HandBrake CLI Video transcoder

START HERE

`HandBrakeCLI -i <in> -o <out.mp4>`
Encode with defaults

`HandBrakeCLI -i <in> -o <out.mp4> -Z "Fast 1080p30"`
Use a preset

`HandBrakeCLI -z`
List presets

`HandBrakeCLI -i <in> -t 0`
Scan titles and tracks

`HandBrakeCLI -i <in> -o <out.mkv> -e x265 -q 22`
Pick encoder and quality

`HandBrakeCLI -i <in> -o <out.mp4> -a 1,2 -E av_aac`
Choose audio tracks

`HandBrakeCLI -i <in> -o <out.mp4> -s 1 --subtitle-burned`
Burn in subtitles

`HandBrakeCLI -i <disc> --main-feature -o <out.mkv>`
Rip the main title

Source -i file or disc → `-t` / `-c` → **Title** chapters, tracks → `filters, size` → **Picture** crop, scale, deinterlace → `-e` / `-q` → **Encode** video, audio, subs → `-f` → **Output** mp4 / mkv / webm

CONCEPTS

Pick a preset first, then override single options after it; the preset only sets defaults.

Constant quality (-q) beats a fixed bitrate for most files; lower numbers mean better quality and bigger files.

Progress goes to stderr, so redirect it (2>/dev/null) in scripts and use --json for machine-readable output.

BASICS

`HandBrakeCLI -i <in> -o <out>`
Encode a file
The container follows the output extension unless -f is given.

`-Z <preset>`
Use a preset by name
Names are case-sensitive; quote names with spaces.

`-z`
List all presets

`--preset-import-file <file.json>`
Import a preset file

`-f <format>`
Set container (av_mp4, av_mkv, av_webm)

`-O`
Optimize MP4 for web streaming

`--json`
Print machine-readable progress

`-v <level>`
Set log verbosity

SOURCE AND TITLES

`-t 0`
Scan all titles, then exit

`--scan`
Scan only the chosen title

`-t <n>`
Encode title number n

`--main-feature`
Auto-select the main title

`-c <a-b>`
Encode only chapters a to b

`--min-duration <s>`
Ignore titles shorter than s seconds

SOURCE AND TITLES (cont.)

`--previews <n:save>`
Set preview count and saving

`--start-at <unit:n> --stop-at <unit:n>`
Encode a time range
Units are duration, frames or pts, e.g. --stop-at duration:60.

VIDEO

`-e <encoder>`
Choose video encoder
Common: x264, x265, svt_av1, VP9; hardware ones need matching GPU support.

`-q <rf>`
Constant quality value

`-b <kbps>`
Average video bitrate

`--multi-pass`
Use two-pass encoding with -b

`--encoder-preset <name>`
Set speed/efficiency preset

`--encoder-tune <name>`
Tune for content type

`--encoder-profile <name>`
Force encoder profile

`--encoder-level <lvl>`
Force encoder level

`--encoder-preset-list <encoder>`
List presets of an encoder

`-r <fps> --cfr`
Constant frame rate

`--vfr`
Variable frame rate

`--pfr -r <fps>`
Cap frame rate (peak)

`-x <opt=val:opt=val>`
Pass raw encoder options

`--enable-hw-decoding <type>`
Use hardware decode (nvdec, qsv)

PICTURE

`-w <px> -l <px>`
Set width and height

`-X <px> -Y <px>`
Limit maximum width and height

`--crop-mode <mode>`
Crop: auto, conservative, none, custom

`--crop <t:b:l:r>`
Crop by pixel amounts

PICTURE (cont.)

`--rotate <angle>`
Rotate 90, 180 or 270 degrees
Use --rotate=angle=90:hflip=1 to also flip.

`--keep-display-aspect`
Preserve display aspect ratio

`--non-anamorphic`
Use square pixels

FILTERS

`--deinterlace`
Deinterlace with yadif

`--decomb`
Deinterlace only combed frames

`--comb-detect`
Detect combing before filtering

`--detelecine`
Undo 3:2 pulldown

`--hqdn3d <preset>`
Denoise (ultralight to strong)

`--nlmeans <preset>`
High-quality slow denoise

`--lapsharp`
Sharpen with Laplacian filter

`--deblock <preset>`
Remove blocking artifacts

`--deband`
Reduce color banding

AUDIO

`-a <list>`
Select audio tracks (1,2 or none)

`-E <encoder>`
Audio encoder (av_aac, opus, ac3, copy)
Use copy:ac3 or similar to pass a track through untouched.

`-B <kbps>`
Audio bitrate per track

`-6 <mixdown>`
Mixdown: mono, stereo, 5point1

`--all-audio`
Take all tracks in the language list

`--audio-lang-list <codes>`
Filter audio by language code

`--first-audio`
First track per listed language

`-D <value>`
Dynamic range compression

`--gain <dB>`
Adjust volume in decibels

AUDIO (cont.)

`--audio-fallback <encoder>`
Encoder when passthrough fails

SUBTITLES AND CHAPTERS

`-s <list>`
Select subtitle tracks (1,2 or none)

`--subtitle-burned[=n]`
Burn a subtitle track into the video

`--subtitle-default[=n]`
Mark a track as default

`-F[=n]`
Show forced subtitles only

`-s scan`
Find foreign-audio subtitles

`--subtitle-lang-list <codes>`
Filter subtitles by language

`--all-subtitles`
Take all subtitles in language list

`--srt-file <file>`
Add an external SRT file

`--srt-lang <code>`
Language of the SRT file

`--srt-offset <ms>`
Shift SRT timing

`--srt-burn[=n]`
Burn in the SRT file

`-m`
Add chapter markers

RECIPES

Small MKV, HEVC

```
HandBrakeCLI -i movie.mkv -o small.mkv \
 -e x265 -q 24 --encoder-preset slow \
 -a 1 -E opus -B 128
```

Batch a folder

```
for f in *.mkv; do
HandBrakeCLI -i "$f" -o "${f%.mkv}.mp4" \
  -Z "Fast 1080p30" </dev/null
done
```

DVD to MKV with subtitles

```
HandBrakeCLI -i /dev/sr0 --main-feature \
  -o movie.mkv -e x264 -q 20 \
  --audio-lang-list eng --all-audio \
  --subtitle-lang-list eng --all-subtitles
```

Upload-ready 720p MP4

```
HandBrakeCLI -i in.mov -o out.mp4 -e x264 -q 23 \
  -X 1280 -Y 720 -O -a 1 -E av_aac -B 160
```