SurCode DTS CD Encoder
DTSHD Encoder Priority Loop Playback AVCHD/Blu-ray
ffdcaenc AAC/ALAC Settings 🗸 🖓 Blank Video / Text As Subtitles
4
Resampling Method : SSRC V () Save Images
Default Output Format : MKV 🐓 🗸
Default 7. Save Cancel
Delouit 7. Save Califer

# Options [1a] to [1c]

With **[1a]** to **[1c]** you can change the text (including layout) that you would like to display during the playback of an audio track.

Option **[1a]** changes the background of the default image that will be used when you did not select yourself any specific images.

Option **[1b]** will allow you to change the color of the text, the outline color, the outline style (i.e. Outline, Shadow (*default*) or None), the position where the text should be displayed (i.e. at the Top, Center or Bottom (*default*) of the screen) and how the text should be aligned (i.e. Left, Center (*default*) or Right).

<u>Note:</u> The default text outline color has been set to dark gray instead of black to ensure less of a halo effect around the text when encoding the image to a DVD-Video or AVC High-Definition format. Test first the result when making changes to these text color and text outline color settings, i.e. what you see on the screen is not always how the text will look like on the image after encoding it to video.

Option **[1c]** will manage the size, visual effect and position of the Thumbnails. The size can be a value between 1 and 900. Change the value and press then Enter to see the change on the screen. The visual effects can be rounded corners and/or a small reflection added to the original thumbnail image.

The position of the thumbnail can be set horizontally (i.e. Left (*default*), Center, Right) and vertically (i.e. Top, Center, Bottom (*default*)).

Take note that if the horizontal position of the thumbnail is Left or Right and the position of the text is on the same vertical position (Top, Center, Bottom) as the thumbnail, that the text will be aligned and sized as such not to overwrite the thumbnail.

The following options are available for the template (see **[1d]**) that will generate the text that will be displayed for each of the tracks.

Template : , Enabled	b. ₽ ₩	Load Save	
Edit D.	%artist% %-% %all		
Add	%tracknumber% %	<sup>- %</sup> Template Line	×
Delete	<	%artist% %-% %album% Size: 100%	l. Reset
Font C.	🗹 Auto-Size Aria	II, 3 %artist% ~ Insert Keyword . OK	Cancel

In the text area [a] the template will be shown.

Use the **"Add"** button (see **[b]**) to add a new line to the template or use **"Edit"** to change an existing line. Lines can be moved up and down with the **"Arrow"** buttons. Use the **"Delete"** button to delete a line from the template. With option **[e]** the template can be enabled *(default)* or disabled. When you use "Add" or "Edit" a dialog screen will appear where you can type in the template line (see **[f]**) and where you can change the size (see **[g]**) of that line from 100% *(default)* to 5%.

%artist%, %album%, %comment%, %tracknumber% and %title% are keywords that can be used for the Artist, Album, Comment, Track Number and Title of the audio track. %titlenext##% and %titleprev##%, where ## is a 2-digit number starting from 01, 02,..., are special keywords that can be used to show the title of the ## next or previous track versus the current audio track.

If the main track has CUE entries, then the next/previous track titles will only be taken from that CUE entries list, otherwise the next/previous track titles will be taken from all of the tracks loaded in the AudioMuxer input list.

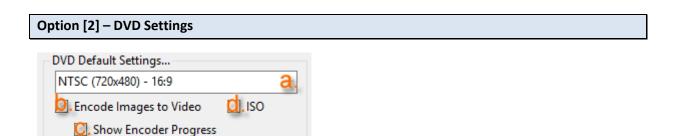
A drop-down box of keywords is available to facilitate the typing of them in the template (see [h]).

Enclosing a text in % will only show that text when the line is not empty, e.g. %artist% %-% %album% will only show the dash (-) when either the Artist, Album or both are not blank.

With **[i]** the colour of the text can be changed. Using the **"Reset"** button will set the colour back to white *(default)*.

With option **[c]** you can change the font of the text and whether or not you want to auto-size it within the dimensions of the chosen output format (DVD,...).

With **[d]** you can **"Save"** the current template or to **"Load"** an existing template. The template will be saved/loaded as a *.template.txt* file.



With **[a]** you can select the DVD video encoding format, i.e. **"PAL"** or **"NTSC"** (*default*), in 4:3 or 16:9 (*default*) aspect ratio.

With **[b]** you can encode the images to a video of the same length as the one of the audio track. Deselecting this option creates a (still image) output which is not DVD-compliant, but it plays well on most (software) DVD players. By default the video encoding is enabled.

With **[c]** you can show the progress window of the DVD video encoder. This option is disabled by default.

With [d] you can export the DVD to an ISO file.

Option [3] – MKV Settings	
MKV Default Settings HD 720p (1280x720)	□ Export To FLAC ⊖. ∨ □ Re-Tag
MKVMerge Options	Export To DTSWav 1 ~ Re-Tag Write to CD
☐ 4Gb Split ☐ 8.3 File Format ✓ Loop Playback AVCHD/Blu-ray	Export To     AAC/ALAC     Re-Tag       AAC: Variable Bitrate (CVBR)     ~
	AAC Quality: Highest $\checkmark$

With **[a]** you can select the video encoding format, i.e. **"PAL"** or **"NTSC"**, in 4:3 or 16:9 aspect ratio, or one of the additional high-definition formats, **"HD 480p"** (in standard 3:2 or 16:9 aspect ratio), **"HD 720p"** (*default*) or **"HD 1080p"**.

The best output result is achieved with the HD formats, since the encoded video will be in high definition and the size of the file will be much smaller compared to a traditional NTSC/PAL encoding (HD 720p is around 12% of size of NTSC encoding; HD 1080p around 25%). However, the encoding to a high-definition format will take longer, i.e. compared to NTSC/PAL encoding, approximately times 2 for HD 720p and times 6 for HD 1080p.

With **[b]** you can set the text that will be used as chapter name in the MKV file. Default is the title (*%title%*) of the audio track (see **[b1]**). Moreover you can add some "development hacks" command line options (see **[b2]**) that will be used at the global level when creating the MKV file. For more information about these hacks, see the documentation present in the MKVMerge GUI under "Muxing/Add command line options".

MKVMerge Options	×
b1 Chapter Format %title%	
b2. Command Line Options	
Development hacks. Use carefully!	Return

With **[c]** you can select to export the MKV to various formats. Depending on the format different options will be available.

When you export to a **"ACVHD"** (*default*) or **"Blu-ray"** format (see **[d]**), you can additionally choose to split the output to files of maximum 4Gb. This is useful when the output needs to be stored on a FAT32 hard disk or USB flash drive. Moreover, the files can be renamed to a DOS 8.3 file format. *For example, to play a AVCHD from an external drive on the PS3, the "4Gb Split" and "8.3 File Format" options need to be selected.* 

Moreover you can export the "AVCHD" or "Blu-ray" structure to an ISO file, and you can enable *(default)* or disable the playback loop at the end of playing a AVCHD/Blu-ray.

When you export to **"Flac"** or **"Wav"** format (see **[e]**), there is the option to re-tag the output file (see also page 5 for more information).

When you export to **"DTSWav"** (*DTSWav encoder must be present, see also Audio Settings* (*Option* [6]) here below, otherwise this export option will not be available) or **"CDWav"** (16-bit Wav) (see **[f]**), there is next to the option to re-tag the output file also the option to write the result directly to a CD.

