Burn Sweep Logo Effect – Flicker Tuning Guide

This guide explains how to tune the burn-sweep/flicker effect on your homepage logo (React + CSS overlay technique). It focuses on the parameters you can safely adjust and what each one does visually.

Quick mental model

The effect uses two copies of your transparent logo: a **base** image and a **glow overlay**. The overlay is brightened with filter + drop-shadows and then "cut" by a moving mask band (the sweep). Flicker comes from small opacity/brightness jumps during the sweep window. Hover ignite works by temporarily removing the mask and boosting the glow.

Main tuning knobs

- How often it runs (animation duration): controls how frequently the sweep happens.
- Sweep timing window (keyframe percentages): controls when the sweep starts/ends inside the loop.
- Band width/softness (mask gradient + mask-size): controls how thick the sweep looks.
- Heat level (filter: brightness/saturate/blur + drop-shadows): controls intensity/color punch.
- Flicker character (opacity micro-steps during sweep): controls jitter and sparkle.
- Hover ignite strength (the .is-hover rule): controls how dramatic hover feels.

Recommended safe ranges

Parameter	Where	Typical	Notes
Sweep frequency	animation: burnSweep Ns	16–26s	Longer feels premium; shorter feels playful.
Sweep window	@keyframes burnSweep (e.g., 68–86%)	10–20% of loop	A shorter window = quicker sweep.
Band width	-webkit-mask-size	200–280%	Higher = wider band; lower = sharper/tighter.
Blur	filter: blur(Xpx)	0.4–1.4px	Too high looks foggy; too low looks harsh.
Brightness	brightness(X)	1.15–1.55	Controls overall "heat"; keep under ~1.7.
Saturation	saturate(X)	1.3–1.9	Higher pushes orange/red; too high can look neon.
Shadows	drop-shadow radii/alpha	8–30px	Use two shadows: warm outer + hot inner.

How to adjust flicker

1) Make the sweep happen more often while tuning

Temporarily shorten the animation duration so you don't have to wait:

```
animation: burnSweep 8s ease-in-out infinite; (temporary tuning)
```

After you like the result, set it back to something calmer like 18–24 seconds.

2) Increase or decrease flicker jitter

Inside **@keyframes burnSweep**, add small opacity jumps during the sweep window. More jumps = more flicker.

```
Example (stronger flicker): 75% { opacity: 0.55; } 76% { opacity: 1; } 77% { opacity: 0.65; } 78% { opacity: 1; }
```

Softer flicker uses smaller changes (e.g., 0.85 → 1.0) and fewer steps.

3) Change how hot the flicker looks

The sweep's "heat" is mostly the filter on the overlay. Adjust brightness and saturation first; then fine-tune blur and shadows.

```
Hotter: brightness(1.55) saturate(1.80) drop-shadow(0 0 16px rgba(255,140,0,0.85)) drop-shadow(0 0 30px rgba(255,60,0,1.00))

Subtler/premium: brightness(1.25) saturate(1.45) drop-shadow(0 0 10px rgba(255,140,0,0.55)) drop-shadow(0 0 18px rgba(255,60,0,0.70))
```

4) Make the sweep band wider or sharper

Change mask-size (wider band) and/or tighten the gradient stops (sharper edge).

```
Wider band (more coverage): -webkit-mask-size: 260% 100%; Sharper band (tighter): -webkit-mask-size: 190% 100%;
```

Troubleshooting

- **No hover ignite**: Make sure your logo wrapper adds/removes the *is-hover* class (onMouseEnter/onMouseLeave) and the hover CSS targets *.logo-wrapper.is-hover .logo-glow*.
- **No sweep at all**: Confirm the overlay image loads (open http://localhost:4173/logo_print_burn_transparent.png while preview is running).
- **Looks like a constant halo**: Increase the idle opacity to 0 and keep the mask enabled. Also reduce blur and drop-shadow alphas.
- **Too neon**: Lower saturate and inner shadow alpha.
- **Too subtle**: Temporarily shorten duration and raise brightness until you can see it clearly.

Optional: use the included slider tuner

Along with this PDF, I generated a small Python tool that runs a local preview page with sliders and prints the CSS you can paste back into your project.

See: burn_sweep_tuner.py (included in this chat’s files).