

FOR ADOBE ENCORE (CS5.1,...)

In this tutorial I'm going to try explain how to:

- add multiple audio format like PCM, Dolby Digital, DTS-HD, Dolby TrueHD, ect.. into a Blu-ray
- convert your Blu-ray Folder to AVCHD DVD (a.k.a BD-9 BD-5) with your own created menu!

Needed:

- Adobe Premiere Pro CS5.5 (or equivalent)
- Adobe Encore 5.1 CS5.5 (or equivalent)
- BDEdit (Free)
- BD-Rebuilder (Free)
- tsMuxeR GUI (Free)
- (Adobe Photoshop)

Step one (for AVCHD):

If you created your movie in ADOBE PREMIERE PRO export it by:

File > Export > Media

you select (what is underlined): **Export Settings > Format > H.264 Blu-ray**

in the **Basic Video Settings** you choose whatever you want (PAL, NTSC,...)

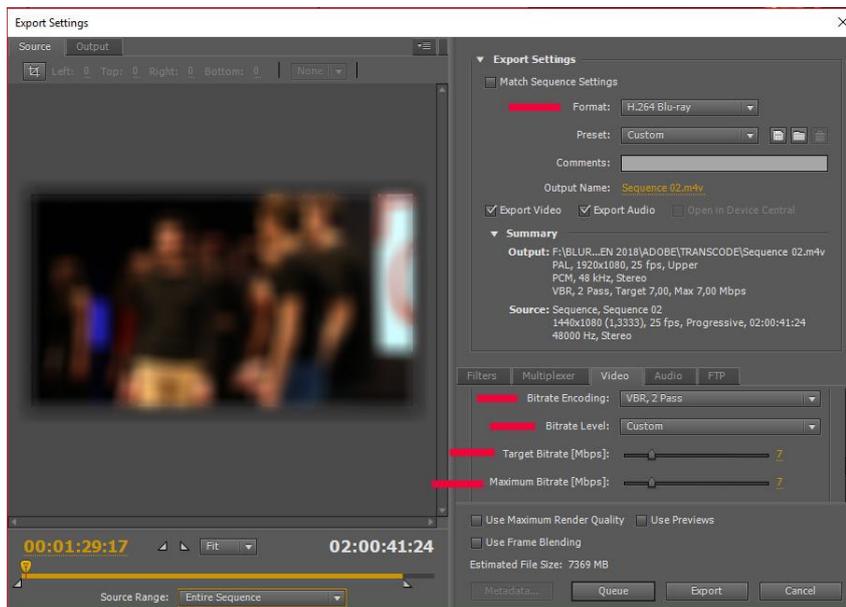
in the **Bitrate Settings** you set **Bitrate Encoding: VBR, 2 PASS**

Bitrate Level: Custom

Target Bitrate: 7

Maximum Bitrate: 7

Why 7? Because DVD has a maximum useable bitrate of 10.08 Mbit/s so that you have enough room for your HD audio and menu's.



Step one (for Blu-ray):

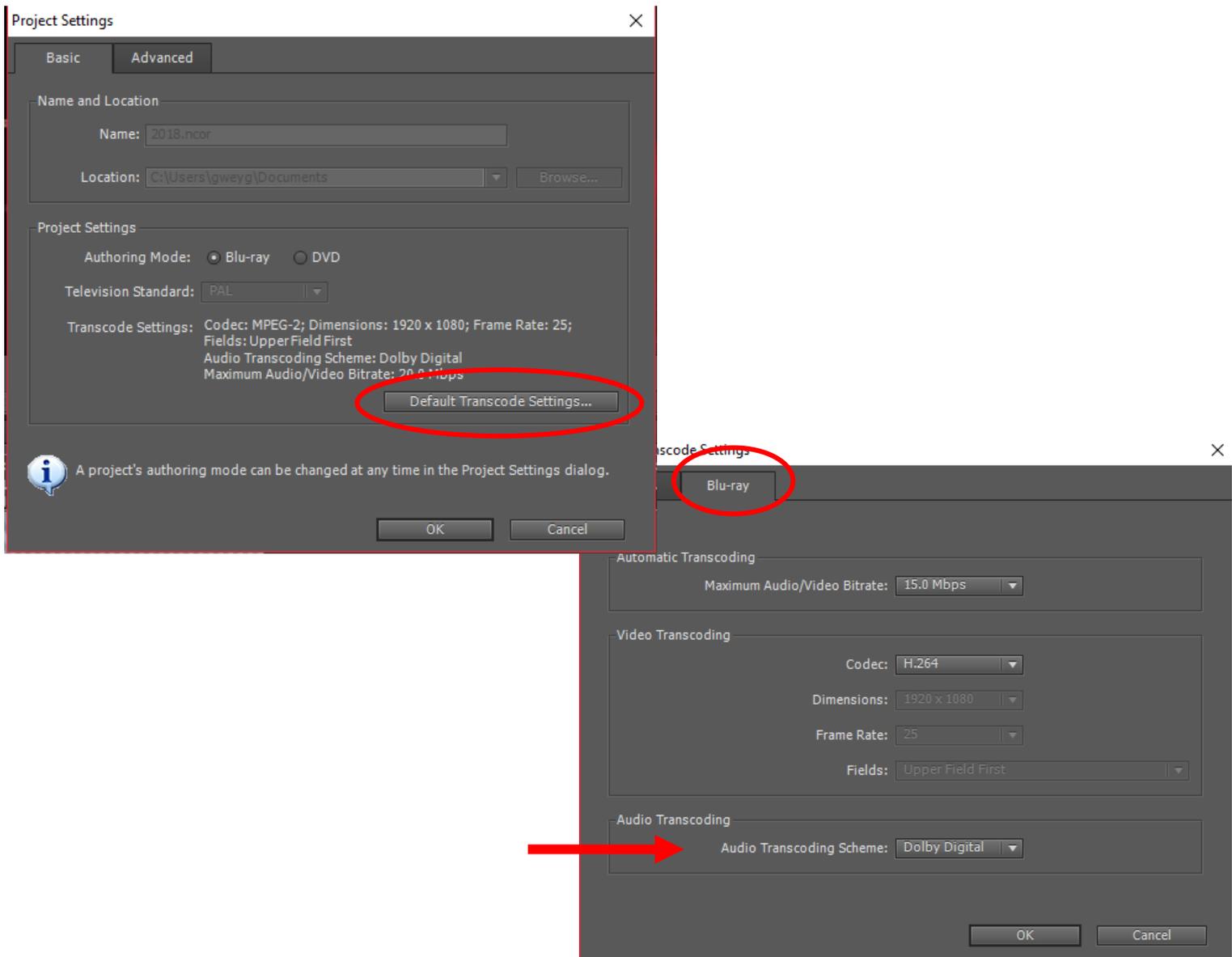
Just export your video in whatever bitrate!

