

1. How to play Audio Sound files

1.1. wavplay

The program `wavplay` plays audio sound files in `wav` format. This is a frontend for the program: `bplay`. It's usage is:

```
wavplay file1 file2 ...
```

If the `wav` file has no header, the program assumes that the file has CD-quality: `stereo`, `16 bit`, `44100Hz sample rate`. If it has no header and the format is different, use the program `bplay` to play it, here is an example:

```
bplay -B 8192 -S -s 22050 -b 16 file.wav
```

Here `-B 8192` is the buffer size (recommended), the switch `-S` tells `bplay` that the file is `stereo`, `-s 22050` means that the sample rate is `22050 Hz` and `-b 16` means that `16 bit` sampling were used.

1.2. mp3

The program `mp3` plays various format of audio sound files. It supports playing the popular `mp3` files and several similar compressed formats: `mpc`, `ape`, `ogg`. It also supports the uncompressed `wav` format too. This is a frontend for several programs: `mpg123`, `mpg321`, `ogg123`, `mac`, `flac`, `mppdec`, `bplay`. It's usage is:

```
mp3 file1 file2 ...
```

It can play audio sound files found by scanning recursively directories, example:

```
mp3 directory
```

1.3. xmms

The program `xmms` is a graphical program suitable for playing `mp3` audio files. It also supports playlists.

2. How to play Audio CD-s

A CD-rom drive is necessary to use these programs.

2.1. `workman`, `xfreed` and `xmcd`

These programs are “easy to use” graphical audio cd player programs. The simplest is `workman` and the most sophisticated is `xmcd`. If your machine has an internet connection, the programs `xfreed` and `xmcd` can connect to Internet CD DataBase Servers (CDDb) to fetch the track names of your CD.

2.2. `workbone` and `cdcd`

These programs are console audio cd player programs

The program `workbone` uses the keys of your keypad to control the playing. Note that NumLock must be switched on and the CD must be inserted before you start the program.

The program `cdcd` can be controlled by simple commands, start the program and type `help` at the `cdcd>` prompt: it gives you the list of the commands. The basic commands are: `list`, `play`, `next`, `eject`, `quit`. It has the completion feature, simply hit TAB when you have typed a partially completed command or track name. It can use CDDb servers.

3. How to view Video Movie files

3.1. `movieplayer`

This program plays various format of movie files. This is a frontend for the program `mplayer`. It supports all the same formats that `mplayer` supports (AVI, MPEG, ...) and also has the same options than `mplayer` has. To play a video file called `video.avi` use this command:

```
movieplayer video.avi
```

It plays the movie in full-screen mode. If it finds the subtitle file `video.srt` or `video.sub` in the same directory where the movie file is located or in the directory `$HOME/.mplayer/sub`, the subtitles are shown at the bottom of the movie. If you want to disable this behaviour, use the following command:

```
movieplayer -noautosub video.avi
```

If you have a different subtitle file, called `/some/where/other.sub`, you can display it with the command:

```
movieplayer -sub /some/where/other.sub video.avi
```

Sometimes the framerate of the subtitle file differ from the framerate of the movie and/or a delay is needed for displaying the subtitle file. You can specify the subtitle framerate using the switch `-subfps` and the delay using the switch `-subdelay`. An example:

```
movieplayer -sub some.sub -subfp 20 -subdelay 42 video.avi
```

The basic usage of the program `mplayer` (and `movieplayer`):

- By pressing the key `q` or `ESC`, the program exits.
- You can switch between normal and full-screen display by pressing the key `f`.
- The left and right arrow keys seek backward/forward 10 seconds.
- The up and down arrow keys seek backward/forward 1 minute.
- The `PageUp` and `PageDown` keys seek backward/forward 10 minutes.
- The key `p` or `SPACE` pause the movie (any key unpauses).
- The key `o` toggles between OSD states: none / seek / seek+timer.

