

# DVDA-AUTHOR

Section: User Commands (1)

Updated: October 2020

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## NAME

dvda-author - manual page for dvda-author version 2019-dev

## SYNOPSIS

**dvda-author** [*OPTION*]...

## DESCRIPTION

dvda-author 2019-dev creates high-resolution DVD-Audio discs

from .wav, .flac and other audio files.

## OPTIONS

Output options

**-h, --help** Display this help.

**-v, --version** Display version.

**-q, --quiet** Quiet mode.

**-d, --debug** Increased verbosity (debugging level)

**-t, --veryverbose** Like **-d** with enhanced verbosity for sample counts.

**, --maxverbose**  
Like **-t** with maximum verbosity on audio buffers (devel info).

**--no-output**  
Does not produce any file structure except for **--fixwav**.  
Computations will be performed.

**-P, --pause** Insert a final pause before exiting.

**-P0, --pause=0** Suppress a final pause before exiting  
if specified in configuration file.

**-l, --log** path Ouput a log to (absolute or relative) filepath.  
Argument must be supplied.

**-L, --logrefresh** path Same as **-l** but prior log will be erased on launching again.

**--loghtml**  
Transform the log into HTML format, with colorized messages, adjacent to log with extension .html added.

**-k, --text** Generates text table in IFO files  
  
Under development, implemented for 1-group discs.  
Use file information as arguments separated by commas.

**-W, --disable-lexer** Deactivates configuration file parsing.

Playback options

**-a, --autoplay** Launches playback on loading disc.

Authoring options

Soundfile authoring

Supported audio types: .wav

.flac and .oga (Ogg FLAC, see below)  
SoX-supported formats with **-S** enabled  
except for lossy formats.

**--project** [file]  
Launches a dvda-author project.  
The project file should have the same syntax as dvda-author.conf [see file HOW\_TO.conf]  
By default, launches dvda-author.dap in the current directory.

**-i, --input** directory [dir] Absolute or relative path to input directory with audio files.

Each subdirectory is a group.

**-o, --output** directory [dir] Absolute or relative path to output directory.

**-x, --extract** {disc or directory} Extract DVD-Audio to directory **-o**.

Groups are labelled g1, g2 in output directory.

**--xlist** 1:1,...,t1n-2:1,...,t2n-...-N:1,...,tNn

Optional hyphen-separated list of groups to be extracted

may be added with **-x**.

Tracks to be extracted in a given group are indicated after a colon.

Tracks to be extracted may be listed separated by commas after colon.

If not specified, all the group will be extracted.

Contiguous tracks may be represented by `...` between commas

e.g. 2-3-4:1,2,...,7,9 means: extract groups 2 and 3 entirely and tracks 2 to 7 and 9 for in group 4.

**--aob-extract** {directory or AOB[,AOB...]}

Direct AOB file audio content extraction.

Unlike **-x**, this option does not use .IFO files. Use this option in combination with **-o**. No wav header is generated.

Several AOB files may be listed, separated by commas.

If a directory is used, it must immediately contain an AUDIO\_TS subdirectory to be read. This includes disc player roots.

**--sync** {directory or AOB[,AOB...]}

Like **--aob-extract** but output is to stdout for piping to third-party software.

Only audio content is directed to stdout.

Extraction is slowed down to standard playback levels after extracting the equivalent of 0.5 second playback.

**--play** {directory or AOB[,AOB...]}

Play audio content using ffmpeg (<https://ffmpeg.org>).

Main process will exit automatically some time after playback is finished.

Limitations: currently not available under Windows. Each group in the disc must be either MLP or have same audio characteristics throughout.

**--player** [ffmpeg | vlc]

Choose a player for play-back (with **--play**).

Currently only ffmpeg (default) and vlc (default for Windows) are supported.

ffmpeg may have issues (Sept. 2019) with some mlp files under Windows.

Prior installation of VLC is requested for

**--player-path** [path]

Absolute or relative path with filename and extension to the player, if **--player=vlc** is used

and the path is not the standard install path (under Program Files for Windows or /usr/bin otherwise)

**--aob2wav** {directory or AOB[,AOB...]}

Like **--aob-extract** but a wav header is prepended to audio content.

