ATELIER CHEAT SHEET

DaVinci Resolve: the pages

Resolve 21 (update 21.1.1, 2 Oct 2026): free, or paid Studio.

Media	prepare footage, sync clips, bins, metadata
Cut	fast editing – "fast turn music videos"; source tape, upper + lower timeline
Edit	classic track-based editing
Fusion · Color	effects, motion graphics (nodes) · correction and grading
Fairlight · Deliver	audio post and mixing · encoding, formats, render queue

Edit page smart trim: **Ripple** start/end of a clip · **Roll** both sides of an edit · **Slip** which part you see (in and out points) · **Slide** move a clip, same length. Markers: one colour for beats, one for song parts.

Cutting to the beat

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seconds per beat = 60 ÷ BPM
frames per beat = frame rate × 60 ÷ BPM
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TRACK · TIMELINE	FRAMES PER BEAT
75 BPM · 25 fps	0.8 s ⟶ 20 · 4/4 bar 80 frames (3.2 s), 3/4 bar 60
72 BPM · 25 fps	20.83
75 BPM · 30/1.001 fps	≈ 23.98

Cuts fall on whole frames: round from the start of the track – beat n at round(n × frames per beat); the error never exceeds half a frame. **AI Beat Detector** (Studio, since 20): right-click audio clip ⟶ Detect Music Beats; for beat-driven music in 4/4 or 3/4. Free version: set the markers by hand.

Frame rates · free or Studio

ITU-R BT.709-6 (HDTV 1920 × 1080, 16:9): 24 and 24/1.001, 25, 30 and 30/1.001, 50, 60 and 60/1.001 Hz; 30/1.001 ≈ 29.97. Timeline and export at the rate you recorded – common: 24, 25, 30, 48, 50, 60 fps; deinterlace first (YouTube).

	FREE	STUDIO
Bit depth	virtually all 8-bit formats	10-bit
Frame rate	up to 60 fps	up to 120 fps
Resolution	up to UHD 3840 × 2160	beyond 4K

Studio only: AI Beat Detector, Smart Reframe, IMF and native unencrypted DCP, remote rendering. The free version also includes multi-user collaboration and HDR grading.

Vintage look: tools

Mostly Resolve FX "Film Emulation". **Fusion comes before Color**: every Color node also changes your Fusion grain. Studio tools in the free version: warning plus watermark. Every Resolve FX has a **Blend** slider; Shift-Space opens the Effects Search.

EFFECT	STUDIO ONLY	NOT MARKED STUDIO-ONLY
Grain	Film Grain, FLC	Fusion node Film Grain
Halation, bloom	Halation, FLC	Glow
Gate weave	FLC, Camera Shake (FX)	Fusion Camera Shake; Perturb on Transform
Flicker	FLC	Flicker Addition
Dirt, scratches · vignette	–	Film Damage · Vignette
VHS, old TV	Analog Damage	Scanlines, Prism Blur, JPEG Damage, Fusion TV
Film colour	FLC	Curves, Split Tone; Film Looks LUTs

FLC = Film Look Creator (Studio), Colorist Guide exercise: preset Default 65mm, Grain preset 35mm; Color Blend, Effects Blend; "3D LUT Compatible" keeps only the colour part. Film Looks LUTs (e.g. Rec709 Kodak 2383 D65) expect Cineon Film Log – a CST before them; add the LUT early, before the primaries.

The free rebuild

1. **Fusion:** MediaIn ⟶ Film Damage ⟶ Camera Shake ⟶ Film Grain ⟶ MediaOut (Film Damage first, so its Film Blur doesn't soften the grain). Camera Shake: Deviation X/Y very small, Rotation Deviation 0. Flickering bulb: Perturb on Film Damage's Focal Factor, Strength 0.5, Wobble and Speed 10.
2. **Color, Balance:** a clean primary correction.
3. **Look:** Curves, unlink YRGB, blue black point up, blue white point down – "a retro film look". Lifting the curve's black point is destructive – late in the tree.
4. **Halation:** Glow – Shine Threshold up, Color Filter red-orange, Composite Type Screen, ease off with Opacity.
5. **Flicker:** Flicker Addition, Flicker Type Gain, small Range.