Step two:

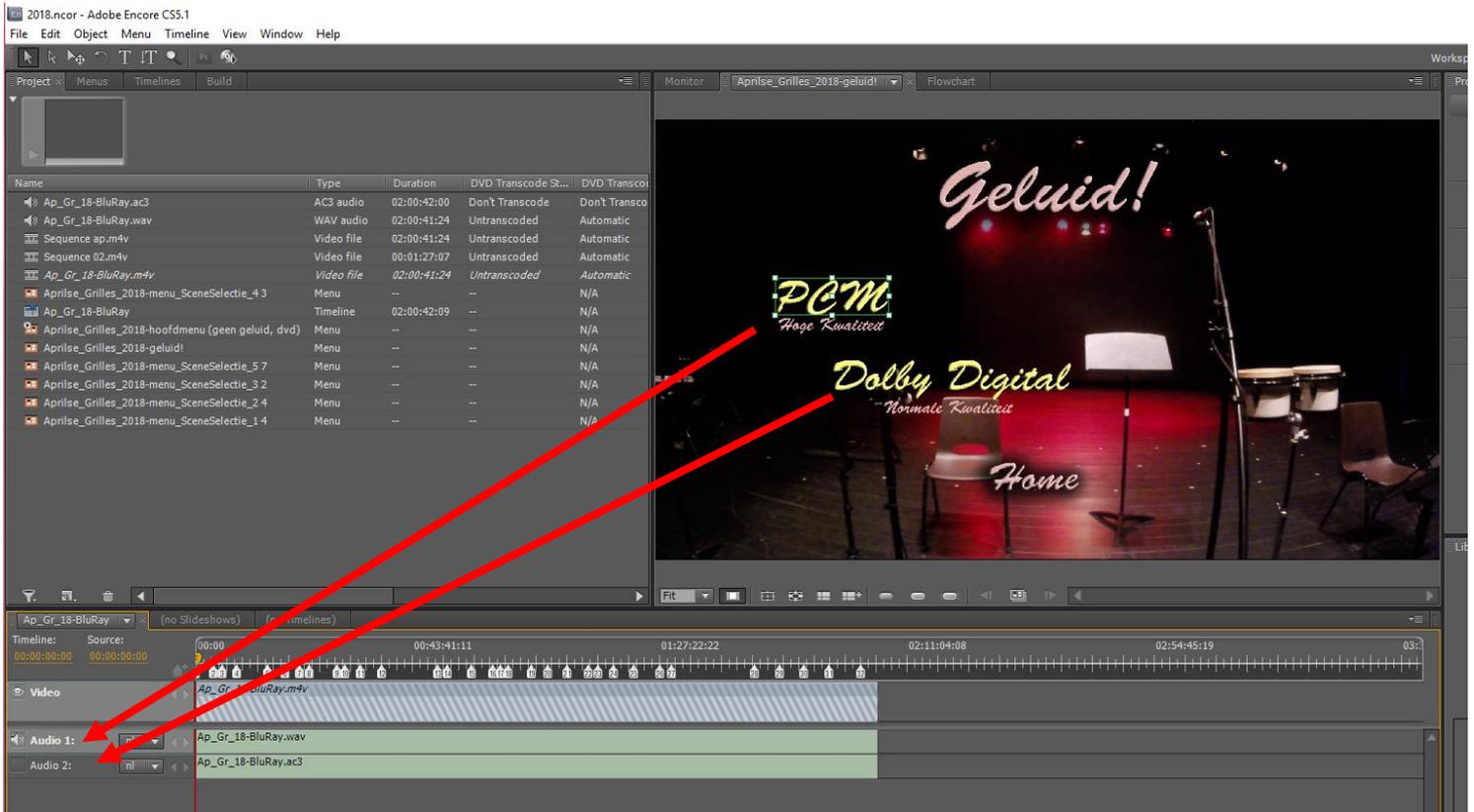
In Adobe Premiere Pro you can only export **Dolby Digital** or **PCM** you can export just this two or you have an additional software where you can create DTS-HD Master Audio (for example: **Surcode Encoder for DTS-HD for Compressor (Apple users)**), Dolby TrueHD. Just export the audio formats that you want to put into the Blu-ray and AVCHD (**note: I did not test DTS-HD, Dolby TrueHD on AVCHD DVD, only Dolby Digital and PCM**)

Step three:

Create your project in Adobe Encore, Blu-ray off-course, add your menu, layout... but in the **Default Transcode Settings (File > Project Settings > Default Transcode Settings > TAB: Blu-ray)** you can choose only one kind of audio format; PCM or Dolby Digital. That doesn't really matter right now, choose one of them is fine.



