

THE DESIGNER'S KNIFE

User Manual

User Manual & Onboarding Guide

Field: UI/UX & Graphic Design · Knife 04 of 50 · \ Offline.Ltd

11 DESIGN TOOLS	3 KILLER FEATURES	∞ WORKS OFFLINE	✓ ZERO DEPENDENCIES
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This manual covers every tool in The Designer's Knife — eight core design utilities plus three advanced features (Color Thief, Theme Weaver, and The Showroom) — from first launch to production-ready CSS. It includes input/output references, keyboard shortcuts, troubleshooting, accuracy notes, and a full glossary.

Version 2.0 · For use with The_Designer_s_Knife.html

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1 Getting Started

The Designer's Knife is a single HTML file. No installation, no internet connection, no account. Double-click the file and you're working.

System Requirements

BROWSER	VERSION	NOTES
Chrome / Edge	90+	Recommended. Full Canvas API support.
Firefox	90+	Full support.
Safari	15+	Full support. Enable local file access if prompted.
Mobile (iOS/Android)	Latest	All tools work. Tab bar scrolls horizontally.

How to Open

Double-click **The_Designer_s_Knife.html** in your file manager. It opens in your default browser. Alternatively, drag the file onto an open browser window. No server, build step, or terminal command required.



PRO TIP

E-mail the HTML file to yourself. Open it from any computer, any browser, any operating system. A portable design studio that fits in a single attachment.

The Welcome Screen

On first launch, a modal explains the knife and its tools. Click **Got it — open the knife** to dismiss. The modal won't appear again unless you clear all data.

2 Interface Overview

The interface has four areas: header, tab bar, content area, and disclaimer bar.

The Header

Displays the knife emoji (🔪), the product name **THE DESIGNER'S KNIFE**, the field category (*UI/UX & Graphic Design*), and the knife number (*Knife 04 of 50*).

The Tab Bar

Nine tool tabs on the left, two system tabs on the right. The active tab is highlighted with a red bottom border.

TAB	SHORTCUT	TYPE
Color Converter	Ctrl+1	Tool
Contrast	Ctrl+2	Tool
Palette	Ctrl+3	Tool
Gradient	Ctrl+4	Tool
Bézier	Ctrl+5	Tool
Type Scale	Ctrl+6	Tool
Spacing	Ctrl+7	Tool
Pixel Grid	Ctrl+8	Tool
◆ Showroom	Ctrl+9	Tool (v2.0)
■ Files	—	System
? Help	Ctrl+H	System

Tooltips

Small circled **i** icons appear next to field labels. Hover (or tap on mobile) to see explanatory text. Click elsewhere to dismiss.

The Disclaimer Bar

The footer reads: *All tools run locally. Nothing leaves your browser.* Click **Full disclaimer** → to see the complete disclaimer in the Help tab.

3 Saving & File Management

Your settings are auto-saved to localStorage every time you change a value. Use the **Files** tab to export or import full state backups.

Exporting

1. Switch to the **Files** tab.
2. Click **Export All** ↓.
3. A JSON file downloads: `designer.knife.state_YYYY-MM-DD.json`.
4. Keep this file alongside your HTML knife file.

Importing

1. Switch to the **Files** tab.
2. Click **Import All** ↑.
3. Select your state JSON file.
4. All tools are restored to their saved values.



CAUTION

Importing overwrites all current tool settings. Export first if you want to keep your current state.

Clearing All Data

In the **Files** tab, scroll to the bottom and click **Clear All Data**. A confirmation dialog appears. This permanently removes all saved settings from localStorage.



PRO TIP

Name your state files by project or date — e.g. `designer.knife.state_brand-redesign.json`. Swap between projects by importing different files.

4 Color Converter

Tab: Color Converter · Ctrl+1

Converts between HEX, RGB, and HSL in real time. Pick a color from the native picker or type values directly. All CSS formats are generated instantly and ready to copy.

Inputs

FIELD	DESCRIPTION
Pick Color	Native color picker. Opens the OS color dialog.
HEX	Hexadecimal color code (#RRGGBB or #RGB).
R / G / B	Red, Green, Blue channels (0–255 each).
H / S / L	Hue (0–360°), Saturation (0–100%), Lightness (0–100%).

Outputs

FIELD	DESCRIPTION
Color Swatch	Large preview of the current color.
CSS Values	HEX, RGB, and HSL strings ready to copy.