(Our suggestion, from the manual.) VHS: Scanlines (animate Line Shift), Prism Blur, JPEG Damage, Fusion TV. Analog Damage (Studio): bypass until export. Fusion Film Grain: Size 1.0 ≈ 2-pixel grains at any resolution; Log Processing on by default. Film Grain (Studio): 8mm, 16mm, 35mm presets – small formats look coarser.

Export: Quick Export & Deliver

Quick Export: In/Out points optional ⟶ File > Quick Export ⟶ preset, Export, Save. Deliver: Render Settings, Add to Render Queue, Start Render; Save as New Preset. YouTube preset: MP4, H.264, High, AAC – "AAC audio encoding is only available on macOS" (Windows/Linux: ProRes 422 master, then HandBrake Creator preset – our suggestion).

YOUTUBE (HELP)	RECOMMENDATION
Container · video	MP4, moov atom at the front ("Fast Start") · H.264, progressive, High, 4:2:0, VBR
1080p SDR	8 Mbit/s at 24/25/30 fps, 12 at 48/50/60
2160p SDR	35–45 Mbit/s at 24/25/30 fps, 53–68 at 48/50/60
Audio · colour	AAC-LC (or Opus), 48 kHz, stereo 384 kbit/s · BT.709

No bitrate limit required. Shorts: square or vertical, up to three minutes. Vertical: duplicate timeline, Custom Timeline Settings, "Use vertical resolution" ⟶ 1080 × 1920, "Scale full frame with crop".

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MB ≈ (video + audio Mbit/s) × seconds ÷ 8
4 min 1080p25: (8 + 0.384) × 240 ÷ 8
≈ 252 MB (our calc., container overhead not
included)
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Other platforms

Vimeo	1080p 10–20 Mbit/s, 4K UHD 30–60 Mbit/s; H.264, ProRes 422 (HQ) or H.265; constant frame rate; AAC-LC 48 kHz 320 kbit/s
Reels (API)	9:16 recommended, max. 1920 px wide; MOV/MP4, HEVC or H.264; 23–60 fps; max. 25 Mbit/s; AAC 128 kbit/s; max. 300 MB, 3 s to 15 min
TikTok (API)	360–4096 px per side; MP4 and H.264 recommended; 23–60 fps; max. 4 GB · Resolve preset: tick "Use Vertical Resolution"

Instagram and TikTok values come from their developer docs for API uploads, not from app help pages. HandBrake (free): RF 20–24 for 1080p, lower RF = higher quality.

Loudness, levels, rights - no legal advice

- EBU R 128: –23.0 LUFS, true peak not above –1 dBTP; streaming services typically use a higher target (R 128 s2). Resolve's YouTube standard: –14 LKFS, –1.0 dBTP – Blackmagic's statement, not YouTube's. Measure first: Analyze Audio Levels, ITU-R BS.1770-4. The true peak is a ceiling, not a target.
- "Normalize to Standard" scales by loudness or peak, whichever exceeds first; "Optimize to Standard" brings loudness into range, peaks below the threshold. Keep the full-dynamic master untouched (our suggestion). Data levels: Auto ("usually the preferred behavior"); YouTube converts full to limited range.
- Content ID can block, monetise or track. Own track claimed and you hold all rights ⟶ dispute it in YouTube Studio. Shorts over one minute with an active claim are blocked worldwide. GEMA: private YouTube uploads need no separate licence; commercial users clear the synchronisation right themselves.

Sources: Blackmagic Design (DaVinci Resolve 21, Reference Manual 21.1, Resolve 20 New Features, Beginner's, Editor's, Colorist, Visual Effects and Fairlight guides, downloads) · ITU-R BT.709-6 · YouTube Help · Vimeo Help Center · Meta for Developers · TikTok for Developers · EBU R 128, R 128 s2 · GEMA · HandBrake. Details: adubta-music.de/atelier.html