When you export to **"AAC/ALAC"** (AAC/ALAC encoder must be present, see also Audio Settings (Option [6]) here below, otherwise this export option will not be available) (see [g]), you can next to re-tagging the output file also set the encoder to AAC or ALAC, and for AAC, also the desired bitrate and quality can be selected.

Option [4]			
3. Blank Video / Text As Subtitles			
Split By Main Audio Track	~		

C. Save Images

Option **[a]** will use an already prepared Blank Video file (i.e. black frames) in NTSC, PAL and HD format and the text will be displayed as subtitles during playback. This option is the fastest way possible to get a result in the desired output format. Subtitles will be shown on the bottom of the screen and the font, font-size, color etc. of the text will be predefined, i.e. the options [1a] to [1d] will not be considered in this case. Subtitles will be shown 1 second after a chapter point and will end 1 second before the next chapter point. Please note that since there is only 1 subtitle per track that if you use the (fast) forward/backward during the playback of the song, that the subtitle will not be shown anymore when you hit again the play button, because you have passed the trigger point of the start of a subtitle (i.e. 1 second after each chapter point).

Subtitles can have more than 2 lines and all blank lines will be removed from the template (see Option **[1]**) prior to creating the subtitle. For DVD the subtitle font size can vary between the different subtitle lines. For Blu-ray only 1 size will be used for all of the lines.

Option **[b]** will create an MKV, MPG, Flac, Wav, CDWav, DTSWav, AAC, ALAC or DVD/AVCHD/Blu-ray ISO file for each separate **"Main Audio Track"** (*default*) or for each **"CUE entry"** when a CUE list was loaded for a given audio track, with the possibility (see **[c]**) to generate a supplementary jpg image for each file (which can be useful when playing/streaming the file and the media server has the option to display a small image for each of the files).

Selecting the option to create a file for each main track/CUE entry will create a subdirectory for each artist/album combination (or "Unknown" when both are empty) and the filename will be the concatenation of the track number and track title (or "Track xx" when both are empty).

Note that if the ISO option is enabled that an additional ISO file will be created containing the DVD, AVCHD or Blu-ray structure for each main audio track/CUE entry. The individual DVD (VIDEO\_TS), AVCHD or Blu-ray folders will however not be available anymore since they will be overwritten for each main audio track/CUE entry. Mounting however the additional ISO file will give you access again to these individual folders.

Should you have selected the export option for MKV and the ISO option was not enabled, then AudioMuxer will enable it automatically for you when you have selected the "Split By ..." option.

Option [5]		
Default Output Format :	MKV ~	]

With Option [5] you can set the default Output Format, which is **"DVD"** or **"MKV"** (default). The title of the tracks will be used as the chapter names in the MKV output file. The settings in Options [2], [3], [4] and [5] can be overwritten on the main screen of AudioMuxer. The changes will however not be saved, contrary to the changes you'll make on this Settings screen.

Option [6]

Audio Settings	
DTS Test	
ArcSoft DTSHD Decoder	
SurCode DTS DVD (+DTS CD) Encode	er
SurCode DTS CD Encoder	
🗹 DTSHD Encoder 🛛 Priority	
ffdcaenc AAC/ALAC Settings	<b>~</b>
SpecWeb Settings	×
Resampling Method : SSRC	< 0

Option [6] will let you check whether some of the commercial DTS Encoders/Decoders have been installed to which AudioMuxer is able to interface with directly. AudioMuxer itself does not contain any code to encode or decode DTS, but is dependent on these applications to perform the task. You must have a valid license for the commercial packages listed in the Audio Settings otherwise you should not use them with AudioMuxer (cf. EULA). The DTSHD Encoder refers to the DTS-HD Master Audio Suite<sup>™</sup> and licensed from DTS, Inc. The SurCode<sup>™</sup> DTS DVD or CD encoders are licensed from Minnetonka Audio Software.

The ArcSoft DTS decoder is part of the ArcSoft TotalMedia Theatre (TMT) software (licensed by ArcSoft). The usage of the ArcSoft DTS Decoder is however being phased out since an open-source alternative DcaDec (part of eac3to 3.30 or above) will be used by default to decode the DTS Audio streams (including the high definition ones above 48kHz). A **"Priority"** option (not shown here above) is however available if you still want to use the ArcSoft DTS decoder as the default.

There is a free DTS encoding (no DTSHD though) alternative called ffdcaenc. However since DTS encoding is heavily patented by DTS, Inc. you should according to the author of the software not be using this software in a country were software patents are legal (like the US for instance). Check first before installing it. Click on the **"ffdcaenc"** button to indicate where the software is located and that you are eligible to use the software.

In AudioMuxer a commercial encoder will always take precedence over a free alternative. With **"Priority"** you can indicate that the DTSHD Encoder should be used in priority over other installations. This option is only relevant when exporting MKV to DTSWav in the main AudioMuxer panel.

Click on the **"AAC/ALAC Settings"** button to indicate where qaac is located (an AAC encoder and ALAC encoder/decoder) and where the Nero AAC Decoder is located. The red checkmark will turn green if the location of both software have been provided and now the export and/or conversion to AAC/ALAC will be available in AudioMuxer. Where applicable, click on the **1** for more information.

Click on the **"SpecWeb Settings"** button to indicate where SpecWeb is located in order to enable this option in the Audio Conversion toolbox of AudioMuxer. SpecWeb is a stereo to surround converter hosted on <u>www.surroundbyus.com</u> (see <u>link</u>). Remark that the author of SpecWeb has indicated that the software cannot be used for commercial purposes.

For the **"Resampling Method"** you can choose between SSRC (default) and r8brain free. Click on the **1** for the comparison between eac3to (SSRC) (*default*) and r8brain free 1.9.

Option [7]		
Default C.	Save a. Cancel b.	

With the **"Save"** button (**[a]**) you will save the settings and with the **"Cancel"** button (**[b]**), you will leave the settings window without saving any changes.

The **"Default"** button (**[c]**) will bring you back to the default settings of AudioMuxer (which are the ones displayed on the dialog screen shown at the beginning of this Application/Settings section).

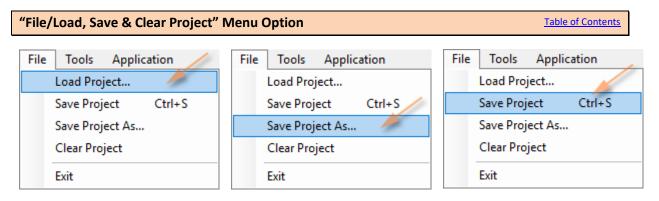
Option [8]		

Auto-Update (Internet access needed)

With the **"Auto-Update"** option enabled, AudioMuxer will update itself each time a new version is published. For this to work, an access is needed to the Internet and your firewall will have to allow Audiomuxer to establish a connection to the Internet.

"Application/Show Log	file" Menu Option	Table of Contents
Application		
Settings		
Show Logfile		
About		

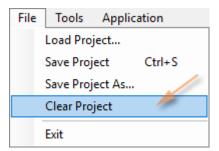
The Show Logfile menu option will show the log files of all applications that are external to AudioMuxer. The log files can be saved to one overall log file or, if necessary, part of the text can be copied from the screen (using Ctrl-C).



For future reference, you can **"Save"** and **"Load"** your current application settings, list of audio files, image list... as a AudioMuxer project. The Project file will be saved/loaded as a *.project.txt* file. The **"Save As..."** option will open a dialog screen where you can indicate under which name that you want to save the file, whereas the **"Save"** option, or **Ctrl-S** as shortcut, will save the file under the current name displayed in the title bar (see below). If changes are made to the current file and these changes are not yet saved then an asterisk (\*) will be displayed at the end of the filename.

