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LUMATIC LAB // IMAGE SCULPTOR

Image Sculptor – Complete User Guide

Welcome to the app that fills the gap between simple filters and complex pro software.
This tool is built for photography hobbyists who want deliberate, refined images without subscriptions, account creation, or background tracking. Everything runs locally on your device. Your images never leave your machine.

This guide covers:

- **Quick Start** – **Get editing in under 2 minutes.**
- **Deep Workflow** – Every panel, slider, and toggle explained.
- **Technical Notes** – The math, logic, and engineering behind the tool.

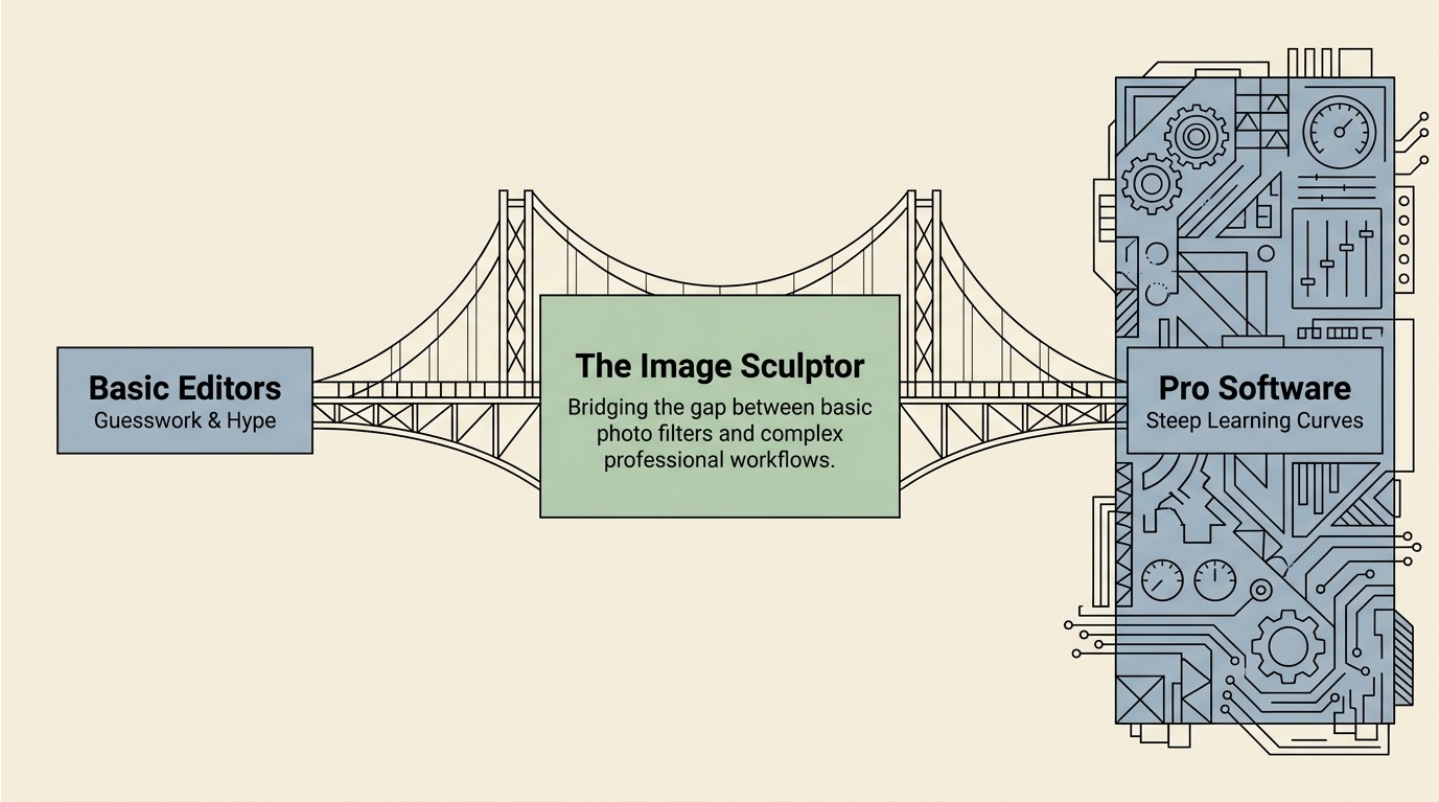

IMAGE SCULPTOR Table of Contents

Part 1: Quick Start Guide (5 Steps) - For the user who wants results immediately.