For more information please see the manual of the `mplayer` program (especially the `KEYBOARD CONTROL` section), using the command:

```
man mplayer
```

4. How to view (or save in AVI format) Video CD-s

4.1. `vcdplay`

This program plays Video CD-s. This is a frontend for the program `mplayer`. A CD-rom drive is necessary to use it.

- Insert the Video CD into the drive.

- If you have more CD-rom devices, you can select it (CD-rom device option).
- The program displays the available tracks. Use the `Select track` option to select the track (the default is the longest track).
- If you use the `rescale` option and the resolution 640, the picture will be smoother.

4.2. vcdrip

The program converts the tracks of Video CD-s into AVI (MPEG4) format. This is a frontend for the program `mencoder`. A CD-rom drive is necessary to use it.

- Insert the Video CD into the drive.
- If you have more CD-rom devices, you can select it (CD-rom device option).
- The program displays the available tracks. Use the `Select track` option to select the track (the default is the longest track).
- Select the `filename`.
- Select the `size` of the generated AVI file.
- Select if you want to use `mp3 audio encoding` (recommended).
- Select the `audio bitrate` (in case of mp3 audio encoding).
- Select the `video encoding` (lavr or xvid).
- Then you are asked to select the `video bitrate`. Note that the default value is automatically calculated from the file size and the track duration, but the track duration given by `mplayer` is usually wrong, so the calculated value will be incorrect too (in most cases `mplayer` reports shorter track times and the calculated value is higher than the right one). The calculation assumes that you use mp3 audio encoding: if not, the value will be inaccurate.

- If you use the `rescale` option and the resolution 640, the picture will be smoother, so the quality of the converted AVI will be better.
- The program asks if you want to `view only` the VCD: don't answer yes if you want to rip the CD.
- If you use `two pass encoding`, the quality of the resulting movie will be better, but the encoding time will be longer.

5. How to display and set the region code of your DVD drive

5.1. regionset

This program can be used to display and set the zone setting of a DVD drive. A DVD-rom (or DVD-writer) drive is necessary to use it. It's usage is:

```
regionset dvd-device,
```

where the `dvd-device` is equal to `/dev/dvdrom` for the first DVD-rom drive and `/dev/dvdromn` for the $n+2$ 'th DVD-rom drive ($n=0,1,2,\dots$).

6. How to view (or save in AVI format) Video DVDs

6.1. dvdplay

This program plays Video DVDs. This is a frontend for the program `mplayer`. A DVD-rom drive is necessary to use it.

- Insert the Video DVD into the drive.
- If you have more DVD-rom devices, you can select it (`DVD-rom device` option). If you previously ripped and saved the content of the DVD into files on your hard drive (e.g. using the program `dvdbackup`) specify here the name of the directory in which the file `VIDEO_TS.IFO` is located.

- The program displays the available titles. Use the `Select title` option to select the title (the default is the longest track; the track is a synonyme of title).
- If there are more chapters in the selected title, the program displays the number of the available chapters. Use the `Select chapter` option to select the chapter (the default is the first).
- Select the default audio language (`Select alang` option).
- If there are more audio channels on the disk, the program displays the list of the available aids (the aid number identifies the audio channel). The number, the format, the language and the aid is displayed. A help about the aid codes is displayed: aids 160-191 are used for conventional mono or stereo (CD-quality) audio channels, the aids 128-159 are used for high-quality multi-channel (surround or home video) sound systems: not all soundcards can play these. When you made the decision, select the aid (`Select aid` option).
- Select the video channel, (`Select vid` option).
- You can use the `rescale` option and specify a different video width (the height is scaled automatically to preserve the image ratio).
- You can use the `crop` option and remove the black outlines. In the crop parameters (`w:h:x:y`), `w,h` are the cropped width and height, and `x,y` are the position of the cropped picture. If you choose the `automatical crop detect` option, you must specify a `threshold` parameter, the `time position` and the `duration` parameter for the detection. Play with these values until you find the correct crop parameters.
- Select if you want to enable displaying subtitles (`enable subtitles` option). If you enabled it, select the default subtitle language (`Select slang` option). If there are more subtitles on the disk, the program displays the list of the available sids (the sid number identifies the subtitle). The sid number and the language is displayed. Select the sid using the `Select sid` option.

