AiBow Ink

v1.0 — GPU fluid ink, smoke and liquid simulation for After Effects (Windows)

AiBow Ink runs a real 2D fluid simulation (Stable Fluids with vorticity confinement, CUDA-accelerated with a CPU fallback) inside After Effects. Ink, smoke and liquid motion grow out of your own layers - text, logos, shapes or footage - and follow their actual shape: change the source and the flow changes with it.

Installation

The easiest way to install and license is by using the aescripts + aeplugins manager:
https://aescripts.com/learn/aescripts-aeplugins-manager-app/
To install a trial you can select 'Add Trial' from the 'Account' menu.

Manual installation:
1. Quit After Effects.
2. Copy `AiBowInk.aex` to `C:\Program Files\Adobe\Common\Plug-ins\7.0\MediaCore` (administrator rights required).
3. Restart After Effects. The effect appears under **Effect > AiBow Tools > AiBow Ink**.

System requirements: Windows 10/11 (64-bit), After Effects 2023 or later. NVIDIA GPU recommended (RTX 20 series or later run the CUDA backend natively); without one the plugin automatically renders on the CPU - identical results, but 10-20x slower at high grid resolutions.

Quick start (5 minutes)

1. Apply **Effect > AiBow Tools > AiBow Ink** to a text or logo layer.
2. Pick a **Preset** - Sumi-e Bleed, Rising Smoke or Ink in Water are good starting points.
3. Press play. The simulation rolls forward with the timeline; ink grows out of the layer's shape.
4. Adjust **Flow Rate** and the **2. Fluid Physics** group to taste.
5. For a transition, set Composite Mode to **Reveal (Ink Matte)**, enable **Use Transition Progress** and keyframe **Transition Progress (%)**.

> **Note:** the effect is deterministic - the same frame always renders the same image, so scrubbing and Multi-Frame Rendering are safe.

Presets

Custom, Sumi-e Bleed, Neon Glow, Pastel Contours, Rising Smoke, Ink in Water, Liquid Flame, Monochrome Smoke, Falling Drip, Source Colors, Ink Reveal, Ink Backdrop, Wind Streaks. Every preset applies a complete look; switching between presets never leaves stray settings behind.

Parameters — 1. Emitter Setup

Emitter Mode	Layer Alpha (ink from the layer's shape) / Direction (from one side) / Bloom (radial burst from a point).
Emitter Point	Position of the Bloom emitter.

Flow Rate	How much ink is emitted.
Emission Radius	Size of the emitting footprint.
Motion Impulse Scale	How strongly the emitter's own motion pushes the fluid.
Direction	Direction preset for the Direction mode (up / down / left / right).

Parameters — 2. Fluid Physics

Grid Resolution	128 (fast) / 256 (balanced) / 512 (high detail). A quality knob - the look is calibrated to stay consistent across resolutions.
Vorticity (Swirl)	Small-scale swirling energy.
Viscosity	Thickness of the fluid.
Dissipation (Lifespan)	How quickly ink fades away.
Gravity X / Y	Wind and buoyancy. Negative Y makes ink rise like smoke.
Turbulence group	Multi-octave curl noise: strength, scale, detail, speed.
Wind X / Y	Uniform push across the whole frame.

Parameters — 3. Color & Style / 4. Edge & Glow

Palette Mode	Gradient Ramp / Multi-Color Source (colors picked from the layer) / Custom Colors (6 pickers).
Ramp Interpolation	RGB or Perceptual (OkLab).
Contour Bands	Topographic ink-wash banding, with Band Softness.
Edge Threshold / Softness	Where the ink edge cuts and how soft it is.
Appearance Curve	A draggable curve editor that shapes density-to-opacity directly; overrides the two sliders above when enabled.
Glow / Bloom / Rim	Additive glow intensity, bloom radius and color, rim light width and color.
Edge Darken (Paper Bleed)	Darkened edges, like ink soaking into paper.
Texture Layer	A layer input that modulates the ink with your own texture.

Parameters — Composite / 6. Solver

Composite Mode	On Top / Behind / Mask Source / Additive Glow / Ink Only / Reveal (Ink Matte) / Erase (Ink Matte). The two matte modes turn the simulation into a transition.
Master Opacity	Overall opacity.
Simulation Length (steps)	Total rollout length.
Simulation Speed (%)	Playback speed of the simulation, frame-rate independent.

Use Transition Progress	Drives the rollout from a keyframeable percentage instead of comp time - lands a transition on an exact frame and can run backwards.
Bleed (Diffusion)	Softening diffusion of the ink.
Processing	Auto / GPU (CUDA) / CPU. Auto and GPU fall back to CPU automatically when no NVIDIA GPU is available, so projects always render.

Tips

Faster previews: Grid Resolution 128 or 256 while designing, 512 for the final render.
Rising smoke: Direction mode (to Up) + negative Gravity Y + some Turbulence.
Transitions: Composite Mode Reveal or Erase + Use Transition Progress, keyframed 0 to 100.
Natural drift: Wind and Gravity at 0, Turbulence 15-30 - the fluid moves on its own.

Troubleshooting

Nothing appears	Check Flow Rate is above 0 and the source layer has visible alpha (Layer Alpha mode).
Renders are slow	No NVIDIA GPU present - the CPU fallback is 10-20x slower. Lower Grid Resolution.
The layer disappears	Check the Composite Mode - Ink Only and the matte modes replace the source by design.
Different look after reopening	Make sure the same Processing backend is used; Auto is recommended.

Support: please use the support tab on the product page at aescripts.com. Include your After Effects version, OS, GPU and steps to reproduce.
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