So if you create your AUDIO menu with the different audio formats as button's (I created PCM and Dolby Digital as button's) link the audio (of your movie sequence) with the button's but **it doesn't really matter if all of your audio sources is, for example *.AC3, what is important:** is that you know in which order the audio must be. For example DTS-HD button is linked with **AUDIO 2**, Dolby Digital button is linked with **AUDIO 1**,... so you know Dolby Digital comes first and DTS-HD second. (In my case PCM is AUDIO 1 and Dolby Digital is AUDIO 2)



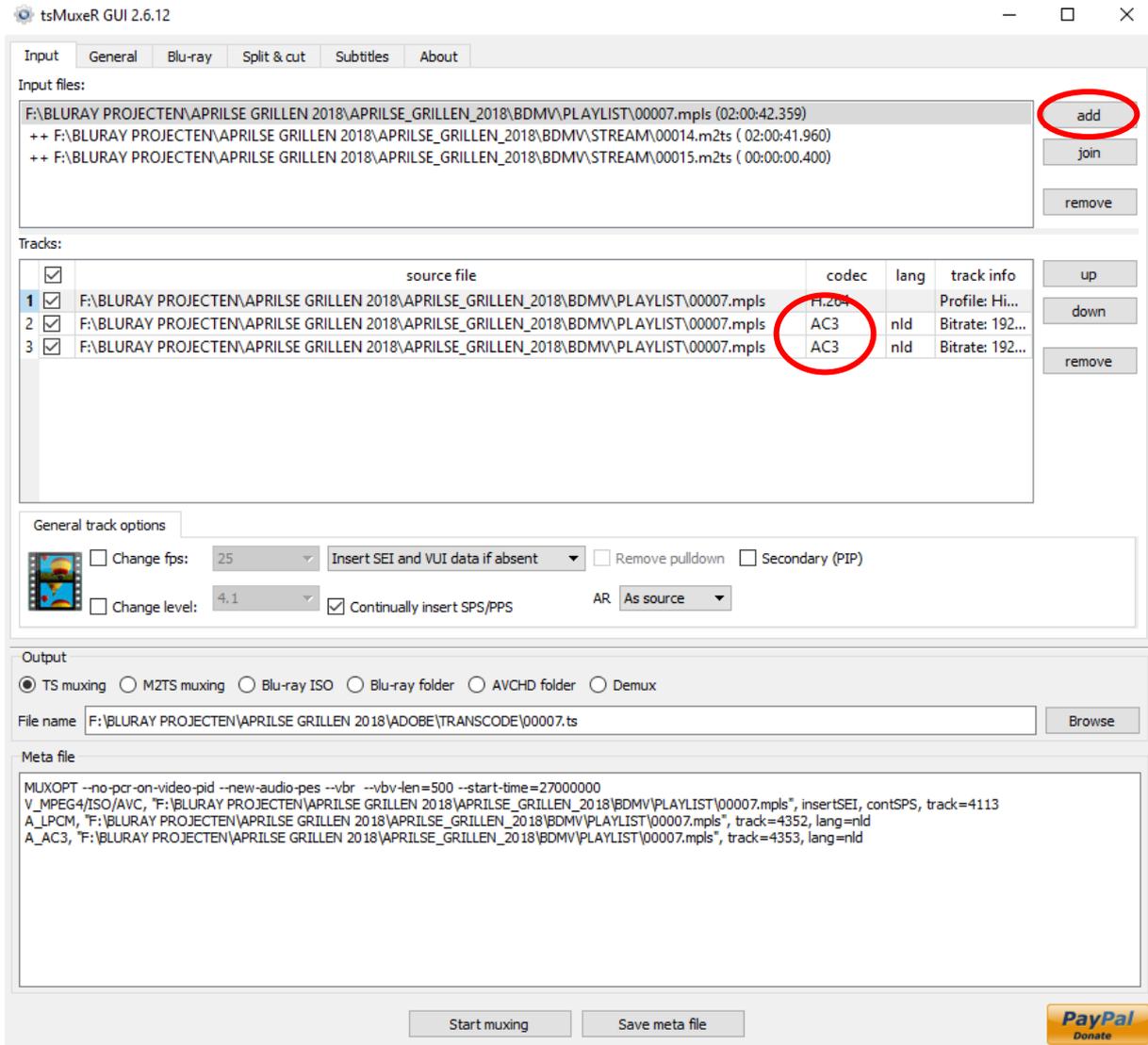
Step four:

Build your Blu-ray in Adobe Encore and choose **Blu-ray Folder**

AVCHD? Go to Step eight!!

Step five (for Blu-ray):

When you created your Blu-ray folder you need to locate which Playlist contains your movie and what clipinfo is linked with your movie. So you can one-by-one drag and drop all the *.MPLS files into **tsMuxeR (BDMV > PLAYLIST > *.MPLS)**. In my case it's playlist 00007.mpls and if you can see 00014.m2ts is my movie so the clipinfo is 00014.clpi (BDMV > CLIPINF > *.CLPI) and if you can notice I have 2 AC3 files but I want the first one as PCM and the second AC3 (Dolby Digital). So you click on the **add** button.



The screenshot shows the tsMuxeR GUI 2.6.12 interface. The 'Input files' section contains three files: 'F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\PLAYLIST\00007.mpls (02:00:42.359)', '++ F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\STREAM\00014.m2ts (02:00:41.960)', and '++ F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\STREAM\00015.m2ts (00:00:00.400)'. The 'Tracks' section shows a table with three tracks, all selected. The first track is H.264, and the next two are AC3. The 'add' button in the top right is circled in red. The 'General track options' section shows 'Change fps' set to 25, 'Change level' set to 4.1, and 'Continually insert SPS/PPS' checked. The 'Output' section shows 'TS muxing' selected and the 'File name' set to 'F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\ADOBE\TRANSCODE\00007.ts'. The 'Meta file' section contains a list of command-line options for MUXOPT.