Step 1 – Load Your Image

•Click **[LOAD IMAGE]** in the top-left panel, or

•**Drag & drop** any image file (JPG, PNG, etc.) directly onto the workspace.

•The canvas will resize to match your image dimensions.

Step 2 – Pick a Tonal Palette (CSV)

•In the right-hand panel, find "**2. TONAL (CSV)"**.

•You will see a list of coloured bars – each is a palette (Duotone, Tritone, Quintone).

•**Click any bar** to apply it. Dark areas take the left side of the bar; bright areas take the right.

•For surprise results, click **RANDOM LOOK** – the app picks a random palette and random intensity.

Step 3 – Adjust Strength & Add a Mood (LUT)

•Below the palette section, use **Tone Strength** (default 0.75) to blend the effect back to your original colours.

•Scroll down to the **LUT STACK**. Each LUT shows six coloured blocks (Red, Yellow, Green, Cyan, Blue, Magenta) – a preview of how that LUT shifts pure colours.

•Click a LUT to apply it as a final "wash" (e.g., warm glow, cool teal, B&W conversion).

•Use **RANDOM LOOK** here too for unexpected moods.

Step 4 – Basic Finishing Touches

On the left panel:

•**Exposure** – overall brightness.

•**Contrast** – pushes darks darker, lights lighter.

•**Shadows / Midtones / Highlights** – adjust specific brightness zones independently.

•The **Tone Strength** slider here works the same as on the right.

Step 5 – Name & Save Your Work

At the bottom of the left panel :

• Type a name into the **IDENTITY** box.

•Click **Execute Output**.

•The tool automatically saves:

•Three JPG tiers (Thumbnail, Preview, Master)

•A professional `33^3 .cube` LUT for use in external software (DaVinci Resolve, Premiere, etc.)

> **To start completely fresh** – click **START AGAIN** in the top bar.

Part 2: Detailed Workflow & Panel Reference

1. PROFILE (GAIN) – Primary Optical Filter

Located top-left panel.

Control	Function
Red / Green / Blue Gain	Adjust raw RGB signal before any creative stage. Range: –1.00 to +1.00. Default = 0.00 (neutral).
MONO MODE	Converts image to pure greyscale using Rec. 601 luminance (`0.299R + 0.587G + 0.114B`). Not a simple desaturation – mathematically flattens colour to luma. Ideal as a starting point for B&W LUTs.
RESET	Returns all Gain sliders to 0.00 and toggles Mono Mode to BYPASS.

Pro tip: In Mono Mode, boosting Red Gain acts like a traditional red lens filter – darkens blue skies, adds drama to clouds.

2. TONAL (CSV) – Colour Replacement by Brightness Zones

Right panel, top section.

This is the heart of the “Sculptor” approach. Instead of blending colours continuously, the image’s brightness range is divided into **buckets**. Every pixel in a bucket receives the exact same colour from the palette.

Feature	Explanation
Stack list	Each item shows a horizontal gradient – the palette’s colour structure (Duo = 2 colours, Tri = 3, Quin = 5).
Active preset	Highlighted with a 4-5px Turquoise border + orange text.
Mode selector	Smooth – interpolated transitions between zones (organic). Discrete – hard edges between buckets (graphic, posterised look).
LOAD TONAL	Upload `.csv` files containing colour stops (Adobe-compatible format).

Feature	Explanation
RANDOM LOOK	Picks a random palette and random Sculpt Mix intensity.
PURGE	Removes all loaded palettes.