**--forensic**

Use this mode with **--aob-extract**, **--aob2wav** or **-x** if IFO files are missing or mangled, or AOB files

have been partially restored using recovery tools.

**--strict**

Use this option with **--aob-extract**, **--aob2wav** or **-x** to stop extraction in case of severe header issues. May be useful in

combination with **--forensic** to manually repair header issues.

**--decode**

Use this option with **--extract** or **--aob2wav** to decode MLP audio to the WAV format.

This option is based on the ffmpeg decoder and is subject to the same legal restrictions as those applying to the MLP ffmpeg decoder.

**--encode**

Use this option to encode to MLP audio.

This option is based on the ffmpeg encoder and is subject to the same legal restrictions as those applying to the MLP ffmpeg encoder.

**--mlp-files**

Like **--encode** but just creates the corresponding MLP files

In the subdirectory MLP of the temporary directory (see **--tempdir**).

Disc remains PCM. This option is based on the ffmpeg encoder and is subject to the same legal restrictions as those applying to the MLP ffmpeg encoder.

**--log-decode** [AOB]

Decode AOB file and log MPEG specifics. Should be used only in conjunction with **--outfile**

**--outfile** [file]

Absolute or relative path to the log generated by **--log-decode**. Caution : should be alone in its own directory.

**-p, --startsector** NNN Specify the number of the first sector

of the AUDIO PP.IFO file in the output of mkisofs.

If NNN=0, falling back on 281 (default).

Without **-p** start sector will be computed automatically.

**-g** Start of a group. You may specify up to 9 groups of tracks.

Minimum: one group. Enter full or relative path to files if input directory is not set by [-i].

**-z, BROKEN**. Separate two consecutive titles when files have same audio

characteristics within a group.(

**-Z, --playlist** You may specify up to 9 group copies.

Total number of groups and copy groups should not exceed 9.

**-n, --no-videozone** Do not generate an empty VIDEO\_TS directory.

**-w, --rights** Access rights to directories created (octal values)

**--merge** [channels]  
The following tracks are mono and will be merged into multichannel.  
They must be ordered as Lf-Rf-C-LFE-Ls-Rs (see table below) and may be specified further by **--cga** to disambiguate combinations wrt group1/group2 types.  
To be used with **-g** (e.g. **-g --merge ... --merge ... -g --merge ...**). Under development.

**-c, --cga** Enter channel group assignment right after group, e.g: **-g** file1...fileN **-c** cga1...cgaN

Channel assignment should match number of channels of each file  
If **--merge** is used, each cga value applies to the respective merged channels in linear order.  
Combine channels using either decimal indexes in following table or hyphenated channel assignement labels  
e.g. **-g** a.wav **--merged** b1.wav b2.wav b3.wav b4.wav b5.wav b6.wav **-c** Lf-Rf-C2-Lfe2-S2 **--cga** 17  
means: apply channel assignment Lf-Rf-C2-Lfe2-S2 to first track and Lf-Rf-C-Lfe2-Ls2-Rs2 (index 17)  
to second track formed by 6 merged mono channels b1.wav to b6.wav  
Channel group assignment (CGA)

Index	1	2	3	4	5	6
0	Mono					
1	L R					
2	Lf Rf S2					
3	Lf Rf Ls2 Rs2					
4	Lf Rf Lfe2					
5	Lf Rf Lfe2 S2					
6	Lf Rf Lfe2 Ls2 Rs2					
7	Lf Rf C2					
8	Lf Rf C2 S2					
9	Lf Rf C2 Ls2 Rs2					
0xA-10	Lf Rf C2 Lfe2					
0xB-11	Lf Rf C2 Lfe2 S2					
0xC-12	Lf Rf C2 Lfe2 Ls2 Rs2					
0xD-13	Lf Rf C S2					
0xE-14	Lf Rf C Ls2 Rs2					
0xF-15	Lf Rf C Lfe2					
0x10-16	Lf Rf C Lfe2 S2					
0x11-17	Lf Rf C Lfe2 Ls2 Rs2					
0x12-18	Lf Rf Ls Rs Lfe2					
0x13-19	Lf Rf Ls Rs C2					
0x14-20	Lf Rf Ls Rs C2 Lfe2					

Keys:  
Index 2 means channel belongs to Group2  
L-R: Stereo  
Lf: Left front  
Rf: Right front  
Ls: Left surround (behind)  
Rs: Right front

C:  
Center  
Lfe: Low Frequency Effect (Subwoofer)  
S: Surround (just one behind)

Ls: Left  
surround  
Rs: Right surround

Each group must have either same sample rate or be even multiples (e.g. 96kHz/48 kHz or 88.2 kHz/44.1 kHz).  
The latter case is not yet supported.  
Within groups, bit rate may differ but sample rate cannot.

