# LumaticLAB | Colour Picker User Guide

Version 2.12 | Documentation release 1.0 | 17 October 2026

Full operating instructions and explanations.

## Overview

Colour Picker v2.12 is a self-contained HTML utility. A browser-native colour input and editable hex field share one current colour. The Details disclosure keeps additional measurements out of the primary workflow.

## Control reference

| Visible control | Action / result |
|---|---|
| **Choose a colour** | Use the browser colour picker; updates the selected colour immediately. |
| **Hex colour** | Enter #RRGGBB, RRGGBB, #RGB or RGB; commit with Enter or by leaving the field. |
| **Copy** | Copies the accepted six-digit code, if clipboard facilities permit. |
| **Load colour-name database** | Choose a local CSV file, or drag/drop one into the database area. |
| **Colour readouts** | Expand/collapse the named and numeric measurement panel. |
| **Status** | Reports accepted input, load results or validation errors. |

## Colour codes and validation

Hexadecimal RGB represents red, green and blue channels as pairs from 00 to FF. Input is case-insensitive; accepted codes are normalised to uppercase with a leading #. Three-digit codes are expanded (for example #ABC becomes #AABBCC). The control permits a maximum of seven input characters; enter unprefixed six-digit codes when appropriate.

While typing invalid text, Copy is disabled. The selected colour remains the last accepted value. Input commits on Enter or the change event; it is not recalculated on each typed character.

## Understanding the readouts

| Metric | Meaning |
|---|---|

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|---|---|
| **Colour name** | Exact CSV name if supplied; otherwise a computed descriptive label based on HSL. |
| **Rec. 601 luma** | Weighted RGB value: 0.299R + 0.587G + 0.114B, on a 0-255 scale. |
| **RGB** | Integer red, green and blue channels (0-255). |
| **HSL** | Hue in degrees; saturation and lightness in percent, rounded for display. |
| **Relative luminance** | Weighted linearised sRGB channels, on a 0-1 scale. |
| **sRGB channel values** | Each 8-bit RGB channel expressed as a percentage of 255. |

Rec. 601 luma and relative luminance are not interchangeable. Names such as Deep Muted Red are approximate labels, not recognised universal colour names.

## CSV colour-name database

Use comma-separated values (.csv). The parser reads column 2 as the name and column 3 as a hexadecimal value; column 1 is ignored. Rows with fewer than three fields or with invalid/blank names or hex values are not stored. Valid records take precedence over automatic naming for exact colour matches.

Quotation marks and escaped doubled quotes are supported. A UTF-8 byte order mark at the beginning is stripped. Multiple entries with the same normalised hex code resolve to the last entry. A new successful import replaces the earlier database; a failed import leaves the prior database intact. The interface reports loaded unique names and a rejected-row count.

Do not rely on an arbitrary CSV header: if its third column contains a valid hexadecimal code, it is treated as data. There is no fuzzy or nearest-colour search.

## Privacy and storage

The supplied program contains no network calls, sign-in, analytics, storage API or cookie logic. CSV text is processed in the browser session using File.text(). The application does not persist imported databases between restarts. Browser and operating-system clipboard behaviour is controlled by their permission and security policies.

## Troubleshooting

| Symptom | Action |
|---|---|
| **Copy fails** | Select the hex field and use your operating system copy shortcut. |
| **Colour does not update** | Commit the hex value with Enter or move focus away; check the status warning. |
| **Database not loaded** | Use a .csv file with valid entries in columns 2 |

| | |
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| | and 3; check quoting and hex format. |
| **Unexpected name** | Check for an exact hex match in the loaded database; otherwise the automatic naming rule applies. |
| **Details not visible** | Open Colour readouts. |
| **Different colour picker UI** | Colour input appearance depends on the browser and platform. |

## Limitations

No photograph sampling or eyedropper control is supplied by this code. No batch conversion, palette export, ICC profile handling, colour contrast score or image editing is implemented. Clipboard fallback uses a legacy browser copy command and may not succeed everywhere.