	source file	codec	lang	track info
1	F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\PLAYLIST\00007.mpls	H.264		Profile: Hi...
2	F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\PLAYLIST\00007.mpls	AC3	nld	Bitrate: 192...
3	F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\PLAYLIST\00007.mpls	AC3	nld	Bitrate: 192...

```
MUXOPT --no-pcr-on-video-pid --new-audio-pes --vbr --vbr-len=500 --start-time=27000000
V_MPEG4/ISO/AVC, "F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\PLAYLIST\00007.mpls", insertSEI, contSPS, track=4113
A_LPCM, "F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\PLAYLIST\00007.mpls", track=4352, lang=nld
A_AC3, "F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\PLAYLIST\00007.mpls", track=4353, lang=nld
```

And search for your audio file. When you add your audio file, in my case PCM, you replace the first audio file by removing the first audio file, in this case it's number 2 so it looks like this:

The screenshot shows the tsMuxeR GUI 2.6.12 interface. The 'Input' tab is active, displaying a list of input files and a table of tracks. The track table has columns for track number, source file, codec, language, and track info. Track 2 is highlighted, and its 'remove' button is circled in red. Below the table are 'General track options' and 'Demux options' tabs. The 'Output' section shows 'TS muxing' selected as the output format, with a file name field and a 'Browse' button. The 'Meta file' section contains a command line for muxing. At the bottom, there are 'Start muxing' and 'Save meta file' buttons, and a 'PayPal Donate' button.

tsMuxeR GUI 2.6.12

Input files:

- F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\PLAYLIST\00007.mpls (02:00:42.359)
- ++ F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\STREAM\00014.m2ts (02:00:41.960)
- ++ F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\STREAM\00015.m2ts (00:00:00.400)
- F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\ADOBE\TRANSCODE\Ap_Gr_18-BluRay.wav

Tracks:

	source file	codec	lang	track info	
1	<input checked="" type="checkbox"/> F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\PLAYLIST\00007.mpls	H.264	nld	Profile: Hi...	up
2	<input checked="" type="checkbox"/> F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\ADOBE\TRANSCODE\Ap_Gr_18-BluRay.wav	LPCM	nld	Bitrate: 153...	down
3	<input checked="" type="checkbox"/> F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\PLAYLIST\00007.mpls	AC3	nld	Bitrate: 192...	remove

General track options | Demux options

Delay (in ms): 0 Downconvert HD audio Secondary

Language: nld ("Dutch; Flemish")

Output

TS muxing M2TS muxing Blu-ray ISO Blu-ray folder AVCHD folder Demux

File name: F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\ADOBE\TRANSCODE\00007.ts

Meta file

```
MUXOPT --no-pcr-on-video-pid --new-audio-pes --vbr --vbr-len=500 --start-time=27000000  
V_MPEG4/ISO/AVC, "F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\PLAYLIST\00007.mpls", insertSEI, contSPS, track=4113  
A_LPCM, "F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\ADOBE\TRANSCODE\Ap_Gr_18-BluRay.wav", lang=nld  
A_AC3, "F:\BLURAY PROJECTEN\APRILSE GRILLEN 2018\APRILSE_GRILLEN_2018\BDMV\PLAYLIST\00007.mpls", track=4353, lang=nld
```