**--downmix**  
Enter downmix coefficients in dB. If track has more than 2 channels, each channel (Lf, Rf, C, Ls or S, Rs, LFE) will be mapped to left (l) and/or right (r) stereo channel

with volume reduced by x dB, x the channel downmix coefficient.

Enter positive dB values corresponding to each channel volume reduction, mapped to left or right stereo, separated by commas.

Schema is **--downmix** Lf.l,Lf.r,Rf.l,Rf.r,C.l,C.r,S.l,S.r,Rs.l,Rs.r,LFE.l,LFE.r

Use 100 for 'off' value and 0 for no volume reduction.

This option can be repeated up to 16 times. It is cyclically recycled to 16 times to provide as many downmix tables.

Each track can be indexed using **--dtable** to be downmixed with the corresponding table.

Example : **--downmix** 6.2,100,100,7.2,0,0,13,13,16,16,0,0 **--downmix** 5.2,100,100,8.2,0,0,10,10,12,12,0,0 **--dtable** 2 **--dtable** 1 means that track 1 will be downmixed using the second table and track 2 the first one.

#### **--dtable**

Enter downmix table rank (1-based) as indicated above.

#### **--provider**

Enter provider name.

**-F, --fixwav**(options) Bad wav headers will be fixed by fixwav.

Can be run alone without DVD-AUDIO output by adding **--nooutput**.

**-f, --fixwav-virtual**(options) Use .wav header repair utility

without any write operation.

**-S, --sox** Use SoX to convert file format to .wav.

Without **-S** or **--resample** (see below), only flac, Ogg FLAC

and .wav files are accepted.

#### **--resample** c b s

Use SoX to convert file format to .wav, and/or change channel to c, bitrate to b, samplerate to s.

You do not need to use **-S** with **--resample**.

Always provide the three values c b and s separated by white space in the same order as in the previous **-g** files.

#### **--padding**

Reverse default behaviour for transition between audio tracks with identical characteristics (number of channels, bit depth and sample rate).

If necessary, audio will be padded with 0s instead of being joined (default).

Use **--pad-cont** for padding with last-known byte.

**-C, --pad-cont** When padding, pad with last known byte, not 0. See **--padding** above.

Deactivates **--lossy-rounding**

**-L, --lossy-rounding** Sample count rounding will be performed by cutting audio files

instead of padding (see **--padding** and **--pad-cont**).

Deactivates **--pad-cont** and **--padding**.

#### Menu authoring

**-m, --topmenu**(=mpgfiles) Generates top menu from comma-separated list of mpgfiles.

Without argument, automatic menu generation is launched.

**-u, --duration** hh:mm:ss Duration of top menu file, if provided.

It is mandatory when **--topmenu** has an argument file.

**-M, --xml** filepath Generates dvdauthor xml project

to (absolute or relative) filepath.

**-H, --spuxml** filepath Generates spumux xml project

to (absolute or relative) filepath.

**-G, --image** file Menu Background image for customized menu authoring.

**-E, --highlight** file Menu Highlight image for customized menu authoring.

**-e, --select** file Menu Select image

image that appears on pressing Enter with remote control usually Background with a change in text color.

**-N, --blankscreen** file For automatic menu authoring, you can replace black video background with this image.

**-O, --screentext** string Text for top menu. Format is

"album\_text=group1\_text=text(track11),text(track21),...,text(trackn1):group2\_text=text(track12),text(track22),...,text(trackn2):..."  
with text(tracknk) the text for track n of group k and  
groupk\_text the text for group k.