Use Cases

Quick format conversion, picking a starting color for palette generation, sending a color to the Contrast Checker.

Common Difficulties

PROBLEM	CAUSE & SOLUTION
Shorthand HEX not accepted	The field accepts both #RGB and #RRGGBB formats. Ensure the # prefix is present.
HSL doesn't update	HSL fields update when you change HEX or RGB. All three formats are always in sync.



PRO TIP

Use **Send to Contrast** → to instantly check your chosen color against a background without retyping values.

5 Contrast Checker

Tab: Contrast Checker · Ctrl+2

Calculates the contrast ratio between a foreground (text) color and background color using the WCAG 2.1 relative luminance algorithm. Shows pass/fail for AA, AAA, and large-text thresholds.

Inputs

FIELD	DESCRIPTION
Foreground (Text)	HEX color for text. Picker + text field.
Background	HEX color for background. Picker + text field.


Outputs

FIELD	DESCRIPTION
Preview	Live preview showing sample text on the chosen background.
Contrast Ratio	The WCAG contrast ratio (e.g. 12.45:1).
WCAG AA	Pass/Fail badge for normal text ($\geq 4.5:1$).
WCAG AAA	Pass/Fail badge for enhanced contrast ($\geq 7:1$).
AA Large	Pass/Fail badge for large text ($\geq 3:1$).

Use Cases

Checking text legibility, validating palette colors against backgrounds, meeting accessibility requirements.

Common Difficulties

PROBLEM	CAUSE & SOLUTION
Ratio seems wrong	Ensure foreground and background are not swapped. Use  Swap Colors to reverse them.
Need to test multiple pairs	Use the Color Converter's Send to Contrast button to quickly cycle colors.

6 Palette Builder

Tab: Palette Builder · Ctrl+3

Generates color palettes based on color theory harmonies from a single base color. Supports complementary, analogous, triadic, split-complementary, tetradic, and monochromatic harmonies. Also generates tints and shades.

Inputs

FIELD	DESCRIPTION
Base Color	The seed color. Picker + HEX field.
Harmony	Dropdown: Complementary, Analogous, Triadic, Split-Complementary, Tetradic, Monochromatic.

Outputs

FIELD	DESCRIPTION
Generated Palette	Color swatches with HEX labels. Click to copy.
Tints & Shades	Nine lightness steps from the base hue. Click to copy.
CSS Variables	Named CSS custom properties for the palette.

Use Cases

Building a brand palette from a single color, exploring color harmonies, generating tint/shade ramps.

Common Difficulties

PROBLEM	CAUSE & SOLUTION
Colors look muddy	Try a base color with higher saturation. Monochromatic harmony varies only lightness.
Too few swatches	The number of swatches depends on the harmony type. Tetradic gives 4, analogous gives 3.



PRO TIP

The Palette tab also contains the **Color Thief** feature — scroll down to find the image drop zone and Auto-Harmonize button. See Section 12.

7 Gradient Generator

Tab: Gradient Generator · Ctrl+4

Builds CSS gradients with multiple color stops, adjustable angle, and three gradient types (linear, radial, conic). Outputs copy-ready CSS.

Inputs

FIELD	DESCRIPTION
Type	Linear, Radial, or Conic.
Angle	Rotation angle in degrees (0–360). Applies to linear and conic.
Color Stops	Each stop has a color picker and a position (0–100%).

Outputs

FIELD	DESCRIPTION
Preview	Live gradient preview at full width.
CSS Output	The complete background CSS property value.

Use Cases

Creating background gradients, hero section overlays, decorative borders.

Common Difficulties

PROBLEM	CAUSE & SOLUTION
Radial gradient ignores angle	Radial gradients are circular — the angle control is intentionally disabled (dimmed).
Gradient looks banded	Add intermediate color stops for smoother transitions.

8 Bézier Curve Editor

Tab: Bézier Curve Editor · Ctrl+5

Interactive cubic-bezier editor for CSS transition timing functions. Drag control points on the canvas, use presets, or type exact coordinates. Preview the animation in real time.

Inputs

FIELD	DESCRIPTION
Control Points P1/P2	X (0–1) and Y (–0.5 to 1.5) for each control point.
Presets	Buttons for ease, linear, ease-in, ease-out, ease-in-out, and back.

Outputs

FIELD	DESCRIPTION
Canvas	Visual curve with draggable control points.
Animation Preview	Ball animation showing the easing in real time.
CSS Output	transition-timing-function: cubic-bezier(...);

Use Cases

Crafting custom animation curves, comparing easing functions, prototyping micro-interactions.