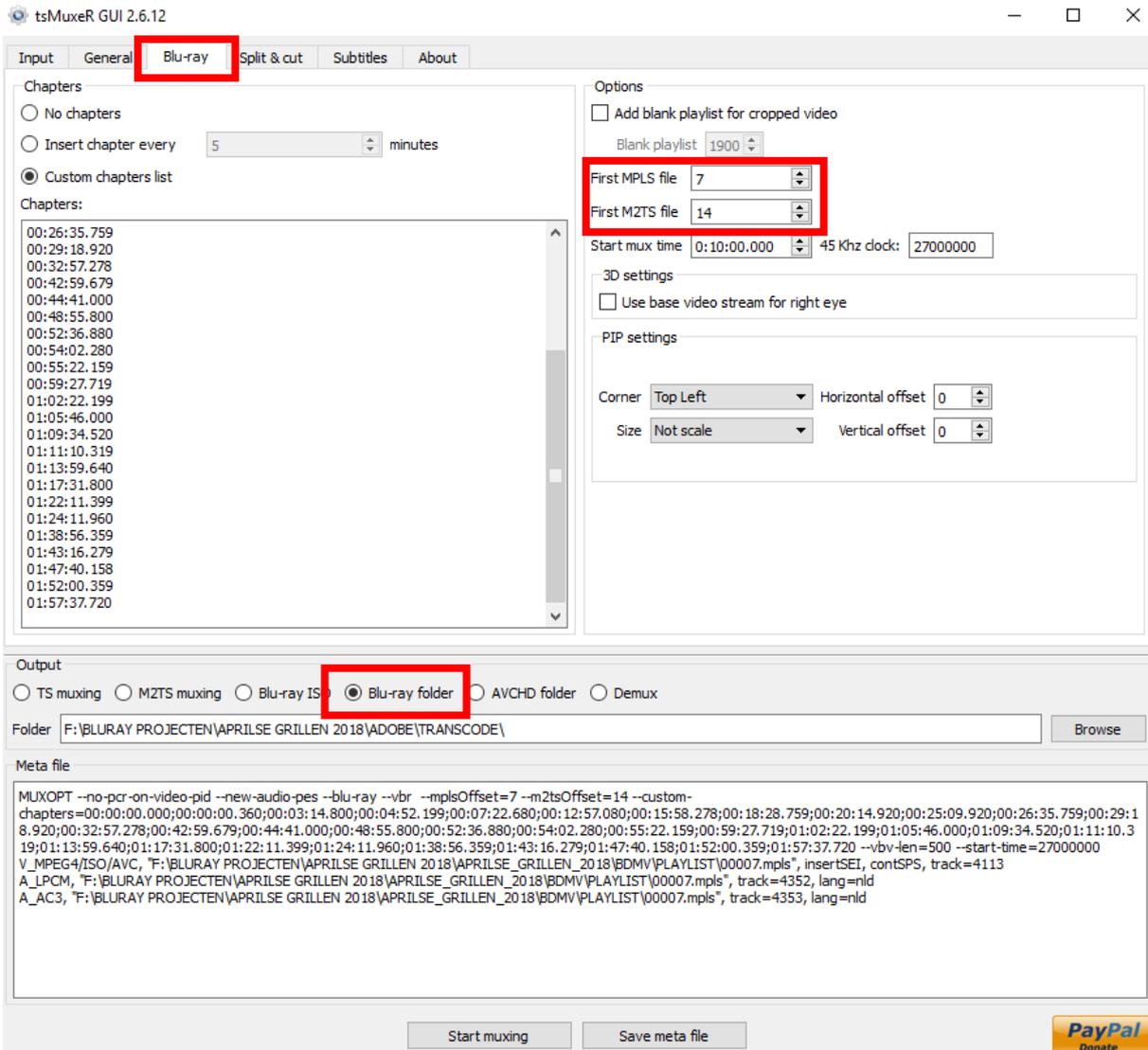
Start muxing Save meta file

PayPal Donate

The next thing that you have to prepare is in on the tab, **Blu-ray**. In the Options section you must fill only two things: **First MPLS file** and **First M2TS file**.

- **First MPLS file**: here you fill the **playlist number** mine was 00007.mpls so I fill 7 in.
- **First M2TS file**: here you fill the **clipinf/m2ts file number**, mine was 00014.m2ts so I fill 14 in.

In the **Output** section you check **“Blu-ray folder”** and choose your destination. All done? Click on **“Start muxing”**

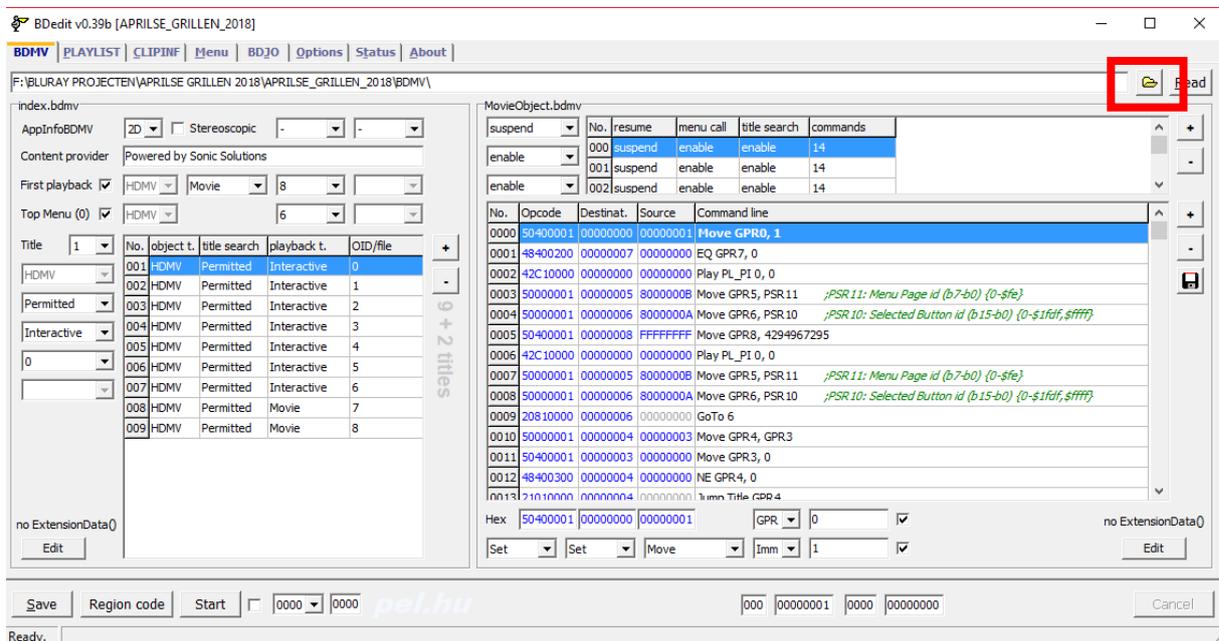


Step six (for Blu-ray)

When muxing is done you replace in the Adobe Encore exported Blu-ray folder (original) your *.M2TS and *.CLPI file from the tsMuxeR GUI Blu-ray folder (muxed). So in the original STREAM folder I deleted the 00014.m2ts file and import the muxed 00014.m2ts which contain the added audio stream. And in the original CLIPINF folder I delete the 00014.clpi and import the muxed 00014.clpi file. **You don't replace the MPLS file!! Only *.M2TS and *.CLPI**

Step seven (for both)

Now you open BDEdit. (We're almost there!) And **click on the yellow folder icon** and locate your BDMV folder and it will look, more or less, like this:



The screenshot shows the BDEdit v0.39b interface. The main window displays the BDMV folder structure for 'APRILSE_GRIFFEN_2018'. The 'MovieObject.bdmv' table is visible, listing various objects and their properties. A yellow folder icon is highlighted in the top right corner of the interface.