**-U, --loop** loop background video.

**-K, --highlightformat -1** for automatic menu authoring

with little square before titles, 0 for underlining, 1 for button highlight.

**-J, --font** a,b,c Font name,font size,font width

(number of pixels for width of font size 10).

Font name should be compatible with Image magick specifications (mogrify **-list** font).

**--fontname a**  
Font name.  
**--fontsize b**  
Font size.  
**--fontwidth b**  
Font width.

**-Y, --topmenu-palette** string Text for system palette. Format is

either "norefresh", to block the refreshing of menu images, or:  
textcolor:highlight\_color:select\_action\_color  
in alpha-YCrCb 32-bit hexa coding. Here textcolor is the non-highlighted text for tracks,  
,highlight\_color is the underline or mobile motif color,  
and select\_action\_color is album and group labels  
as well as color of tracks on pressing the highlighted track.

**-8, --activemenu-palette** string Text for menu colors. Format is:

textcolor:highlight\_text\_color:highlight\_color:select\_action\_color  
in alpha-YCrCb 32-bit hexa coding. Here textcolor is the text for tracks,  
highlight\_text\_color is the color of album and group labels and highlighted text (broken feature)  
highlight\_color is the underline or mobile motif color,  
and select\_action\_color is on pressing the highlighted track.

**-y, --topmenu-colors** string Text for menu colors. This is a developer's switch.

Use the **-palette** switches for modifying display colors.  
This switch determines the colors of pictures generated in the temporary directory before creating the mpg background files.  
Format is either "norefresh", to block the refreshing of menu images, or  
textcolor:backgroundcolor:highlightcolor:select action color in rgb values a,b,c between 0 and 255.

**-b, --background** Background jpg files (comma-separated) to create a background mpg file

into which titles are multiplexed.  
Specify as many files as there are menus, or the last file will be duplicated for missing menu files.

**--background-colors**

Background RGB colors to colorize background mpg files  
into which titles are multiplexed.  
Specify as many colors as there are menus, or the last color will be duplicated for missing menu colors.  
Syntax is r,g,b:r2,g2,b2:...:rk,gkbk for **--nmenus=k**.

**-B, --background-mpg** list Background mpg file(s) in a comma-separated list

into which titles are multiplexed.

**--topmenu-slides** file(s) .jpg image files to be multiplexed with sound tracks (see option below) into a slideshow.

By default a black screen will be used.

Each menu screen should have at least one associated .jpg slide. List of slides is comma-separated for each menu.

Menu lists are colon-separated: menu1\_pic1,menu1\_pic2:menu2\_pic1,menu2\_pic2, etc.

**-Q, --soundtracks** file(s) Background wav file(s)

to be multiplexed into a slideshow, with option **--topmenu-slides**.

By default a silent track will be multiplexed.

Each menu screen should have its own sound track. List of tracks follows same usage as for **--topmenu-slides**.

Note that currently with several menus there can be only one track/slide per menu.

**-A, --topvob f** Import already authored top vob menu f.

**--import-topmenu f**

Import VIDEO\_TS stream (VOB format) into AUDIO\_TS top menu (AUDIO\_TS.VOB).

**-0, --menustyle** desc Specifies top menu style

By default, tracks are listed under group headers.

If desc='hierarchical', the first menu screen lists groups.

If desc='active', all tracks will have an associated still picture with menu links that remain active while listening to the track.

**-1, --stillvob f** Import already authored still pictures vob.

**-2, --stilloptions** ... Still picture options (add after **--stillpics**). Each option applies to ranked pic, e.g.

rank=0>manual,starteffect=fade,rank=1,starteffect=dissolve.

Suboptions are:

rank=[number], starteffect=[effect], endeffect=[effect]

manual, lag=[number], start=[number], active

See details below.

**--stillpics**

Background jpg files to create one or more still pictures

for each track. See usage below.

If a track has no still picture, use two colons in a row.

You may otherwise indicate a directory containing pictures

named pic\_abc.jpg, with a,b,c between 0 and 9.

**--stillpics** dir/

Directory for background jpg files to create one still picture for each track.  
Pics should be named pic\_000.jpg, ..., up to pic\_999.jpg (maximum).