AudioMuxer - D:\AudioMuxer\AudioMuxer.guide.project.txt Tools Application File

With the "Clear Project" option you can clear the current project.



- When you load a project, AudioMuxer will look for the audio and image files in the directory location as indicated in the project. If the audio and/or image file(s) cannot be found, then AudioMuxer will subsequently try to locate them in the directory where the project is saved.
- If you Load or Clear a project and the changes of the current project have not yet been saved, then a dialog screen will appear that will allow you to save these changes first.

"Tools/Audio Conversion" Menu Option

Tools Application Audio Conversion

There is a toolbox available to convert MP3, Flac, (mono/multi-channel) Wav, Wave64 (W64), WavPack, Ogg, MLP, AAC, ALAC, MKV, MKA, DTSWav, DTS, DTS-HD (Master Audio & Hi-Res Audio) or AC3 (+TrueHD) files to an AC3, DTS, DTSWav, DTS-HD, AAC, ALAC, Wav, Mono-Wav or Flac format.

1a. Select Audio	Expand All	Collapse All	Delete	Clear List			
TrueHD/Att      D:\AudioMuxei      AC3   48000      D:\AudioMuxei      AC3   48000      D:\AudioMuxei      AC   48000      D:\AudioMuxei      O:\AudioMuxei      D:\AudioMuxei      D:\AudioMuxei      D:\AudioMuxei      D:\AudioMuxei      D:\AudioMuxei      D:\AudioMuxei      MLP   96000      D:      D:	\Testfiles\Test core)   96000H; \Testfiles\Test mos (+ core)   4 \Testfiles\Test Hz   448 kb/s   \Testfiles\Test Hz   427 kb/s   \Testfiles\Test Hz   1 510 kb/s \Testfiles\Test S:X (+ core)   4 \Testfiles\Test Hz     6Ch (3/2	File 7.1.dtshd File 7.1.dtshd File Dolby.Atmos.thd+a 8000Hz   8Ch (3/2/2.1) File DTS-44kHz.ac3 5Ch (3/2/0.1) File AAC.m4a 6Ch (3/2/0.1) [ID=1] File DTS-48kHz.dts 6Ch (3/2/0.1) File DTS-X.dts 8000Hz   8Ch (3/2/2.1) File MLP.mlp /0.1)*	c3		Convert To : AC3 DTSWav DTS-HD Wav Mono Wavs FLAC	448       kbps         DTS       15         Resample to :       15         Extensible Wave Fo       15         Bit Depth to :       15         Resample to :       15         Flac Level :       15	36 × kbps 48000 × rmat × 24 × 48000 × 6 ×
≟ <b>,</b> ] D:\AudioMuxer				3. —	Qaac	AAC: Variable Bitrat AAC Quality: to Stereo	te (CVBR) v Highest v
				4. —	SpecWeb Su	rround SpecV	Veb Settings
				5. —— 6. ——	Resampling Me Iibav DTS De ArcSoft DTS	coder	48000 ~
Output Folder : Same as Source	O Specific I	-		0	Ask To Overwri Add To AudioN	- 7	Return

<u>Note:</u> Refer to page 15 which DTS Encoders are compatible with AudioMuxer. If no proper encoder is installed the DTS, DTSWav and/or DTS-HD button will be greyed out.

With the "Select Audio" button ([1a]) you can select the Audio files that you want to convert.

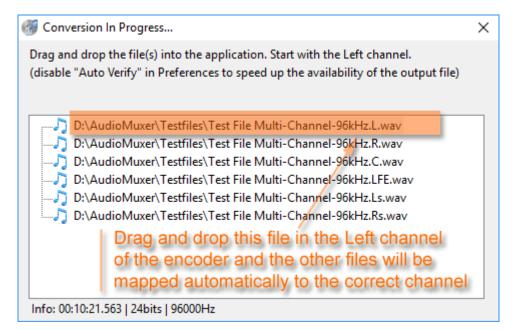
If you specifically select "DTSWav File" as the file type in the selection dialog of **[1a]**, AudioMuxer will do a thorough check of the DTSWav file structure and will fix it if necessary. In the latter case, a new file will be created with a "fixed.wav" extension.

The information provided will show the channel assignment (see **[1b]**) in the format *"front channels/surround channels/back channels.LFE present or not"*. If the channel assignment is suffixed with a *"\*"* then that means that the channel assignment is not present or cannot be properly derived and then depending on the number of channels the shown channel assignment will be assumed.

Clicking on one of the **"AC3"**, **"DTS"**, **"DTSWav"**, **"DTS-HD"**, **"Wav"**, **"Mono Wavs"**, **"FLAC"**, **"Qaac"** buttons (see **[2]**) will convert the files in the list to the selected output format.

When **"DTS"** or **"DTSWav"** is selected the proper Surcode<sup>™</sup> encoder will be automatically started, or alternatively the free ffdcaenc DTS Encoder if it is present and the conversion will take place automatically (fully coupled).

When "DTS-HD" is selected the DTS-HD Master Audio Suite<sup>™</sup> will start automatically, but you will have to select yourself the DTS format that you want and to hit the encode button. AudioMuxer will however give you the list of mono-wavs that you can drag & drop into the encoder, so that you do not have to look for them in your file system (loosely coupled). See here below. If you leave the Audio Conversion toolbox, AudioMuxer will ask you whether the DTS-HD Master Audio Suite<sup>™</sup> can be closed or not.



Disable "Auto Verify" in Preferences of the DTS-HD Master Audio Suite™ in order to speed up the availability of the output file in AudioMuxer.

For a conversion to AC3 or DTS, the input files must be in a 48kHz sample rate, otherwise a resampling method (see **[5]**) will be used to resample them to 48kHz. For DTSWav, the input files must be in 44.1kHz otherwise a resampling will be started.

For a conversion to Wav, Mono Wavs or Flac the original sample rate and bit depth can be kept *(default)* or it can be indicated to output to a new sample rate and/or bit depth.

For a conversion to Wav, the format of the output Wav file can be selected, i.e. standard Wave, extensible Wave (*default*) or Wave64 (W64) format. Mono-wavs will always be in the standard Wave format.

For a conversion to Flac, the Flac compression level can be selected. The scale goes from 0 (no compression) to 8 (maximum compression). The default value is level 6, which is a good balance between size of the file and the time it will take to produce it.

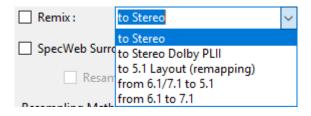
For a conversion to AAC/ALAC using Qaac, you have for AAC different bitrates you can choose from (see below) with a quality of Highest, High, Medium, Low or Lowest. You can also choose to convert

to the lossless ALAC format for which no quality indicator is needed. See Qaac wiki for more information  $\rightarrow$  <u>https://github.com/nu774/qaac/wiki</u>

Qaac	AAC: Variable Bitrate (CVBR)	$\sim$
	AAC: Variable Bitrate (CVBR)	
	AAC: Variable Bitrate (TVBR)	
	AAC: Average Bitrate (ABR)	
Remix :	AAC: Constant Bitrate (CBR)	
	ALAC: Apple Lossless Audio	

There are 2 resampling methods available, i.e. **"SSRC"** and **"r8brain"**. In Application/Settings you can set the default resampling method. See also page 16, option [6].

