

Jenner Logo Ideation Tool

A browser-based design tool for exploring, editing, and exporting variations of the Jenner “J” logo — a 3×3 dot grid that animates through build-up and rotation sequences.

Installation

Prerequisites

- A modern web browser (Chrome, Firefox, Safari, or Edge)
- No server, build tools, or dependencies required — the tool runs entirely client-side

Setup

1. Clone the repository:

```
git clone https://github.com/JennerAnalytics/jal-logo.git  
cd jal-logo
```

2. Open `prototype.html` in your browser:

```
# macOS  
open prototype.html  
  
# Linux  
xdg-open prototype.html  
  
# Windows  
start prototype.html
```

Or drag the file into any browser window.

That's it — no `npm install`, no build step.

Quick Start

When the page loads you see a grid of animated logo cards. Each card is a unique combination of **variant**, **dot shape**, **color scheme**, and **sizing mode**.

1. **Browse** the grid to see all combinations animate
 2. **Click** a card to pause/resume its animation
 3. **Double-click** a card to open the editor
 4. **Export** a complete asset pack from the editor
-

User Guide

Grid View

The main screen displays all logo variations as animated cards.

Filters Use the filter bar at the top to narrow down the grid:

Filter	Options	Description
J Variant	hook-6, stair-6, L-5, right-5, heavy-7, loop-8, full-9	The J-letterform shape
Dot Shape	circle, squircle	Round dots or rounded squares
Color Scheme	dark/light, light/dark, dark/amber	Background and dot colors
Sizing	uniform, wave, corner, trail	How dot sizes vary across the grid

Click a filter button to toggle it on/off. Active filters are highlighted. The filter summary at the bottom shows the current selection — click it to copy.

Speed & Display Controls

- **Speed** slider: Adjust animation speed (0.1× to 3×)
- **Smooth** toggle: Enable/disable smoothstep interpolation between rotation frames
- **Favicon size** toggle: Preview cards at 32×32px to check small-size legibility

Special Variation Sections Below the standard grid, three sections show curated variations:

- **Smooth Trail** — full-9 with 8-step interpolated trail weights for fluid rotation
- **Center-Pulse** — full-9 with a breathing center dot that pulses with the rotation cycle
- **AA Variations** — heavy-7 with anti-aliased J via fine-tuned dot sizing

These have stable IDs (ST1, CP1, AA1, etc.) that don't change when cards are added.

Editor View

Double-click any card to open the full editor.

Preview Panel (left)

- Large 300×300 animated preview
- **Play / Pause / Step** controls for frame-by-frame inspection
- **Speed** slider independent of the grid speed

Controls Panel (right)

Playback Mode

- **Skip build-up:** Toggle to skip the 5-frame build-up sequence and loop only the rotation frames

Weight Matrix (3×3 dot sizes) Each cell controls the relative size of the dot at that grid position. Values range from 0.10 to 2.00.

- **Period selector (1–8):** Switch between the 8 rotation periods to edit weights independently per frame
- The currently animating period is highlighted with a green border
- Editing a weight immediately updates the preview

Dot Shape Toggle between **Circle** and **Squircle** (rounded square with $r = 0.35 \times \text{dotRadius}$).

Color Scheme

- **Presets:** Click dark/light, light/dark, or dark/amber for quick changes
- **Custom:** Use the color pickers or type hex values for background and dot colors

Base Dot Size Ratio Slider from 0.20 to 0.95 — controls the ratio of dot diameter to cell size (default: 0.60).

Animation Timing

- **Build 1–5:** Duration of each build-up frame (40–500ms)
- **Rotation:** Duration of each rotation frame (40–500ms, applies to all 8 periods)

Exported Config A read-only text field showing the current configuration in JENNER_EDIT: format. Click **Copy config** in the header to copy it to your clipboard. This format can be pasted back into the source code to recreate the variation.

Config format example:

```

JENNER_EDIT:
variant=full-9 shape=circle bg=#1c1c1e dot=#e8a435 baseSize=0.60
skipBuild=true rotMs=140
P1=[[0.40,0.30,1.30],[0.55,0.20,1.15],[0.70,0.85,1.00]]
P2=[[0.55,0.43,0.85],[0.70,0.33,0.73],[0.85,1.00,1.15]]
...