**-4, --norm** Argument is 'ntsc', 'pal' or 'secam', depending on TV standard.

**-5, --aspect** Set the playback aspect ratio code of the encoded video. By default, this value is inferred from the input header.

- 1 - 1:1 display
- 2 - 4:3 display
- 3 - 16:9 display
- 4 - 2.21:1 display

**-6, --nmenus** int Generates int top menus (default 1).

**-7, --ncolumns** int Top menus will have at most int columns (default 3).

Disc authoring

**-I, --mkisofs**(=file) Run mkisofs to author disc image using file  
as an ISO image. If file is empty, use tempdir/dvd.iso.

**-r, --cdrecord**(=a,b,c) Run cdrecord to burn disc image.

Unless specified, **--mkisofs** will be automatically triggered with default tempdir/dvd.iso value.  
Device is of the form a,b,c, see cdrecord **-scanbus**. It can be omitted  
if there is just one writer.

**-R, --growisofs** /dev/dvd Run growisofs to burn disc image.

Device is of the form /dev/scd0 under many GNU/Linux distributions.  
It cannot be omitted.

DVD-VIDEO zone authoring

**--lplex-output** dir  
Output directory for lplex  
Default is same as specified **-o** value  
or default output directory.

**--dvdv-tracks** ...  
Add tracks to be added to DVD-VIDEO zone using lplex:  
track11,...,trackn1:track12,...,trackn2:...  
for trackij the ith track of video titleset j.

**--dvdv-slides** ...  
Add slides to be added to DVD-VIDEO zone using lplex:  
slide11,...,sliden1:slide12,...,slide2:...  
for slideij the ith slide of video titleset j.  
Each track should have a corresponding slide.  
Add two commas in a row for repeating previous slide.  
There can be a maximum of 1 slide per track.

**-V, --videodir** directory Absolute or relative Path to VIDEO\_TS input directory

**-T, --videolink** rank Rank of video titleset linked to in video zone

(XX in VTS\_XX\_0.IFO).  
In this case the path to the VIDEO\_TS linked to  
must be indicated.

**--dvdv-import**  
Create DVD-VIDEO zone from DVD-AUDIO zone.  
Import DVD-Video standard compliant files (16-24 bit/48-96 kHz  
from DVD-AUDIO to DVD-VIDEO.

**--mirror**  
Like **--dvdv-import** but resample audio tracks  
if they are not DVD-Video compliant (.wav files only)

**--mirror-strategy** st Values for st are: 'high' or 'low'.  
If necessary, **--mirror** will resample audio tracks  
by upsampling (high) or downsampling (low)

**--hybridate**  
Alias for **--dvdv-import**  
**--dvdv-slides=...** with each slide the first slide of **--stillpics=...** for each audio track.

**--full-hybridate**  
Alias for **--mirror --mirror-strategy** high  
**--dvdv-slides=...** with each slide the first slide of **--stillpics=...** for each audio track.

Software configuration

**-D, --tempdir** directory Temporary directory for DVD-Audio files (dvda-author).

Optional. CAUTION: tempdir will be erased unless **--no-refresh-tempdir** is used.

**-9, --datadir** directory Data directory with subdirectory `menu' containing at least default backgrounds for menus. Optional, only to be used when menus are created.

, **--lplex-tempdir** directory  
Temporary directory for DVD-Video files (lplex)  
Optional.

**-X, --workdir** directory Absolute or relative path to working directory: current directory in command line relative paths.

By default, the current directory.

With Code::Blocks and similar IDE, you may have to specify your root package directory as argument to **--workdir**.

**--no-refresh-tempdir** Do not erase and recreate the DVD-Audio temporary directory on launch.

**--no-refresh-outdir**  
Do not erase and recreate the output directory on launch.

**--bindir** path  
Absolute or relative path to auxiliary binaries.

Sub-options

fixwav sub-options:

simple-mode

Deactivate default automatic mode and advanced options.  
User will be asked for more information.

prepend

Prepend header to raw file, maybe virtually

in-place

Correct header in the original file (not advised) unless real is set later

cautious

Be cautious when overwriting files in-place

interactive

Request information from user.