No.	Opcode	Destinat.	Source	Command line
0000	50400001	00000000	00000001	Move GPR0, 1
0001	48400200	00000007	00000000	EQ GPR7, 0
0002	42C10000	00000000	00000000	Play PL_PI 0, 0
0003	50000001	00000005	80000008	Move GPR5, PSR 11 ;PSR.11: Menu Page id (b7-b0) {0-\$fe}
0004	50000001	00000006	8000000A	Move GPR6, PSR 10 ;PSR.10: Selected Button id (b15-b0) {0-\$1df,\$fff}
0005	50400001	00000008	FFFFFFF	Move GPR8, 4294967295
0006	42C10000	00000000	00000000	Play PL_PI 0, 0
0007	50000001	00000005	80000008	Move GPR5, PSR 11 ;PSR.11: Menu Page id (b7-b0) {0-\$fe}
0008	50000001	00000006	8000000A	Move GPR6, PSR 10 ;PSR.10: Selected Button id (b15-b0) {0-\$1df,\$fff}
0009	20810000	00000006	00000000	GoTo 6
0010	50000001	00000004	00000003	Move GPR4, GPR 3
0011	50400001	00000003	00000000	Move GPR3, 0
0012	48400300	00000004	00000000	NE GPR4, 0
0013	21010000	00000004	00000000	3 min Title GPR 4

And click on the **PLAYLIST** tab. Just **under the xxxxx.mpls** there is a **list box** in here you **select your playlist file**. In mine case “ 00007 ” And in the **section: PlayList** you **select your movie file**. In mine case “ 00014 ” is this highlighted? Good! Now you go to the **section STN** here you will see different shortcut names like: **Vi , Au , PG , IG , sV , sA , PIP**. Here you select the Au (Au stands for Audio) And just under Au you must see a number, in mine case 2, because I want PCM and Dolby Digital and if I can count correctly that’s two. Do you have more? Like 3? You must see the number 3! And so on. Now you see something like:

- **001 PlayItem 1100 DD, Stereo, 48KHz, NLD** (this can be different!)
- **002 PlayItem 1101 DD, Stereo, 48KHz, NLD** (this can be different!)
- **..... if you have more**

That’s because your playlist doesn’t know that you have added different audio format so we are going manually change this. now you must know which audio format comes first what second and so on.. So I click on the “ 001 ” and just under that you have multiple list boxes, the third is for your audio format, so I choose LPCM. The forth one is for how many channels you have. The fifth is what kind of Hertz your audio is. And the Sixth is what language is your audio file. **Just don’t touch the first and the second! So mine will look like this:**

- **001 PlayItem 1100 LPCM, Stereo, 48KHz, NLD**
- **002 PlayItem 1101 DD, Stereo, 48KHz, NLD**

BDedit v0.39b [APRILSE_GRILLEN_2018]

xxxxx.mpls
 00007
 AppInfoPlayList
 Sequential 0 00000000 00000000 random access audio mix bypass mixer
 ExtensionData no ExtensionData() Edit

file	c	rS	IN time	OUT time	length	UO1	UO2	An
000	00014	1	00:00:10:00.000	02:10:41.960	02:00:41.960	00000000	00000000	0
001	00015	1	00:00:10:00.000	00:10:00.400	00:00:00.400	00000000	00000000	0

STN

Vi	Au	PG	IG	sV	sA	PIP
1	2	0	0	0	0	0

Apply to dpi

type	mPID	SPid	sCid	sPID	attrib
001 PlayItem	1100				DD, Stereo, 48 kHz, nld
002 PlayItem	1101				DD, Stereo, 48 kHz, nld