Common Difficulties

PROBLEM	CAUSE & SOLUTION
Ball doesn't animate	Click <input type="checkbox"/> Animate to trigger the preview. The ball returns to start after 1.2 seconds.
Overshoot looks wrong	Y values outside 0–1 create overshoot. This is intentional for bounce-style easings.

9 Typography Scale

Tab: Typography Scale · Ctrl+6

Generates a modular type scale using standard mathematical ratios. Preview each step at actual size and export as CSS custom properties.

Inputs

FIELD	DESCRIPTION
Base Size (px)	The root font size (8–32px, default 16).
Scale Ratio	Dropdown: Minor Second (1.067) through Golden Ratio (1.618).
Steps	Number of scale steps to generate (4–12).

Outputs

FIELD	DESCRIPTION
Scale Preview	Each step rendered at its actual pixel size with rem conversion.
CSS Variables	Named custom properties: --text-xs, --text-sm, --text-base, etc.

Use Cases

Establishing typographic hierarchy, generating consistent font sizes for a design system.

Common Difficulties

PROBLEM	CAUSE & SOLUTION
Preview text is capped	Very large sizes (>120px) are capped in the preview but the CSS values are exact.
Ratio feels too tight/wide	Minor Second (1.067) is tight; Golden Ratio (1.618) is dramatic. Major Third (1.250) is a popular middle ground.

10 Spacing Calculator

Tab: Spacing Calculator · Ctrl+7

Builds a spacing scale using linear multiples, powers of 2, Fibonacci, or golden ratio progressions from a single base unit.

Inputs

FIELD	DESCRIPTION
Base Unit (px)	The atomic spacing unit (1–32px, default 8).
Scale Type	Linear, Powers of 2, Fibonacci, or Golden Ratio.
Steps	Number of scale steps (4–16).

Outputs

FIELD	DESCRIPTION
Spacing Scale	Table with step number, multiplier, px, rem, and visual preview bar.
CSS Variables	Named custom properties: --space-1, --space-2, etc.

Use Cases

Creating consistent margin/padding tokens, establishing a spacing system for components.

Common Difficulties

PROBLEM	CAUSE & SOLUTION
Values grow very fast	Powers of 2 and Golden Ratio produce exponential growth. Use fewer steps or a smaller base.
Which scale type?	Linear for simple systems, Fibonacci for natural-feeling progression, Powers of 2 for technical systems.

11 Pixel Grid Painter

Tab: Pixel Grid Painter · Ctrl+8

A simple pixel art editor for quickly sketching icons and small graphics at 8×8, 16×16, 24×24, or 32×32 resolution. Supports draw, erase, and fill tools. Export as PNG.

Inputs

FIELD	DESCRIPTION
Color	Native color picker for the drawing color.
Grid Size	8×8, 16×16, 24×24, or 32×32.
Tool	Draw, Erase, or Fill (flood fill).

Outputs

FIELD	DESCRIPTION
Canvas	Interactive pixel grid. Click/drag to paint.
Export PNG	Downloads a 1:1 scale PNG image of the grid.

Use Cases

Sketching favicons, creating small icons, prototyping pixel art, rapid icon concepts.

Common Difficulties

PROBLEM	CAUSE & SOLUTION
Fill doesn't work as expected	Fill replaces all connected pixels of the same color. It won't cross color boundaries.
PNG is tiny	The export is 1:1 pixel scale (e.g. 16×16 pixels). Scale up in your image editor.

12 Color Thief

Feature: located in the Palette tab, below the main palette builder

Color Thief lets you drop any image (logo, moodboard, photograph) onto the knife and instantly extract 6–8 dominant and accent colors. The Auto-Harmonize button then nudges those colors for WCAG accessibility, populates the Palette, sends the best text/background pair to the Contrast Checker, and suggests a matching gradient.

How to Use

1. Switch to the **Palette** tab and scroll below the palette builder.
2. Drag an image onto the **Drop Image Here** zone, or click to browse.
3. The knife extracts dominant colors and displays them as swatches.
4. Click **■ Auto-Harmonize & Fix Accessibility**.
5. The palette base, contrast pair, and gradient are all updated automatically.

Inputs

FIELD	DESCRIPTION
Drop Zone	Drag-and-drop or file picker. Accepts JPG, PNG, SVG, WebP.
<input type="checkbox"/> Auto-Harmonize	Analyzes extracted colors, checks WCAG AA, and populates tools.