There is an option available (see **[3]**) to remix the (multi-channel) audio to Stereo or Stereo Dolby PLII. Or to map the audio to a 5.1 format (no up-mixing though). Moreover a 6.1 or 7.1 layout can be down-mixed to 5.1 by respectively adding the Back Centre (-3dB) or the Back Left & Back Right to the existing Surround Left & Right channel, and a 6.1 layout can be up-mixed to a 7.1 layout by copying the Back Centre (-3dB) to the Back Left & Back Right.



Option [4] will give the possibility to convert a stereo file to surround using the SpecWeb Stereo to Surround converter (see next pages for more details).

SpecWeb Surround	SpecV	Veb Settin	gs
Resample Source	to :	48000	~

Please note that only stereo files are allowed in the list of input files when selecting this option.

There is the option (see **[6]**) to bypass the default open-source DcaDec DTS Decoder and to use the open-source ffmpeg/libav DTS Decoder or the commercial ArcSoft DTS Decoder (if installed) instead. The ffmpeg/libav DTS Decoder will only decode up to a maximum sample rate of 48kHz, though.

With the options in **[7]** you can indicate where to save the output files and whether or not to ask the permission to overwrite if the output file already exists.

Selecting option [8] will add the converted audio files to the AudioMuxer input list. Please take note that prior to adding them to the list, that there will be a check performed whether

the converted audio files are matching the type of the audio files already in the AudioMuxer input list (since audio file types cannot be mixed in the same list). If this check fails, then the converted audio files will have to be added manually to the list afterwards.

### SpecWeb details

SpecWeb Surround	SpecV	Veb Settin	gs
Resample Source	to:	48000	~

Clicking the **"SpecWeb Settings"** button will bring up the settings panel. On the right-hand side (see below) you'll find the wide range of SpecWeb

settings that can be used to convert stereo to surround (5.1, Quad,...). Please refer to the SpecWeb User Guide for all the details. Clicking **"Help"** in the menu bar will bring up the guide.

		×
Method: ArcTan	V Pregain:	+0.0 dB
Ambiance Extraction:	0 % Crossfade	~
- ArcTan Settings		
	Speaker Angle Settings ITU 5.1	
Rotation:	0	•
Image Width:	290	
Center Width:	75	
Front Width:	90	
Rear Width:		
Pan Mode:	Constant Power Panning 🗸 🗸	
ArcTan Mode:	Across ~	
Adjacent Speaker:	3	%
LS Blend:	4	%
RS Blend:	4	%
Slice Settings		
Stage 1 Humidity:	90	%
Stage 2 Humidity:	95	%
Wrap Rears		
Stage 3 Humidity:	100	%
Default	Save As Default Save Return	Cancel

The first time that you use SpecWeb in AudioMuxer the default values for all of the settings will be read from the SpecWeb.ini file found in the SpecWeb application directory. It is adviced that you store these settings locally as the default ones for AudioMuxer (**"Save As Default"** button), since for

consistency and fall-back reasons, it is not allowed in AudioMuxer to overwrite the original SpecWeb.ini application file. The ini file with the default settings will be stored in the Encoding directory in the AudioMuxer roaming folder.

The **"Default"** button will give the possibility to overwrite the current active ini file with the default settings. The **"Save"** button will save the current settings to the current active ini file. The name of the active ini file is shown in the title bar.

SpecWe	b Setting	IS				
File	Help	1.				
Play	Song	Output Device:	-1: default	device	~	Stop Playing
2.						
	ute LFE	Additional Gai	n Settings	Not Set		
		atic Gain (Zag)				
	Use 5.1	Master Limiter (Za		_	Laurel Manual	in Only
	Zag Auto	omatic Gain Setting	Is Autor	natic Peak I	Level - Normal	lize Only
Ке	ep multi	-channel result file	(*.SpecWeb	.mch.*)	Versionir	
		ermediary files crea				-
		ate SpecWeb Ini fil			eb result file	
	-	rwrite Existing Ini F				
3.						Donate

On the left-hand side of the SpecWeb Settings panel you'll find the playlist ([1]) (empty in this example, but we'll come back to that later on) and some additional SpecWeb parameters ([2]), like muting the LFE in the end result and the use of the Zag Automatic Gain routine that will ensure that

the surround result remains true to the original stereo. By default the 5.1 Master Limiter will be used for that purpose and in post-processing to normalize the output to the peak level derived from the stereo input file.

On the bottom ([3]) some additional options are available like preserving the intermediary SpecWeb result file, adding versioning to the result files (useful when testing different SpecWeb settings for a given input file), storing the ini file together with the result file (a way to keep track of which SpecWeb settings were used for which result file; useful when versioning is enabled) or to save all SpecWeb intermediary files.

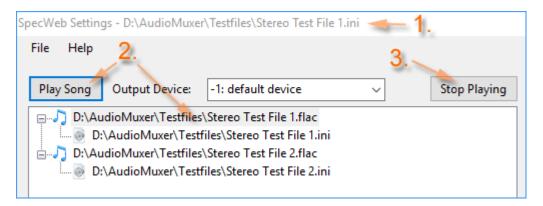
File	Help
	Load SpecWeb Ini
	Load Default SpecWeb Ini
	Save
	Save As
-	Exit

In the File menu you can load the settings of an existing ini file (**"Load SpecWeb Ini..."** option) or to load the default settings (**"Load Default SpecWeb Ini"** option). Furthermore the current settings can be saved to the ini file that is active (see title bar) (**"Save"** option) or saved to another file (**"Save As..."** option).

As already mentioned before, "Help" will bring up the SpecWeb User Guide.

# Practical case on how this could work in order to get you started

Load some stereo files in the Audio Conversion toolbox. Select SpecWeb Surround and click on the SpecWeb Settings button. In the menu bar (see [1]) you'll find the active ini file and below (see [2]) the list of stereo files that can be played through the SpecWeb browser interface or stopped when necessary (see [3]).



Select a stereo file and click the **"Play Song"** button and the SpecWeb browser interface will start playing the file (see next page).

It is best that your resize your browser window a bit and that you move some windows around such that you have AudioMuxer (at least the list of stereo files to be played) and the browser window visible at the same time.