Important: The palette replaces actual colours of your image. It decides what colour each brightness zone becomes. This happens before the LUT stage.

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3. LUT STACK – Final Colour Mood / Wash

Right panel, middle section.

A LUT (Look-Up Table) is a 3D colour transform – a “coloured glass” laid over the finished image.

Feature	Explanation
6-block preview	Shows diagnostic colours (R,G,B,C,Y,M) as they would appear after the LUT is applied.
LOAD LUT	Upload `.cube` files (standard 3D LUT format).
RANDOM LOOK	Random LUT + random Tone Strength.
PURGE	Removes all loaded LUTs.

Order is fixed: Tonal palette THEN LUT. If you reverse the order, the palette would just replace everything again. **This is by design.**

4. GRADE (CALIBRATION) – Final Tonal Balancing

Right panel, bottom section.

Slider	Range	Effect
Tone Strength	–1.00 to +1.00 (default 0.75)	Master mix of the entire grade. At +1.0 fully applied, 0.0 bypassed, –1.0 inverted.
Exposure	–1.00 to +1.00 (default 0.0)	Overall brightness multiplier.
Contrast	–1.00 to +1.00	Expands or compresses tonal range.
Shadows / Midtones / Highlights	–0.5 to +0.5	Independent zone adjustments. Soft-knee transitions prevent banding.
Duo Pivot	0.01 to 0.99 (default 0.5)	Sets the midpoint where shadows become highlights.
Sculpt Mix	0.0 to 1.0 (default 0.5)	Blends the Tonal palette effect back to the original colour signal.
Snapshot buttons	Save / Restore	Store a complete state of all sliders, modes, and active presets.

Snapshot behaviour:

•**Save Snapshot** – captures current settings.
•**Restore Snapshot** – only available after saving. Reverts everything in one click.

5. SUPERIMPOSITION – Textures & Backgrounds

Left panel, middle.

Control	Function
Drop zone	Drag & drop a second image. It is automatically scaled to match the main image dimensions.
Placement	Overlay – second image on top (mix with opacity). Underlay – second image as background behind the main image.
Opacity / Mix	Blend amount.

No size mismatch worries – the tool force-scales all secondary assets to the primary image's exact width and height.

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6. VIGNETTE (FINISH)

Left panel, below Superimposition.

Preset / Slider	Effect
Portrait Glow	Subtle darkening at edges, radius 0.85, feather 0.8, strength 0.3.
Moody Edge	Strong dramatic vignette, radius 0.5, feather 0.4, strength 0.8.
Custom	Manual control over Radius (size), Feather (softness), Strength (darkness).
None	Resets vignette to zero.

The vignette is applied after all other adjustments, right before output.

Part 3: Monitoring Tools – ‘Forensic’ Feedback

1. Dual-State Zebra (Top Bar)

Click **ZEBRA OFF** to toggle on.

Warning Colour	Meaning
Turquoise (#38BDF8)	Unrecoverable crushed blacks (signal < 0.01). No detail left.
Red (#FF4444)	Unrecoverable blown highlights (signal > 0.99). No detail left.

These are measured at the **very end** of the signal path. If you see them, you can:

•Ignore them for artistic high-key / low-key looks.
•Reduce Exposure or Tone Strength to bring the signal back into a legal range.

2. Full-Width Histogram (Left Panel Bottom)

•256 bins, 80px height, spans 100% of sidebar width.

•Displays the final luminance distribution after all adjustments.

•Updated in real time as you edit.

•Helps ensure your master export has balanced dynamic range.

3. Hold: View Original (Top Bar)

Press and hold this button.
The entire processing pipeline is temporarily bypassed – you see the raw source image.
Release to return to your current edits. Perfect for instant A/B comparison.

Part 4: Technical Notes for Engineers & Power Users

The Baseline of Truth – Rec. 601

All luminance assessments use the hard-coded Rec. 601 standard. This ensures that the “heft” of the image remains consistent across different monitors and devices. No “guessing” algorithms are used.