Outputs

FIELD	DESCRIPTION
Extracted Swatches	6–8 dominant colors from the image. Click any swatch to copy its HEX.
Harmonized Report	Shows which colors pass AA on dark/light backgrounds and what was updated.



PRO TIP

Drop a client's logo to extract their brand colors, then hit Auto-Harmonize. You'll have an accessible, production-ready palette in under 10 seconds.

13 Theme Weaver

Feature: located in the ■ Files tab

Theme Weaver takes your current palette base color and generates a complete design system in one click. It creates primary, accent, and neutral color scales (9 steps each), fills every tool with cohesive values, and outputs copy-ready CSS custom properties with light and dark mode variants.

What It Generates

OUTPUT	DESCRIPTION
Primary Scale	9-step scale (100–900) from the seed color.
Accent Scale	Complementary hue, 9-step scale.
Neutral Scale	Desaturated variant, 9-step scale for backgrounds and text.
Semantic Tokens	CSS variables: --color-bg, --color-surface, --color-text, --color-primary, --color-accent, --radius-sm/md/lg.
Dark Mode	@media (prefers-color-scheme: dark) override block.
Type Scale	Set to Major Third (1.250), 8 steps.
Spacing	Set to Fibonacci scale, base 8px, 8 steps.
Bézier	Set to smooth ease (0.4, 0, 0.2, 1).
Gradient	Built from primary scale endpoints.
Contrast Pair	Lightest neutral on darkest neutral.

How to Use

1. Set your desired base color in the **Palette** tab.
2. Switch to the ■ **Files** tab.
3. Click ♦ **Weave Complete Theme**.
4. All 8 tools are filled with cohesive values. Review the token output.
5. Click **Copy All Tokens** or **View in Showroom** →.



PRO TIP

Combine Color Thief and Theme Weaver: drop a client's logo → extract colors → set the best one as palette base → weave a complete theme. Inspiration to production in 30 seconds.

14 The Showroom

Tab:  Showroom · Ctrl+9

The Showroom is a live component playground. It renders a complete UI sample — navigation bar, hero section, feature cards, and typography specimen — styled entirely by your current tool settings. Every change in any tool instantly updates the preview.

Components

COMPONENT	STYLED BY
Navigation Bar	Palette (brand color), Contrast (text on surface).
Hero Section	Gradient (background), Type Scale (heading sizes).
Primary Button	Color Converter (primary color), Spacing (padding).
Secondary Button	Contrast (border color on hero).
Feature Cards	Spacing (gap, padding), Type Scale (heading, body sizes).
Typography Specimen	Type Scale (all sizes from sm to 8xl).

Interactive Features

Click any element in the Showroom to jump directly to the tool that controls it. For example, clicking a card jumps to the Palette tab; clicking the hero jumps to Gradient.

Light/Dark toggle switches the preview between light and dark mode, adapting colors from your contrast settings and palette.

Export captures the current CSS tokens to your clipboard for pasting into a project.



PRO TIP

Use the Showroom as your feedback loop. Make a change in any tool, switch to the Showroom with Ctrl+9, and instantly see how it affects a real UI. Iterate with joy.

15 Keyboard Shortcuts

All shortcuts use Ctrl on Windows/Linux and Cmd (⌘) on macOS.

Ctrl+1	Switch to Color Converter
Ctrl+2	Switch to Contrast Checker
Ctrl+3	Switch to Palette Builder
Ctrl+4	Switch to Gradient Generator
Ctrl+5	Switch to Bézier Editor
Ctrl+6	Switch to Type Scale
Ctrl+7	Switch to Spacing Calculator
Ctrl+8	Switch to Pixel Grid
Ctrl+9	Switch to The Showroom
Ctrl+S	Export All (download state JSON)
Ctrl+H	Switch to Help tab
Escape	Close modal dialogs

16 Troubleshooting

Blank page or broken layout

JavaScript must be enabled. Check your browser settings. Some privacy extensions (NoScript, uBlock in strict mode) may block inline scripts.

Settings lost after closing

The knife uses localStorage. Private/incognito windows clear localStorage on close. Use a normal browser window, or export your state before closing.

Import says 'Wrong knife'

The state file's "knife" field must be "designer". Files from other Offline.Ltd knives are not compatible.

Color picker doesn't open

Some browsers restrict the native color picker in local HTML files. Try Chrome or Edge. Alternatively, type HEX values directly into the text field.