E ←□ SpecWeb Controls × +	~	
$\leftarrow$ $\rightarrow$ $\circlearrowright$ localhost:7681		
Gains		ArcTan
		Rotation -180
Pre Gain -110 dB	💶 15 dB 🛛 🚺 🔲 💷	Image Width 0 360 290
LF Gain -110 dB	💶 15 dB 🛛 🔲 🔲 💷	Center Width 0 . 119
RF Gain -110 dB	💶 15 dB 🛛 🔲 🔲 💷 💷	Front Width 0 90
C Gain -110 dB	💶 15 dB 🛛 🔲 🔲 🔲 🔲 💷	Rear Width 0 180 53
LFE Gain -110 dB	💶 15 dB 🛛 🔲 🔲 💷 💷	Pan Mode Constant Power Panning
LS Gain -110 dB	💶 15 dB 🛛 🔲 🔲 💷 💷	ArcTan Mode Across V 2. Amb Ext Mode Crossfade V
RS Gain -110 dB	💶 15 dB 🛛 🔲 0.0	Amb Extraction 0
Method		Adj Spkr 0 0.03
ArcTan Time: 1:45	<ul> <li>✓</li> <li>6:23</li> </ul>	LS Blend 0
1.45	0.23	RS Blend 0 0.04
Play Controls	<b>4</b> .	Slice
Play Controls		Slice Stage 1 0 1 0.90
Play Controls	4. Save End/Next	
Play Controls		Stage 1         0         1         0.90           Stage 2         0         1         0.95           Wrap Rears         -         -         -
		Stage 1   0   1   0.90     Stage 2   0   1   0.95     Wrap Rears   0   0
Playing: Stereo Test File 1 - 3. 0% 100%	Save End/Next	Stage 1         0         1         0.90           Stage 2         0         1         0.95           Wrap Rears         -         -         -
Image: Stereo Test File 1         3.           0%         100%	Save End/Next	Stage 1 0 1 1 0.90 Stage 2 0 1 1 0.95 Wrap Rears Stage 3 0 1 1.00 ZAG
Playing: Stereo Test File 1 3. 0% 100% Meters Meter Type: Song •	Save End/Next Surround	Stage 1 0 1 1 0.90 Stage 2 0 1 1 0.95 Wrap Rears Stage 3 0 1 1 1.00 ZAG Norm ZAG Max Output (dB) 0.0
Image: Stereo Test File 1       3.         0%       100%         Meters         Meter Type:       Song O         Solo/Mute       Peak	Save End/Next Surround Window RMS	Stage 1       0       1       1       0.90         Stage 2       0       1       1       0.95         Wrap Rears       -       -       1       1.00         Stage 3       0       1       1.00       -         ZAG         Norm       Match       Max Output       0.0         C to Front (dB)       3.0       -       -
Playing: Stereo Test File 1 - 3. 0% 100% Meters Meter Type: Song • Solo/Mute Peak LF SM -15.0	Save End/Next Surround Window RMS -32.6	Stage 1 0   Stage 2 0   Wrap Rears   Stage 3   Stage 3   C to Front (dB)   LFE to Front (dB)
Playing: Stereo Test File 1 3. 0% 100% Meters Meter Type: Song © Solo/Mute Peak LF SM -15.0 RF SM -17.0	Save End/Next Surround Window RMS -32.6 -37.8	Stage 1       0       1       0.90         Stage 2       0       1       0.90         Wrap Rears       5       0       1       0.95         Stage 3       0       1       1.00       0.95         ZAG         Norm $\checkmark$ Match $\checkmark$ Max Output (dB)       0.0         Only $\checkmark$ Match $\checkmark$ Max Output (dB)       0.0         C to Front (dB)       3.0       -9.0         Rear to Front (dB)       -3.0
Image: Stereo Test File 1       3.         0%       100%         Meters       Meters         Meter Type:       Song •         Solo/Mute       Peak         LF       SM         SM       -15.0         RF       SM         C       SM	Save End/Next Surround Window RMS -32.6 -37.8 -30.3	Stage 1 0   Stage 2 0   Wrap Rears   Stage 3   Stage 3   C to Front (dB)   LFE to Front (dB)
Playing: Stereo Test File 1 3. 0% 0 100% Meters Meter Type: Song • Solo/Mute Peak LF SM -15.0 RF SM -17.0 C SM -10.7 LFE SM -33.3 LS SM -13.9 RS SM -16.2	Save End/Next Surround Window  RMS -32.6 -37.8 -30.3 -51.6 -34.7 -39.0	Stage 1 0 1 1 0.90 Stage 2 0 1 1 0.95 Wrap Rears Stage 3 0 1 1 1.00 ZAG Norm Match Max Output 0.0 (dB) 0.0 C to Front (dB) 3.0 LFE to Front (dB) -9.0 Rear to Front (dB) -3.0 Connection Status 0
Image: Stereo Test File 1   Playing: Stereo Test File 1   0%   100%   Meters   Meter Type:   Solo/Mute   Peak   LF   SM   -15.0   RF   SM   -17.0   C   SM   -10.7   LFE   SM   -13.9	Save End/Next Surround Window RMS -32.6 -37.8 -30.3 -51.6 -34.7	Stage 1     0     1     1     0.90       Stage 2     0     1     1     0.95       Wrap Rears     0     1     1     0.95       Stage 3     0     1     1     0.95       ZAG     ZAG     1     1.00       ZAG     Max Output     0.0     0.0       C to Front (dB)     3.0     3.0       LFE to Front (dB)     -9.0     -9.0       Rear to Front (dB)     -3.0       Connection Status     0       Spec Web Guide     Web Site

Do not worry that you do not have a surround audio setup attached to your computer. By only playing the surround channels through your stereo speakers, i.e. playing Ls+Rs in solo and as such muting all other channels (they are displayed in Red) (see **[1]**), you can get a pretty good idea of what part of the stereo will get panned to the surround channels. Play with the different Width settings (see **[2]**) to adjust the width of the surround channels.

Once you are fine with your adjustments, check the filename that is playing (see [3]) and click the Save button (see [4]). Now overwrite the corresponding ini file with the new settings.

Use the AudioMuxer interface to play the next song or to stop SpecWeb with playing (for the latter you can also use the End/Next button in the SpecWeb browser interface).

If you have made too many SpecWeb adjustments for a specific stereo file and you want to have a fresh new start with that specific file, select it first in the list of files and then click the "Default" button. This will overwrite the current ini file with the default parameters and you can have again a clean start in SpecWeb.

If everything is done exit the SpecWeb Settings panel and use the AudioMuxer Conversion panel to choose the (multi-channel) output format (DTS, DTSHD, AC3...). AudioMuxer will now for each of stereo files in the list run SpecWeb in the background, using the corresponding ini file, and to convert the result to the desired output format.

SpecWeb Surround		SpecV	Veb Setting	s
🖉 🗹 Resample So	urce	to :	48000	$\sim$
Resampling Method :	SSRC	2	44100 48000	
libav DTS Decoder			88200 96000	
ArcSoft DTS Decoder			176400 192000	

Upsampling the stereo source file to a multiple of its sampling rate, i.e. 48kHz→96kHz or 192kHz and 44.1kHz→88.2kHz or 176.4kHz, prior to running SpecWeb could improve the quality of the end-result.

Remark that this setting is discarded when playing the song through the SpecWeb browser interface (see SpecWeb Settings).

## \*\*End of SpecWeb practical case

Audio Conversion Remarks:

 For each audio track, the log of the conversion process can be consulted. Expand an audio track in the list (by clicking on the + in front of it), and look for the entry/entries indicated with a <sup>1</sup>/<sub>2</sub>. You can hoover over this entry to briefly see the contents or double-clicking this log entry will display the contents in a window where you can also export it to a text file should that be necessary.

Right-clicking anywhere in the list of audio files will bring up the "**Show Log Report**" option which will show the log entries of all audio files in the list.

The functionality described here above is also available for the "Extract Audio From..." menu options (see next pages).

- 2. If a DTS-MA, DTS Hi-Res or TrueHD+AC3 audio file is loaded, and, respectively, the DTS or AC3 button is selected, then AudioMuxer will ask you to extract only the Core stream from that high-definition audio format or to convert the stream to mono-wavs and to re-encode them again using the DTS or AC3 encoder, respectively.
- 3. DTS files created by the SurCode<sup>™</sup> DTS DVD encoder are not compatible for AudioMuxer. You will get a "<not a valid audio file>" message. For that reason if these DTS files are created outside AudioMuxer then you have to let AudioMuxer to convert them to a compatible DTS format. Load the DTS file in the Audio Conversion list and AudioMuxer will automatically convert them to a compatible DTS file, and a new file will be created with a ".fixed.dts" extension. Using the DTS encoding inside AudioMuxer will automatically create a compatible DTS file.
- 4. LPCM Wav files are compatible with the DVD-Video standard provided that the audio is below or equal 6,144 kbps and audio and video together are below 9,800 kbps. For that reason if you are handling multi-channel wav files it is therefore wise to resample them to 16-bit / 48kHz in order to remain within that DVD-Video limit.