Non-Incremental Logic – The Pristine Buffer

•On loading, the source image is stored in an immutable array named `pristine`.

•Most editors accumulate errors by applying changes on top of changes.
This tool does not. Every slider move triggers a **fresh redraw** from the pristine buffer.

•**Zero ghosting** – returning a slider to 0.00 always gives a 1:1 match with the original pixels.

Mono Mode – Not a Filter, a Mathematical Flattening

When toggled ON, the engine takes the result of the R/G/B Gain sliders , this happens **before** the Tonal and LUT stacks, providing a perfectly clean greyscale canvas.

Export behaviour: If Mono Mode is active, the exported `33^3 .cube` LUT is also monochrome. That LUT will force any external software (Premiere, Resolve, etc.) to convert footage to B&W using the same Rec. 601 weighting.

LUT Engine – Trilinear Interpolation

•All `.cube` assets are sampled using a **trilinear interpolation kernel**.
•Supports standard 3D LUTs (any size, but recommended 33^3 for compatibility).
•The six diagnostic blocks (R,G,B,C,Y,M) are generated by sampling the LUT at pure primaries/secondaries.

Memory Management & Identity Cleansing

•`START AGAIN` purges the `IDENTITY` input and all volatile buffers.

•No session overlap – snapshots are cleared on reset.

•Overlay images are stored separately and force-scaled to primary dimensions.

•Deterministic Export – Execute Output Protocol

When you click **Execute Output**, the app generates:

Tier	Size / Format	Use Case
Thumbnail	200px long side, JPG	Archiving, quick reference
Preview	1220px long side, JPG	Social media, sharing
Master	Full original dimensions, JPG	Print, high-quality storage
LUT	33^3 `.cube` file	External colour grading

All filenames are derived from the **IDENTITY** field (or source filename if left blank) – no prefixes, no extra text.

Export note: The LUT is generated from the same mathematical pipeline as the on-screen image, ensuring perfect consistency between what you see and what you export.

Part 5: Preset vs LUT – Side-by-Side

Feature	Preset (CSV Tonal)	LUT
Scope	Replaces colours by brightness zone	Colour-to-colour transform (mood/wash)
Compatibility	App-specific (CSV format)	Cross-platform (.cube)
Portability	Limited	High – works in any professional video/photo software
Use case	Graphic, deliberate colour mapping	Consistent look across different tools
Complexity	Simple – you choose a bar	Simple – you click a preview

Lumatic Lab's companion tools (also available FREE) allow you to convert selected Adobe presets into LUTs, making your existing looks portable and future-proof.

Part 6: Hardware Requirements & Philosophy

The app is designed to run smoothly on realistic hardware, including Chromebook Plus certified devices.

Component	Recommended Level	Why It Matters
Processor	12th Gen Intel Core i3 / AMD Ryzen 3 7000+	Responsive adjustments, real-time feedback
Memory	8GB RAM	Stable editing without slowdowns
Storage	128GB	Practical working space for images and exports
Display	1080p IPS	Reliable colour and viewing angles

What this app does not do:

•No subscriptions, no locked features, no usage limits.

•No accounts, no email capture, no passwords.

•No background activity – no uploads, no tracking, no “calling home”.

•No GPU-accelerated “auto-corrections”. Every pixel is the result of repeatable, documented mathematics.

Final Notes

•This tool is not designed to fix bad exposure or white balance.
Start with a well-lit, clear photo for best results.

•Experiment freely with **RANDOM LOOK** buttons – you will discover combinations you never expected.

•The workspace background can be changed to Black, Middle Gray, or White using the three colour boxes in the top bar – helps check edge visibility.

•For LUT portability outside this app, use the exported `.cube` file in software like DaVinci Resolve, Adobe Premiere, Final Cut Pro, or any 3D LUT-compatible tool.

App version: v8.6.0 (Image Sculptor)
Based on Image Sculptor v26.5 Master Standards