PlayItem 1100 LPCM Stereo 48 kHz nld

SubPath

type	repeat	item	file	type	conn	multi	STC	IN time	OUT time	sync PI	sync PTS	An

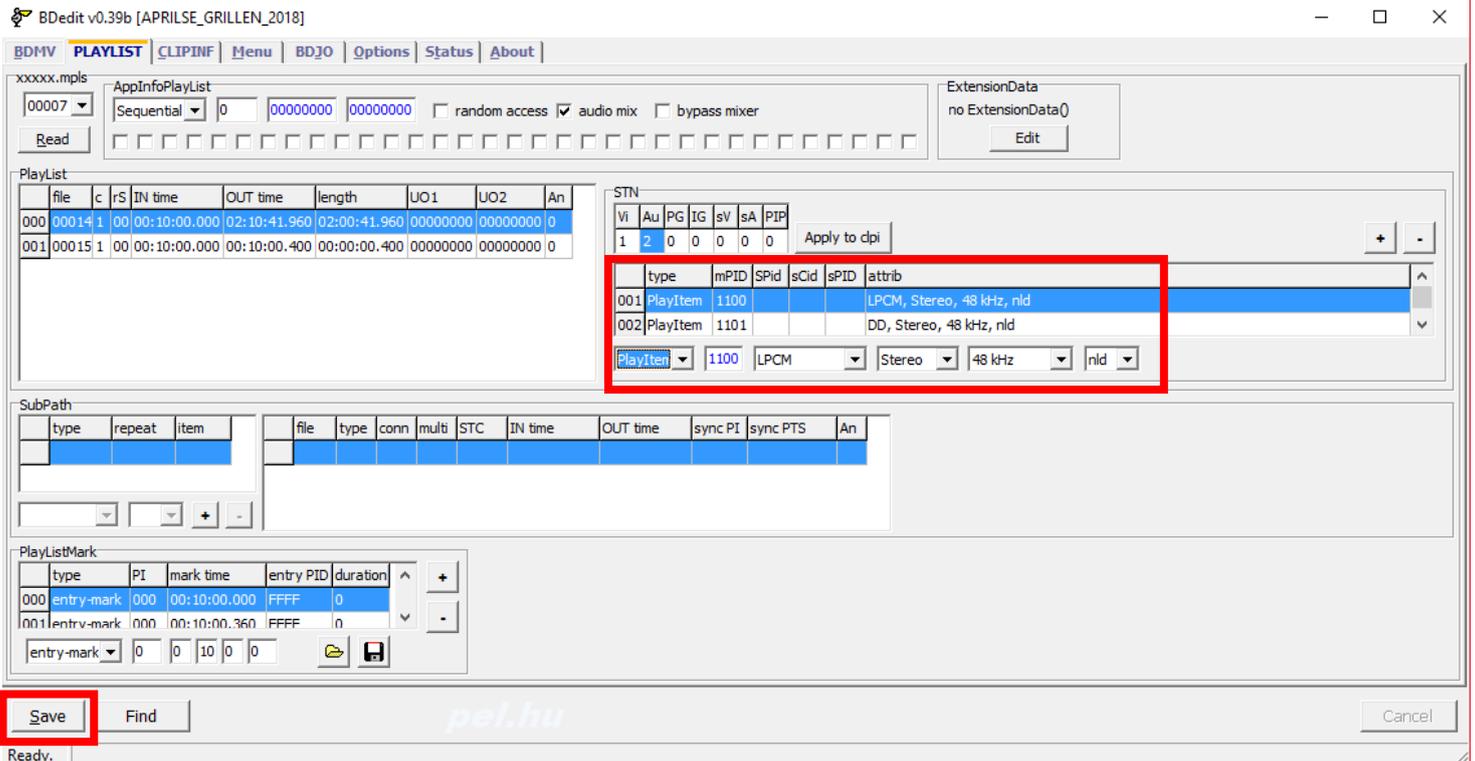
PlayListMark

type	PI	mark time	entry PID	duration
000	entry-mark	000	00:10:00.000	FFFF 0
001	entry-mark	000	00:10:00.360	FFFF 0

entry-mark 0 0 10 0 0

Save Find pel.hu Cancel

Ready.



Done? Click on the Save button and there you have, your Blu-ray! Yeeey you didn't it!!!

Now you can burn it on a Blu-ray disc and try it on your Blu-ray player and run around your table and jump with joy!

AVCHD:

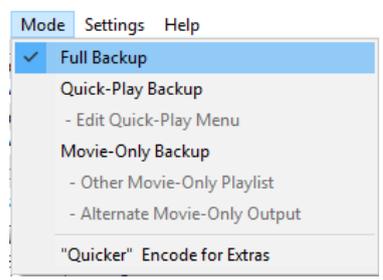
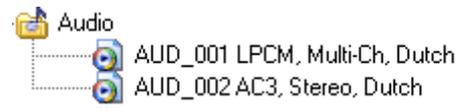
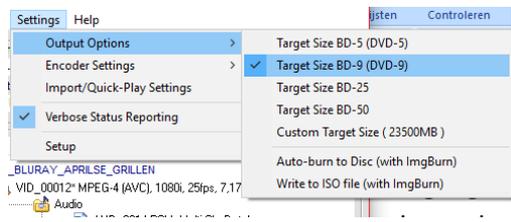
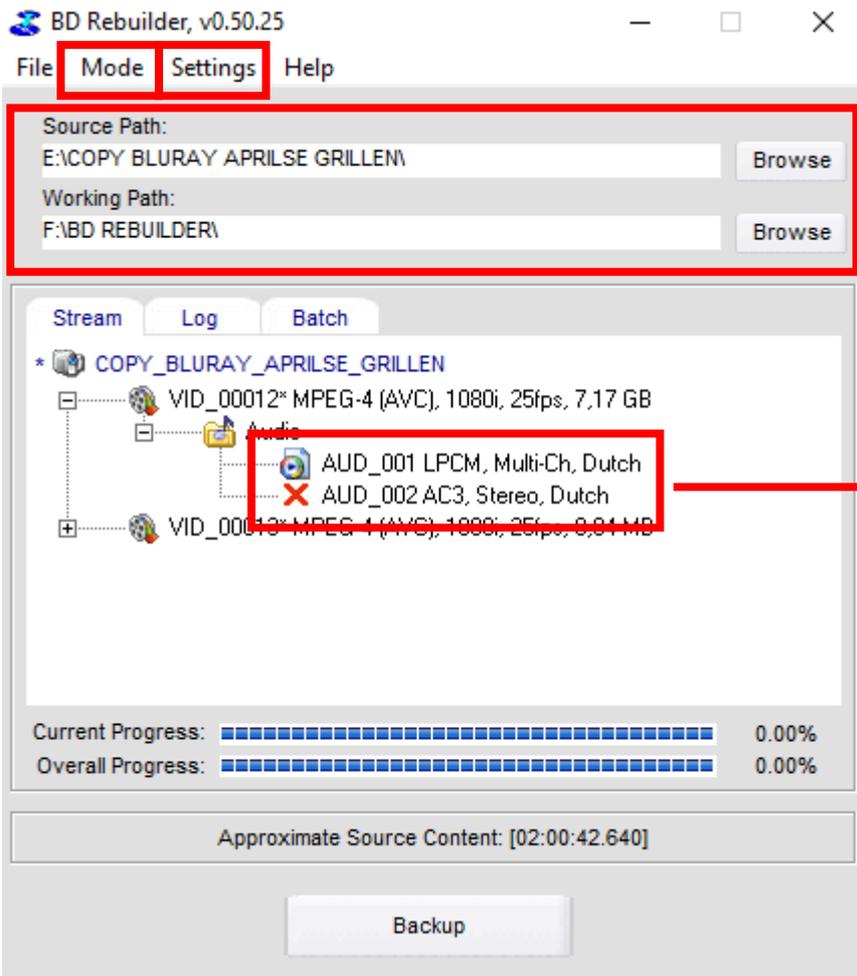
Step eight (for AVCHD)

Now you open **BD-Rebuilder** and in the " **Source path** " you select your Adobe Encore Blu-ray folder. And in your " **Working path** " you choose a destination where the AVCHD folder must be stored. Now you click on: **Settings > Setup** in this section it doesn't really care what is checked and what's not, the only thing that MUST be checked is: **Strict AVCHD for BD-5/9 Movie-Only** and then click on **Save Changes** (in the picture you can see what I checked and what not.)

