

Audio/Video Processing and Podcasts

SoX - Sound eXchange

see <https://sox.sourceforge.net/>

FFmpeg

FFmpeg provides many audio processing filters:

- <https://trac.ffmpeg.org/wiki/AudioChannelManipulation>
- <https://trac.ffmpeg.org/wiki/AudioVolume>
 - <https://github.com/slhck/ffmpeg-normalize>
- <https://trac.ffmpeg.org/wiki/How%20to%20speed%20up%20/%20slow%20down%20a%20video>

latest prebuilt (static) binaries:

- <https://github.com/BtbN/FFmpeg-Builds/releases>

FFmpeg is utilized in several tools, e.g.:

- in (YouTube) Downloader GUIs
- Audio/Video format and CODEC conversion, e.g. [QWinFF](#)
 - source: <https://github.com/qwinff/qwinff>

YouTube Downloader

Downloading audio and video files is interesting for archiving - but also preprocessing for later watching or listening. Many platforms - other than YouTube - are supported.

As described in [yt-dlp Wiki](#) on 2022-09-19, there are 3 active forks for the command line:


- [youtube-dl](#) - The original project
- [yt-dlp](#) - a promising alternative
- [ytdl-patched](#) - a fork of yt-dlp

There are a multitude of Downloader-GUIs, here a very short selection:

- [Open-Video-Downloader](#)
 - abandoned source: <https://github.com/jely2002/youtube-dl-gui>
 - new?: <https://github.com/StefanLobbenmeier/youtube-dl-gui>
- ClipGrab - a GUI for (YouTube-)Downloader (and converter)
 - source and linux releases with my modifications
 - <https://github.com/hayguen/clipgrab>
 - [ClipGrab](#) - the origin for this project
 - source: <https://github.com/FreedomBen/clipgrab>

Podcast programs & apps

Podcast apps (automatically) download episodes from RSS feeds for (offline and mobile) listening.

- [AntennaPod](#) for Android
 - source: <https://github.com/AntennaPod/AntennaPod>
- [Pocket Casts](#) for Android, iOS and Web (for Linux or Windows PCs)
 - free version doesn't allow entering a (private) Feed URL 
 - don't know if commercial *Plus* allows Feed URLs
- [gPodder](#) for Windows/Linux/MacOS computers
 - source: <https://github.com/gpodder/gpodder>
 - more downloader and UI than player
 - also allows downloading/watching videos from YouTube channels. that requires a special URL with the channel-id:
 - <https://commentpicker.com/youtube-channel-id.php>
 - <https://stackoverflow.com/questions/14366648/how-can-i-get-a-channel-id-from-youtube>
 - [LifeHacker Turn YouTube channels into Podcasts](#) does no longer work, but shows the idea
 - selected gPodder docs
 - <https://gpodder.github.io/docs/time-stretching.html>
 - <https://gpodder.github.io/docs/extensions/youtubedl.html>
 - <https://gpodder.github.io/docs/extensions.html>

Providing an own podcast feed

[Podsync](#) can download videos, convert to audio and publish them as an RSS feed - suitable for subscription with podcasts apps. Tools like yt-dlp and ffmpeg are utilized. The only downside: Podsync requires a public server.

Changing speed - not pitch

Listening consumes time - of course. Despite skipping (silent) sections, many episodes can be perceived at (much) higher speed - depending on the speaker(s); thus saving time. The following points to some programs/algorithms.

TDHS, see https://en.wikipedia.org/wiki/Time-domain_harmonic_scaling
implementation: <https://github.com/hayguen/audio-stretch>
and it's origin <https://github.com/dbry/audio-stretch>

Browser Extension: skip-silence

<https://github.com/vantezzzen/skip-silence/issues/36>

<https://chrome.google.com/webstore/detail/skip-silence/fhdmkhbfcfbhakffdiyhceaklaigdlh?hl=en>

FFmpeg uses atempo:

<https://trac.ffmpeg.org/wiki/How%20to%20speed%20up%20/%20slow%20down%20a%20video>

libavfilter/af_atempo.c in [git://source.ffmpeg.org/ffmpeg](https://source.ffmpeg.org/ffmpeg)

it is based on <https://sourceforge.net/projects/apprenticevideo/>
with code at <https://github.com/pkoshevoy/aeyae>
in yae/ffmpeg/yae_audio_tempo_filter.h

theory at <http://www.surina.net/article/time-and-pitch-scaling.html>

Loudness

see [EBU R 128](#)

<https://github.com/hayguen/loudness-scanner>
origin <https://github.com/jiixyj/loudness-scanner>

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