6.2. xine

The `xine` package is also suitable for viewing video DVD movies. Type `xine` to start the program.

6.3. dvdrip

The program converts the titles of Video DVDs into AVI (MPEG4) format. This is a frontend for the program `mencoder`. A DVD-rom drive is necessary to use it.

- Insert the Video DVD into the drive.
- If you have more DVD-rom devices, you can select it (`DVD-rom device` option). If you previously ripped and saved the content of the DVD into files on your hard drive (e.g. using the program `dvdbackup`) specify here the name of the directory in which the file `VIDEO_TS.IFO` is located.
- The program displays the available titles. Use the `Select title` option to select the title (the default is the longest track; the track is a synonyme of title).
- If there are more chapters in the selected title, the program displays the number of the available chapters. Use the `Select chapter` option to select the chapter (the default is the first).
- Select the `filename`.
- Select the `size` of the generated AVI file.
- Select the default audio language (`Select alang` option).
- If there are more audio channels on the disk, the program displays the list of the available aids (the aid number identifies the audio channel). The number, the format, the language and the aid is displayed. A help about the aid codes is displayed: aids 160-191 are used for conventional mono or stereo (CD-quality) audio channels, the aids 128-159 are used for high-quality multi-channel (surround or home video) sound systems:

not all soundcards can play these. When you made the decision, select the aid (`Select aid` option).

- Select if you want to use `mp3 audio encoding`. It is recommended for conventional audio channels – aids: 160-191 –, since they are uncompressed formats. It is NOT recommended for high-quality audio channels, since you lost the quality in mp3 format).
- Select the `audio bitrate` (in case of mp3 audio encoding).
- Select the video channel, (`Select vid` option).
- Select the `video encoding` (lavc or xvid).
- Then you are asked to select the `video bitrate`. Note that the default value is automatically calculated from the file size and the title duration. The calculation assumes that you use mp3 audio encoding: if not, the value will be inaccurate.
- You can use the `rescale` option and specify a different video width (the height is scaled automatically to preserve the image ratio).
- You can use the `crop` option and remove the black outlines. In the crop parameters (`w:h:x:y`), `w,h` are the cropped width and height, and `x,y` are the position of the cropped picture. If you choose the `automatical crop detect` option, you must specify a `threshold parameter`, the `time position` and the `duration` parameter for the detection. Play with these values until you find the correct crop parameters.
- Select if you want to enable ripping subtitles (`enable subtitles` option). If you enabled it, select the default subtitle language (`Select slang` option). If there are more subtitles on the disk, the program displays the list of the available sids (the sid number identifies the subtitle). The sid number and the language is displayed. Select the sid using the `Select sid` option.
- The program asks if you want to `view only` the DVD: don't answer yes if you want to rip the DVD.

- If you use `two pass encoding`, the quality of the resulting movie will be better, but the encoding time will be longer.

7. How to convert/edit Audio Sound files

7.1. audiocut

The program cuts a specified part of an Audio file into another. This is a frontend for the program `sox`. It works well with `wav` files; `mp3` files are NOT supported. The `input file`, the `output file`, the `Start position` (in `hh:mm:ss` format) and the `End position` (in `hh:mm:ss` format) should be specified. The input file also can be given as a command line parameter.

7.2. mp3cut

The program cuts a specified part of an `mp3` audio file into another (without reencoding). This is a frontend for the program `mp3asm`. The `input file`, the `output file`, the `Start position` (in `hh:mm:ss` format) and the `End position` (in `hh:mm:ss` format) should be specified. The input file also can be given as a command line parameter.