### "Tools/Extract Audio From Blu-ray" Menu Option

Tools Application

Extract Audio From Blu-ray

This option in the Tools menu will allow you to extract audio from a non-encrypted Blu-ray.

Extract Audio From Blu-ray	×
Select MPLS File G:\BDMV\PLAYLIST\00000.mpls	Clear
Image: Matrix 1 video track, 1 audio track, 0:55:59, 24p /1.001 (9 chapters)   Image: Bit Master Audio, , 5.1 channels, 24 bits, 96kHz   Image: Bit Master Audio, , 5.1 channels, 1509kbps, 48kHz)   2.	
<ul> <li>Load In AudioMuxer With Chapters</li> <li>Load In AudioMuxer And Split In Chapters</li> <li>Rename</li> <li>Re-Tag</li> </ul>	Return

With the **"Select MPLS File**" button ([1]) you select a Blu-ray playlist (.mpls) file (found in \BDMV\PLAYLIST), since this file contains the chapter information and how the streams on the Bluday disc are linked together.

After parsing the file, the list of available audio streams will be shown. Remark that only AC3/TrueHD, DTS/DTS-HD or PCM streams will be listed. Other type of audio will be discarded. Select one of the streams (see [2]) and click on the Extract button (see [3]) for the extraction process to start (this could take a while depending on the length of the audio file). You can also choose to save the extracted result in Flac or SPDIF Wav (see later) instead of the original stream format. With [4] you can indicate to load the file with the chapter information in the AudioMuxer input list (*default*) or to split the file first with the chapter information before loading it. The "Re-tag" and "Rename" options (see previously) are available as well.

It is advised to first clear the AudioMuxer audio input list (a dialog box will appear in the event this is not yet the case), since most of the operations described here above need that input list as a working base.

#### "Tools/Extract Audio From DVD-Video" Menu Option

Tools Application

Extract Audio From DVD-Video

This option in the Tools menu will allow you to extract audio from a non-encrypted DVD-Video.

Extract Audio From DVD-Video	×
Select VTS*.IFO File D:\AudioMuxer\DVD\VTS_01_0.IFO	Clear
VOB, 1 video track, 3 audio tracks, 1 subtitle track, 0:41:52 (9 chapters) - NTSC 29.97fps 3: RAW/PCM, 2.0 channels, 16 bits, 48kHz 4: AC3, 5.1 channels, 448kbps, 48kHz 5: DTS, 5.1 channels, 1510kbps, 48kHz 2.	
Load In AudioMuxer With Chapters Flac Level : 6 ~	
Load In AudioMuxer And Split In Chapters Export To Flac	
Rename 3. Extract As SPDIF Wav	Return

With the "**Select VTS\*.IFO File**" button (**[1]**) you select a Video Title Set Information file from the VIDEO\_TS folder. This file is the basis for extracting the chapter information and links to the group of VOB files on the DVD that need to be processed for this specific Video Title Set.

After parsing the file, the list of available audio streams will be shown. Remark that only AC3, DTS or LPCM streams will be listed. Other type of audio will be discarded. Select one of the streams (see [2]) and click on the Extract button (see [3]) for the extraction process to start (this could take a while depending on the length of the audio file). You can also choose to save the extracted result in Flac or SPDIF Wav (see later) instead of the original stream format.

With **[4]** you can indicate to load the file with the chapter information in the AudioMuxer input list *(default)* or to split the file first with the chapter information before loading it. The "Re-tag" and "Rename" options (see previously) are available as well.

It is advised to first clear the AudioMuxer audio input list (a dialog box will appear in the event this is not yet the case), since most of the operations described here above need that input list as a working base.

#### "Tools/Extract Audio From MKV/MKA File" Menu Option

Tools Application

Extract Audio From MKV/MKA File

This option in the Tools menu will allow you to extract audio from a Matroska MKV or MKA file.

Extract Audio From MKV/MKA File	×
Select MKV/MKA File D:\AudioMuxer\Testfiles\Test File MKA.mka	Clear
<ul> <li>MKA, 5 audio tracks, 0:04:03 (9 chapters)</li> <li>1: AC3, 5.1 channels, 448kbps, 48kHz</li> <li>2: DTS, 5.1 channels, 1510kbps, 48kHz</li> <li>3: AAC, 5.1 channels, 48kHz</li> <li>4: FLAC, 5.1 channels, 0:04:03, 24 bits, 48kHz</li> <li>5: RAW/PCM, 5.1 channels, 24 bits, 48kHz</li> </ul>	
└ Load In AudioMuxer With Chapters Flac Level : 6 ∨	
Load In AudioMuxer And Split In Chapters Export To Flac	
Rename 3. Extract As SPDIF Wav	Return

With the "Select MKV/MKA File" button ([1]) you select a Matroska MKV or MKA file. After parsing the file, the list of available audio streams will be shown. Remark that ALAC streams will not be listed since the extraction process is not working properly for now. Select one of the streams (see [2]) and click on the Extract button (see [3]) for the extraction process to start (this could take a while depending on the length of the audio file). You can also choose to save the extracted result in Flac or SPDIF Wav (see later) instead of the original stream format.

With **[4]** you can indicate to load the file with the chapter information in the AudioMuxer input list *(default)* or to split the file first with the chapter information before loading it. The "Re-tag" and "Rename" options (see previously) are available as well.

It is advised to first clear the AudioMuxer audio input list (a dialog box will appear in the event this is not yet the case), since most of the operations described here above need that input list as a working base.

#### "Tools/Join Wav or Flac Files" Menu Option

Tools Application
Join Wav or Flac Files

The "Join Wav or Flac Files" option will give you, like it says, the possibility to join together a collection of wav or flac-encoded files to a wav file.

Join Wav or Flac Files				×
Select Files	3a.			
Group By _Suffix Up	Down	Delete	Clear List	6.
				Join Files 🗌 Re-Tag 🐋 4a.
			4b.——	]Export To Flac Flac Level :
			40.	] Save In Wave64 Format
<b>3b</b> .			<b>5</b> . — 🗗	Sort Input Files
				Ask To Overwrite Existing Files
Expand All Collapse All				Return

With the "Select Files" button ([1]) you select the wave files that you want to join together and with the "Group By \_Suffix" ([2]) option you indicate whether you also want to group together the files with the same \_suffix. This is useful if you want to join the same audio channel of a list of tracks into 1 file for that given audio channel. An example is given here below. New files can be added to the list by clicking again the "Select Files" button. With the "Up" and "Down" buttons (see option [3a]) files the join order of the files can be changed. With the "Expand All" and "Collapse All" (see option [3b]) the list of files to join can be easily expanded or collapsed together.

By default the list of files will be joined in a sorted order (see option [5]). Deselecting this option will keep the order of the files as you have input them. Pay attention that when you then activate the "Sort Input Files" option afterwards that the list will be sorted again.

The **"Re-Tag"** option **[4a]** will give you the possibility to create a CUE file for the joined result file. If the **"Export To Flac"** option **[4b]** is selected, then the file will be updated with the tag information provided. The CUE file will be delivered in the standard CD format (\*.cue) and also in the Ogg-format (\*.cue.oggfmt.txt).