```

Exporting Assets

From the editor view:

1. Choose a **Frame** to export:
 - **Canonical (J visible)** — the first rotation frame (0° orientation)
 - **Current frame** — whatever frame is currently displayed
2. Click **Download Asset Pack (.zip)**
3. A progress bar shows rendering status. When complete, a ZIP file downloads automatically.

ZIP Contents The export produces a ZIP with this structure:

```

jenner-logo-export/
  original/          # Your configured colors
    favicon/         # 16, 32, 48, 64, 96, 128, 256px
    web/             # apple-touch-icon-180, pwa-192, pwa-512, og-1200
    macos/           # 16-1024px
    windows/         # 16-256px
    linux/           # 16-512px
    marketing/       # 1024, 2048, 4096px
  transparent/       # Same sizes, no background
    on-white/         # White bg, auto-adjusted dot color
    on-black/         # Black bg, auto-adjusted dot color
    mono-on-white/   # White bg, dark dots (#1c1c1e)
    mono-on-black/   # Black bg, light dots (#f0efe8)
  svg/
    logo-original.svg
    logo-transparent.svg
    logo-on-white.svg
    logo-on-black.svg
    logo-mono-on-white.svg
    logo-mono-on-black.svg
  animation/
    logo-{variation}.gif      # Animated GIF at 256px (looping)
    logo-{variation}-512.gif  # Animated GIF at 512px (marketing)
    sprite-{variation}.png    # Horizontal sprite sheet (all frames)

```

```

sprite-{variation}.css      # CSS @keyframes for sprite animation
logo-{variation}.apng       # Animated PNG (full quality, looping)

```

6 background variations × 6 platform size sets + 6 SVGs + 6 animation sets — everything needed for web, desktop, mobile, and marketing use.

Animation Files Each variation gets a full set of animation assets:

File	Format	Size	Use case
logo-{v}.gif	Animated GIF	256px	Web embeds, email signatures
logo-{v}-512.gif	Animated GIF	512px	Marketing, presentations
sprite-{v}.png	PNG sprite sheet	256px × N frames	CSS animation (best performance)
sprite-{v}.css	CSS keyframes	—	Plug-and-play sprite animation
logo-{v}.apng	Animated PNG	256px	Full-quality animation (Safari, Firefox)

The animations capture the full rotation loop with 6 interpolation sub-steps per frame transition (48 frames total for an 8-period loop), producing smooth motion with smoothstep easing.

Validation Tests

Open `test-export.html` in your browser to run automated validation:

1. Open the file
2. Click **Run All Tests**
3. Tests verify:
 - PNG canvas dimensions and blob validity
 - Background color correctness (transparent, white, black, original, mono)
 - SVG DOM structure (element counts, fill attributes, viewBox)
 - ZIP file completeness (all expected paths present)
 - Rotation math ($R = I$, dot count preservation, formula correctness, smoothstep)

All tests should pass with green checkmarks. Click a category header to expand details.

Mathematical Specification

See `jenner-logo-spec.md` for the formal mathematical specification covering:

- Grid coordinate system
 - 90° CW rotation operator and C group proof
 - All 7 variant canonical matrices
 - Frame sequence (build-up + rotation loop)
 - Weight matrices and per-period overrides
 - Center profile breathing effect
 - Smoothstep interpolation formula
 - Dot geometry (circle, squircle, tile radius)
 - Export variation rules with luminance fallback
-

File Reference

File	Purpose
<code>prototype.html</code>	Main ideation tool — grid explorer, editor, and export
<code>test-export.html</code>	Automated export validation tests (38 tests)
<code>jenner-logo-spec.md</code>	Mathematical specification with LaTeX notation
<code>README.md</code>	This documentation

Browser Compatibility

Tested in: - Chrome 120+ - Firefox 120+ - Safari 17+ - Edge 120+

Requires `canvas.roundRect()` support (available in all modern browsers since 2023). No polyfills needed.

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