7.3. mp3split

The program splits an `mp3` audio file into multiple `mp3` files by autodeTECTING silences in the sound (without reencoding). This is a frontend for the program `mp3splt`. The `input file` and the `output directory` for the splitted files should be specified. The input file also can be given as a command line parameter.

7.4. wav2mp3

The program converts (using compression) a `wav` Audio file into an `mp3` file. This is a frontend for the program `lame`. The ... should be specified.

7.5. mp32wav

The program converts (using decompression) an mp3 Audio file into a wav file. This is a frontend for the program mpg123. The input file and the output file should be specified. The input file also can be given as a command line parameter.

8. How to convert/edit Video Movie files

8.1. videocopy

This program copies a Video Movie file into another using mencoder. This is particularly useful for fixing incomplete or damaged Video Movie files. The input file and the output file should be specified.

8.2. videocut

The program cuts a specified part of a Video Movie file into another. This is a frontend for the program mencoder. The input file, the output file, the Start position (in hh:mm:ss format) and the End position (in hh:mm:ss format) should be specified. The input file also can be given as a command line parameter.

8.3. videosplit

The program splits a Video Movie file into two parts. This is a frontend for the program mencoder. The input file, the two output files and the Split position (in hh:mm:ss format) should be specified.

8.4. avisplit

This program is part of the transcode package.

8.5. videoconv

The program converts a specified Video Movie file into another. This is a frontend for the program mencoder. The input file, the output file

and several options (similar to the options of `dvdrip`) should be specified. The input file also can be given as a command line parameter.

9. How to record Audio Sound files

10. How to record Video Movie files

11. How to use your Scanner

11.1. Detection your Scanner

After connecting the scanner to your computer and switching its power on you can use the following command to get the necessary permissions to use it:

```
get-scanner-permissions
```

Note: you don't need to do this step if the scanner was continuously on-line from boot time.

11.2. Check if your Scanner is supported by Linux

Not all scanners work with Linux. The SANE (Scanner Access Now Easy) library provides a general interface for scanners, so if your scanner is recognized by SANE, most probably it will work. First, please check if it is supported by the SANE library or not. You can use one of the following commands:

```
scanimage -L
```

or:

```
sane-find-scanner
```

If you can see your scanner in the list, scanning will work. If not, you can check on the site of the sane project: <http://www.sane-project.org/> if the latest sane-backends library supports your scanner. If yes, check if the library is newer than the library installed on your Linux system. The command:

```
scanimage -V
```

tells you the version of the sane library installed on your system.

If the scanner is supported by the library and is still not working, another possibility is that your scanner need a firmware upload before scanning. Check the internet or the driver CD of the scanner to find the firmware file.

If your scanner should work with a newest library and/or you have the firmware file, please contact us by e-mail: system@renyi.hu. In your message please specify the scanner's exact model name, the library version which supports it and send the firmware file if the scanner needs it.

11.3. XSane

This is one of the most sophisticated frontends to SANE, definitely this is the program you should use.

Type `xsane` to start the program.

11.4. XScanImage

This is a simpler graphical interface to SANE. Although it has a previewing function, it will not display the scanned images, this program just saves it into a PNM file. It can be started from `gimp` which makes it more usable.

Type `xscanimage` to start the program.

11.5. QuiteInsane

Another graphical frontend for SANE.

Type `quiteinsane` to start the program.

11.6. OpenOffice

The program OpenOffice includes a simple interface that uses SANE.

Type `openoffice` to start the program.

11.7. Scanimage

This is a simple command line program, mostly used for testing purposes.

11.8. VueScan

This is a shareware program, so you must pay for a registration code to unlock its features. Even if you don't pay for the registered version, it might be useful to check the operability of your scanner.

Type `vuescan` to start the program.

You can check for newer versions on the site: <http://www.hamrick.com/vsm.html>.

To purchase VueScan, go to the site: <https://www.hamrick.com/reg.html>.