With the "Join Files" button ([6]) you will start the process. The name of the output file will be asked and that name will be suffixed appropriately should the "Group By \_Suffix" option have been selected. The file will be saved in Wav format (*default*), unless with [4b] it is indicated to save the file in Flac format or with [4c] to save it in a Wave64 (W64) format. Remember that because of size constraints in the Wav header that the size of a Wav file is normally limited to 4Gb, however files above that limit could still be used in other applications, however it could be that not all data is being processed. The "Wave64 (W64) Format" is a file specification for Wav-encoded files above this 4Gb limit and which is not having these size constraints in the header part of the file.

Join Wav or Flac Files	×
Select Files	
Group By_Suffix Up Down Delete Clear List	]
	Join Files 🗌 Re-Tag
ig,} <filename>_LFE   2 Files ig,} <filename>_Ls   2 Files 1.</filename></filename>	Export To Flac
ia → J <sub>4</sub> <filename>_R   2 Files ia → J<sub>4</sub> <filename>_Rs   2 Files</filename></filename>	Flac Level : 6 🗸
	Save In Wave64 Format
	☑ Sort Input Files
	Ask To Overwrite Existing Files
Expand All Collapse All	Return

In the example here above (see **[1]**) the Center channel (with suffix \_C), the Left channel (with suffix \_L), and so on... for 2 files (or tracks) will be joined into separate files, one for every channel (or better, one for every different \_suffix found in the list of input files).



Merge Mono-Wav/Flac to Wav or Flac

This menu option will give the possibility to merge mono-channel wav and flac files together into a multi-channel wav file (and exported to Flac, if necessary).

Merge Mono-Wav/Flac Files		Х
Merge Mono-Wav/Flac Files           Select Files         Up         Down         30.         Delete           Image: Display the select files         Image: Display the select files         30.         Delete           Image: Display the select files         Image: Display the select files         30.         Delete           Image: Display the select files         Image: Display the select files         30.         Delete           Image: Display the select files         Image: Display the select files         30.         Delete           Image: Display the select files         Image: Display the select files         30.         Delete           Image: Display the select files         Image: Display the select files         30.         Delete           Image: Display the select files         Image: Display the select files         30.         Delete           Image: Display the select files         Image: Display the select files         30.         Delete           Image: Display the select files         Image: Display the select files         30.         Delete           Image: Display the select files         Image: Display the select files         30.         Delete           Image: Display the select files         Image: Display the select files         30.         Display the select files           Image: Display the select	Clear List Merge Files A. → A. → Channel Layout: 7.1 → Force Channel Layout 2. → Try To Automatically Identify Channels	×
Expand All Collapse All 3C.	Output Folder :	

With the **"Select Files"** button (**[1]**) you can select the mono-channel wav files that you want to process. Remark that only mono-channel wav files with a bit rate up to 32bits are allowed. Depending on the chosen **Channel Layout**, a maximum of 6 (5.1 Layout), 7 (6.1 Layout) or 8 (7.1 Layout) mono-channel wav files can be selected to be merged together.

When the **"Try To Automatically Identify Channels"** option (**[2]**) is selected, then AudioMuxer will parse the filename looking for the following frequently used identifications at the end of a filename identifying the channel.

Left Channel :	_L, _LF, .L, .LF, _0
Right Channel:	_R, _RF, .R, .RF, _1
Centre Channel:	_C, .C, _2
LFE Channel:	_LFE, .LFE, _3
Left Surround Channel:	_Ls, _Lss, .Ls, .SL, .Lss, _4
Right Surround Channel:	_Rs, _Rss, .Rs, .SR, .Rss, _5
Centre Back Channel:	_Cs, .BC, .Cs, _6
Left Back Channel:	_Lsr, .BL, .Lsr, _7
Right Back Channel:	_Rsr, .BR, .Rsr, _8

The number of files that cannot be mapped automatically will be shown on the bottom of the screen. When the **"To Group Manually"** button is selected a dialog screen will be shown allowing you to manually group these together (see example later on).

With the **"Up"** and **"Down"** buttons (**[3a]**) you can change the order of the files that are mapped to a given channel. With the **"Delete"** button (**[3b]**) you can "EMPTY"-out a given channel, or just to delete a complete group. The buttons in **[3c]** will **"Expand"** or **"Collapse"** all tree-nodes.

Once you are ready to Merge the files together, you can, for compatibility reasons, select the **"Force Channel Layout"** option (see **[4]**). In that way, the output file will always contain, depending on the chosen Channel Layout, 6, 7 or 8 channels, even if some channels in the list will be empty, i.e. contains the word "EMPTY". When this option is not selected, the output will only contain all non-empty channels.

Select the **"Export To Flac"** option ([5]), if you want to convert the output to Flac. The multi-channel wav file will be deleted after the Flac is created.

Click the **"Merge Files"** option (see **[6]**) to start the process. If the resulting Wav file is above the 4Gb limit for this kind of files, a dialog box will appear which will give the option to save the file in a Wave W64 format instead. This Wave W64 file format can handle Wav-encoded files above this 4Gb limit.

For the files that cannot be automatically mapped to a channel, clicking the **"To Group Manually"** button will show the following dialog panel where you can manually group files together to a multichannel output filename (the order of the files to be mapped to a given channel can be changed afterwards). This panel will always be shown if the **"Try To Automatically Identify Channels"** option was not selected.

Group Mono-Wav Files	×
Group To Name of output Wav file Ok 4.	Ungroup
<ul> <li>D:\AudioMuxer\Test\Multi-16-48000.Center.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000.Left.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000.Leftsurr.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000.Right.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000.Rightsurr.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000_00.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000_01.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000_02.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000_02.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000_02.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000_02.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000_03.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000_03.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000_03.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000_05.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000_05.wav   00:05:34.800</li> </ul>	
Select All Unselect All Expand All Collapse All Cancel	Next >>

Select the files that you want to group together to a new output file by checking the checkboxes in front of them (see [1]). Click then the "Group To" button ([2]), type in the name of the output filename and click on "Ok" ([4]). The ".wav" extension will be added automatically and all invalid characters for filenames (i.e.  $\backslash, /, :, *, ?, <, >, |, "$ ) will be deleted.

The example given here below shows a grouping of 6, 2 and 4 mono-channel files, respectively.

If you want to "Ungroup" a collection, then check the checkbox in front of the group file ([1a]), and click on the "Ungroup" button ([1b]).

Group To       1bUngroup         Image: product of the state o	Group Mono-Wav Files	×
D:\AudioMuxer\Test\Multi-16-48000.Center.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000.Left.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000.Leftsurr.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000.Leftsurr.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000.Right.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000.Rightsurr.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000_00.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000_00.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000_00.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000_00.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000_02.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000_02.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000_03.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000_03.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000_03.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000_03.wav   00:05:34.800         D:\AudioMuxer\Test\Multi-16-48000_05.wav   00:05:34.800	Group To	1b. — Ungroup
Select All Onselect All Collapse All Collapse All Collapse All	<ul> <li>D:\AudioMuxer\Test\Multi-16-48000.Center.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000.Left.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000.Leftsurr.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000.LFEq.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000.Right.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000_Rightsurr.wav   00:05:34.800</li> <li>D:\AudioMuxer\Test\Multi-16-48000_00.wav   00:05:34.800</li> </ul>	2. Cancel Next >>

Use the **"Next>>"** button (see **[2]**) to add these groups to the main panel, where you then can change the channel order of the files. The **"Cancel"** button will return without updating the main panel.