padding

Pad files according to WAV standard

prune

Cuts off silence at end of files

force

Launches fixwav before SoX for mangled headers

output=sf

Copy corrected file to new filepath with string suffix sf

infodir=db

Copy info chunks from wav headers to file db/database

virtual

Forces virtual behavior over previous settings (files will be unmodified)

real

Forces real behavior over previous settings (files will be modified)

Sub-options should be separated by commas and appended  
after short option or after = sign if long option is used:

**-f/-F**suboption or **--fixwav(-virtual)=suboption**  
without any whitespace in between them.

Example: **--fixwav=simple-mode,prepend,interactive,output=new**

Still pictures:

p11,p21,...,pn1-p22,p22,...,pn2-...

with tracks separated by hyphens and pictures by colons.

Examples: **-g ~/a.wav --stillpics image1.jpg,image2.jpg,image3.jpg:image4.jpg,image5.jpg,image6.jpg**

If there are no pics for a track use :: as below (no pics for second track):

**-g ~/a.wav ~/b.wav ~/c.wav --stillpics image1.jpg,image2.jpg,image3.jpg::image4.jpg,image5.jpg,image6.jpg**

Still picture transition effects:

rank=k

k is the absolute rank of stillpic (0-based) to which the following options apply (order-dependent).

start=k

picture starts at k sec from start of track.

manual

Enable browsable (manual advance) pictures (experimental).

starteffect=effect

transition effect at start of pic: cut (default), fade, dissolve, top-wipe, bottom-wipe, left-wipe, right-wipe.

endeffect=effect

like starteffect at end of pic show (under development)

lag=k

k is the duration of transition effect in multiples of 0.32 second (k < 16).

active

menu links will be displayed on still picture and remain active while listening.

Example: **--stilloptions** rank=0,start=03,starteffect=fade,lag=12,rank=1,start=20,starteffect=dissolve,lag=15

Transition effects like fade or dissolve may vary depending on hardware.

End effects may be visible only when several pictures are used for a track slide.

If a track has just one still pic, only start effects may be visible.

Note: for optional arguments noted (=...) above, usage is either

**-xY**, with x the option flag and Y the argument, or

**--option=argument**.

There must be a maximum of 9 audio groups.

Each subdirectory of an audio input directory will contain titles

for a separate audio group.

A number between 1 and 9 must be included as the second character of the

subdirectory relative name.

## EXAMPLES

-create a 3-group DVD-Audio disc (legacy syntax):

```
dvda-author -g file1.wav file2.flac -g file3.flac -g file4.wav
```

-create a hybrid DVD disc with both AUDIO\_TS mirroring audio\_input\_directory

and VIDEO\_TS imported from directory VID, outputs disc structure to directory DVD\_HYBRID and links video titleset #2 of VIDEO\_TS to AUDIO\_TS:

```
dvda-author -i ~/audio/audio_input_directory  
-o DVD_HYBRID -V Video/VID -T 2
```

-create an audio folder from an existing DVD-Audio disc:

```
dvda-author --extract /media/cdrom -xlist 1-3:2-5:3,...,7,9-6-7 -o dir
```

will extract audio groups 1, 3 (track 2), 5 (tracks 3 to 7 and 9), 6 and 7 of the disc to

dir/g1, dir/g3, dir/g5, dir/g6, and dir/g7 respectively.

Required compile-time constants:

\_\_GNU\_SOURCE, \_\_CB\_\_ if compiling with Code::Blocks or similar IDE.

Optional compile-time constants:

LONG\_OPTIONS for the above long options (starting with --)

SHORT\_OPTIONS\_ONLY to block all long options.

LOCALE to recompile for another locale than the default "C".

SETTINGSFILE to specify default filepath of the configuration file.

FLAC\_\_HAS\_OGG to enable Ogg FLAC support.

\_LARGEFILE\_SOURCE, \_LARGE\_FILES, \_FILE\_OFFSET\_BITS=64

to enable large file support.

ALWAYS\_INLINE forces code inlining.

WITHOUT\_sox to compile without SoX code

WITHOUT\_FLAC to compile without FLAC/OggFLAC code



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# REPORTING BUGS

Report bugs to [fabnicol@users.sourceforge.net](mailto:fabnicol@users.sourceforge.net)

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