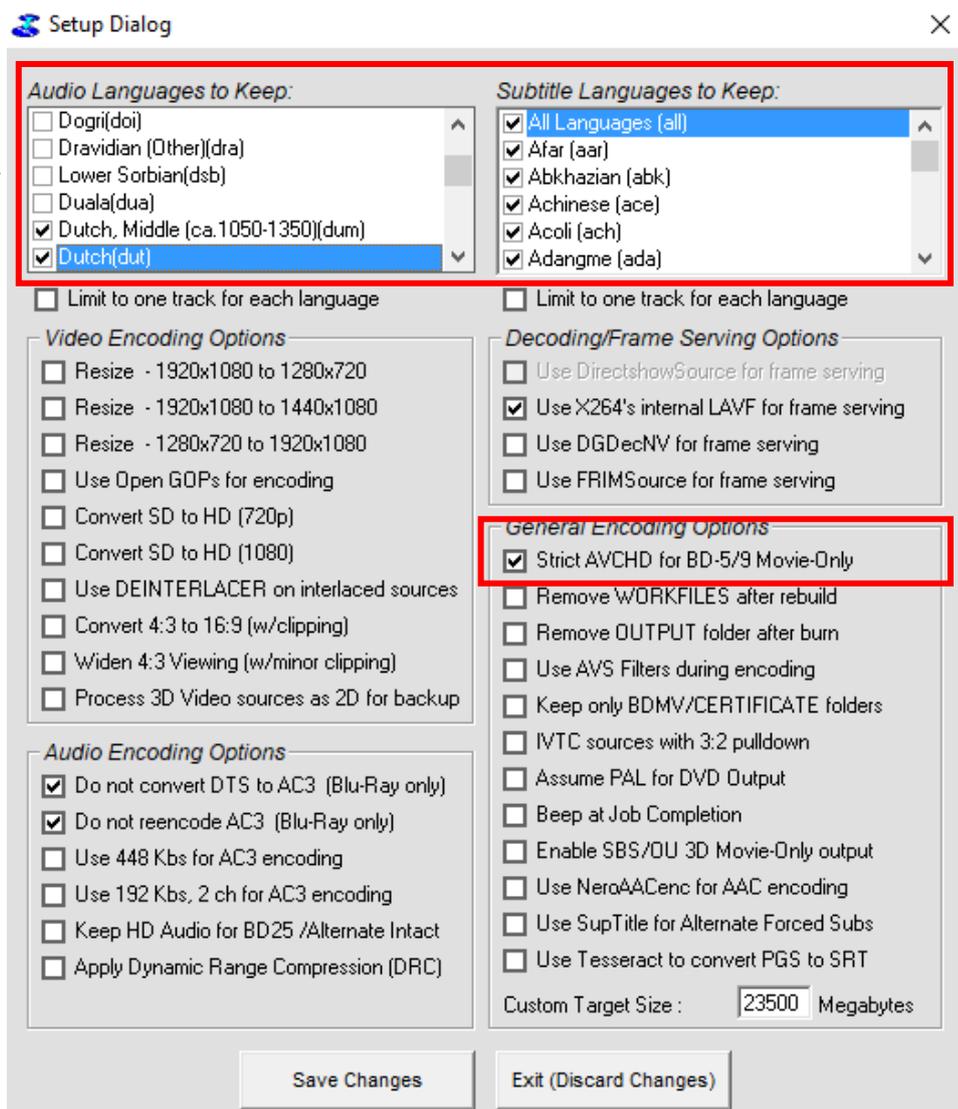
Under the tab **mode** you select **Full Backup** because you want to **keep your menu's!** (note: I did not test this with a popup-menu)

Under the tab **Settings > Output Options** it doesn't really matter if it's on BD-9 or BD-5. We just change this afterwards. But it doesn't hurt if you checked what you want.

And if you notice my second audio is marked with a **red cross**, make sure that all of your audio has the little " **Windows Media Player** " icon. This is important for the *.MPLS file.



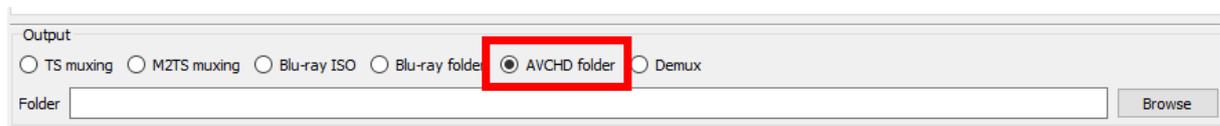
Select your languages or all of them, that's maybe safer. It's up to you.



Done everything? Click on **Backup**. If the software is encoding your movie again, just let it be, go out or drink some coffee or stretch your legs. When it's all done you should have 2 folder's one from Adobe Encore Blu-ray Folder and the new build folder from BD-Rebuilder: AVCHD folder.

Step nine (for AVCHD)

In this step involves working on both folders so make a copy for your own safety. Now we are going to work on the Adobe Encore Blu-ray folder preparing your audio and use your own coded movie for the AVCHD BD-9, BD-5 (DVD) so you can follow " **Step five** " but the only thing that is different is you have to check on the **Output** section the "AVCHD Folder" Done? Go back to step ten.



Step ten (for AVCHD)

When muxing is done you replace in the BD-Rebuilder exported AVCHD folder (new) your *.M2TS and *.CLPI file from the tsMuxeR GUI AVCHD folder (muxed from the Adobe Encore Blu-ray folder). So in the BD-Rebuilder STREAM folder I deleted the 00014.m2ts file and import the muxed 00014.m2ts which contain the added audio stream and my own coded video file. And in the BD-Rebuilder CLIPINF folder I delete the 00014.clpi and import the muxed 00014.clpi file. **You don't replace the MPLS file!! Only *.M2TS and *.CLPI**

All done? Now you can follow the last step, **STEP SEVEN! If you've done it all right you created a playable AVCHD DVD but don't burn it on a Blu-ray burn it on a DVD (single layer or double)!!**

Still have any problems? gunther@weygers.one or go to DOOM9 forum