#### "Convert AC3/DTS to SPDIF Wav/Flac" Menu Option

Tools Application	
Convert AC3/DTS to SPDIF Wav/Flac	
Convert AC3/DTS to SPDIF Wav/Flac Select AC3/DTS Files Up Down Delete Clear D:\AudioMuxer\DTS Files\01 - Track 01.dts O0:04:02.603   DTS   48000Hz   24bits   1 510 kb/s   6Ch O1:\AudioMuxer\DTS Files\02 - Track 02.dts O1:\AudioMuxer\DTS Files\03 - Track 03.dts O1:\AudioMuxer\DTS Files\04 - Track 04.dts O1:\AudioMuxer\DTS Files\05 - Track 05.dts O1:\AudioMuxer\DTS Files\06 - Track 06.dts O1:\AudioMuxer\DTS Files\07 - Track 07.dts O1:\AudioMuxer\DTS Files\08 - Track 09.dts O1:\AudioMuxer\DTS Files\09 - Track 09.dts	<ul> <li>✓</li> <li>✓</li></ul>
Expand All Collapse All	Return

This option is useful for wrapping standard AC3/DTS files in a Flac container and to tag them like any other Flac file. These Flac files can then be streamed over your SPDIF connection from your PC to your home theatre system.

- Please observe the warning that the files created this way are not standard audio files and that as such they will not play on all hardware/software.
- Make sure that you turn down the volume of your speakers while you are testing these files on your system.
- There will be no re-encoding of the AC3/DTS files, but the format will be changed. For that reason it is suggested that the original AC3/DTS files are kept for future use since these are standard audio files and a SPDIF Wav/Flac is not standard (only for a SPDIF connection, but not for other usage).

Only formats that are allowed according to the DVD-V specifications are accepted as valid input files, i.e. AC3, DTS and DTS 96/24. Small exception is 640 kbps AC3 files, which is a format that is also accepted.

With the **"Select AC3/DTS Files"** button (see **[1]**) you can select the AC3/DTS-encoded files. Valid files have a sample rate of 48kHz (AC3, DTS) or 96kHz (DTS 96/24) and have a .ac3, .dts or .cpt extension.

With the **"SPDIF Wav"** button (see **[3]**) the AC3/DTS-encoded files will be converted.

If the **"Export To Flac"** (see **[2]**) option is enabled, this Wav file will then be exported to a Flac file. If also the **"Re-Tag"** option is enabled, then the Flac files will be tagged with the information that you have provided (like artist, album, album art, track titles etc.).

- With respect to the track title and track number, the tagging will occur in the same order as the order of the AC3/DTS files in the list.
- G Since you cannot have multiple values for Artist, Album, Album Art, Comment, Genre, Date, it is suggested that you load files in the audio list that belong together, SPDIF them, clear the list and then load another group of files.



With this option you can change the Volume (in dB) of a Wav or Flac file.

-		(Test The IV	lulti-Chann	el-44kHz.w	av			2	
PCM-N	licrosoft PC	M (24bits)	44100Hz   6	5 350 kb/s	6Ch (3/2/0.	1)*			
	Overall	FL	FR	FC	LFE	SL	SR		
eak (dB)	-0.67	-1.21	-1.41	-0.67	-10.00	-3.95	-0.75 🏄		
RMS (dB)	-21.44	-20.00	-20.01	-19.50	-27.31	-23.02	-23.02		
		2							
olume Char		38							
Gain (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
ann (ub)	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
<sub>Aute</sub> 3b.									
			- 3	~				4.	
-		0.00 -	J	<b>.</b>				Change Vol	ume
] Normaliz	e To (dB) :	0.00							
	e To (dB) :	0.00							
	e To (dB) : Overall	FL	FR	FC	LFE	SL	SR		
] Normaliz esult : Peak (dB)			FR -0.73	FC 0.00	LFE -inf	SL -3.28	SR -0.08		

With **[1]** you can select the Audio file and after the parsing of the file the Peak and Average RMS (Loudness) will be shown in dB (see **[2]**).

You can now change the overall volume or the volume of some specific channels of the audio file (see **[3a]**), mute some of the channels (see **[3b]**) or to normalize the audio file to a give level like 0dB, -3dB, and so on (**[3c]**).

Values can be entered by clicking on the desired cell and then to click again to put the cell in edit mode. Remark that values (**[3a]**) that will create clipping in one or more of the channels will not be allowed. An error will be given. Values in **[3c]** must be 0 or negative.

Click on **"Change Volume"** ([4]) to execute the change and to see the new values for Peak and RMS. Remark that no changes are made yet to the file. Click on **"Save Result"** to overwrite the existing file with the new result or click on **"Save Result As..."** to save the result to a new file (see [5]).

"Tools/Convert Text Format of CUE File" Men	Table of Contents
Tools         Application           Convert Text Format of CUE File	
In case your CLIE file contains special character	Audio Muyor connet road correctly because the

In case your CUE file contains special characters that AudioMuxer cannot read correctly because the text-encoding of the file is not in line with the encoding that was expected, you can use this conversion dialog panel to read the CUE file in UTF7, UTF8, UTF32, ASCII and Unicode encoding subsequently (until the special characters show correctly on the screen), and to save the result then in Normal (Latin-1) encoding (the default expected by AudioMuxer).

Read As:	UTF7	UTF8	UTF32	ASCII	Unicode	Normal
----------	------	------	-------	-------	---------	--------

#### **Overall remarks, tips & tricks**

- 1. At any time you can minimize the AudioMuxer application and progress will be shown in the task bar. <u>Remark:</u> When you have selected the ISO option then the ImgBurn windows and progress will be shown. There is no option in ImgBurn to minimize it automatically while running. If it is annoying then you will have to minimize it yourself.
- 2. When selecting the Blank Video file option, then the Subtitles for AVCHD or Blu-ray using a PAL video format will not be visible since there is a bug in one of the underlying application (i.e. tsMuxeR) which defaults the format of the subtitle to NTSC instead of the required PAL format. As such the subtitle is there, but cannot be shown because of that format inconsistency. There is no problem for NTSC or for the other HD formats.
- 3. When you load DTS-MA files in AudioMuxer, the duration of the files will be calculated automatically. Since these high-definition audio files do not contain a duration indicator, the audio file will have to be put into a container prior to calculating the duration. This process could therefore take some time. Should the DTS-MA files (.dtshd) still contain a header put there by the encoding application, then the duration can be calculated from there, and therefore the lengthy process will not be proceeded. Likewise, for HD audio extracted from Plu ray the duration information is readily.

needed. Likewise, for HD audio extracted from Blu-ray the duration information is readily available (at the moment when you extract it). Note that when you quit AudioMuxer that this information will be lost and the (lengthy) process will be necessary the next time you use this HD Audio file.

- 4. The Core DTS stream extracted from a DTS-MA or DTS Hi-Res stream is not compatible with one of the external applications (MuxMan) AudioMuxer is using to create a DVD-Video. It is advised to use MKV as output format for these DTS files.
- Hardware/software compatibility with respect to the AVCHD or Blu-ray structures put on a DVD5 or DVD9 can be verified in this link: <u>http://forum.doom9.org/showthread.php?t=146339</u>. The "NEWBD" column in that list corresponds to the "Blu-ray" output format of AudioMuxer. The "AVCHD" column to the "AVCHD" output format (of course). Check also the "DTSHD" and "THD" columns to verify whether your hardware/software can play the high-definition Audio formats.

Have Fun 🙂

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