Tab bar is cut off on mobile

The tab bar scrolls horizontally. Swipe left/right to reveal all tabs.

Pixel Grid painting is laggy

Larger grid sizes (32×32) may be slower on older devices. Use 16×16 for responsive painting.

Theme Weaver doesn't change anything

Theme Weaver reads the Palette base color. Set your desired seed color in the Palette tab first, then switch to Files and click Weave.

Showroom looks wrong

The Showroom reads all tool values in real time. If you haven't set values yet, run Theme Weaver first for a cohesive starting point.

17 Accuracy & Limitations

All tools run client-side using standard algorithms. Here is what to expect.

TOOL	ACCURACY	NOTES
Color Converter	Exact	Standard HEX/RGB/HSL conversion. Rounding to integers.
Contrast Checker	WCAG 2.1 compliant	Uses the standard relative luminance formula.
Palette Builder	Color theory standard	Harmonies use fixed hue rotations. Subjective quality varies.
Gradient Generator	Exact CSS output	Browser rendering may differ slightly between engines.
Bézier Editor	Exact	Cubic-bezier values are passed directly to CSS.
Type Scale	Mathematically precise	Pixel values are rounded. rem values are exact.
Spacing Calculator	Mathematically precise	Fibonacci and Golden Ratio follow standard sequences.
Pixel Grid	1:1 pixel accuracy	Exported PNG is exact. No anti-aliasing.
Color Thief	Approximate	Quantization-based extraction. Results depend on image content.
Theme Weaver	Heuristic	Scale generation uses opinionated lightness/saturation curves.
Showroom	Visual approximation	A representative preview, not a pixel-perfect production mockup.



CAUTION

These tools are designed for rapid prototyping and design exploration. Always verify critical accessibility decisions with dedicated testing tools before shipping to production.

18 Glossary

Analogous	Colors adjacent on the color wheel, typically $\pm 30^\circ$ from the base hue.
Bézier Curve	A parametric curve defined by control points. Cubic-bezier is used for CSS transition timing.
Complementary	Two colors directly opposite on the color wheel (180° apart).
Contrast Ratio	The ratio of relative luminance between two colors, per WCAG 2.1. Minimum 4.5:1 for AA normal text.
CSS Custom Properties	Variables defined with <code>--</code> prefix in CSS (e.g. <code>--color-primary</code>). Also called CSS variables.
Design System	A collection of reusable tokens, components, and guidelines that ensure consistency across a product.
Design Token	A named value (color, size, spacing) that encodes a design decision. E.g. <code>--space-4: 32px</code> .
Fibonacci Sequence	A number sequence where each term is the sum of the two preceding: 1, 1, 2, 3, 5, 8, 13...
Flood Fill	An algorithm that fills all connected pixels of the same color, bounded by different colors.
Golden Ratio	The mathematical ratio ≈ 1.618 , often used for harmonious proportions in type and spacing scales.
Harmony (Color)	A set of colors with mathematical relationships on the color wheel (complementary, triadic, etc.).
HEX Color	A hexadecimal color notation: <code>#RRGGBB</code> or <code>#RGB</code> , where each pair represents 0–255.
HSL	Hue (0– 360°), Saturation (0–100%), Lightness (0–100%). A human-intuitive color model.
localStorage	Browser-provided key-value storage that persists between sessions. Cleared by browser or privacy tools.
Modular Scale	A sequence of sizes derived by multiplying a base by a constant ratio (e.g. 1.250).
Monochromatic	A palette using a single hue with varying lightness and saturation.
Quantization	The process of reducing the number of distinct colors in an image to extract dominant tones.

Relative Luminance	A measure of the perceived brightness of a color, accounting for human eye sensitivity (WCAG formula).
rem	A CSS unit relative to the root element's font-size. 1rem = 16px by default.
RGB	Red, Green, Blue — the additive color model used by screens. Each channel: 0–255.
Semantic Token	A design token named by its purpose (--color-primary) rather than its value (--blue-500).
Split-Complementary	A harmony using the base color plus two colors adjacent to its complement ($\pm 30^\circ$ from 180°).
Tetradic	Four colors evenly spaced on the color wheel (90° apart). Also called Square harmony.
Triadic	Three colors evenly spaced on the color wheel (120° apart).
WCAG	Web Content Accessibility Guidelines. WCAG 2.1 defines contrast ratio requirements for text legibility.

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Sharp designs.

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