

WILD CONSTRUCT

Entropy

Customer guide and control reference

Emitter / Particle / Forces / Render

A reference organized around the Entropy interface.

Includes setup, workflows, troubleshooting, and product tooltip descriptions.

Source snapshot: 0.9.27

PDF edition: 10 September 2026

This guide describes a beta source snapshot. Use the installation and compatibility information supplied with your build. Examples were checked against source code; live After Effects verification remains pending.

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01 / Start here

Entropy is a particle effect for Adobe After Effects. A particle is one element in the effect. An emitter is the source that creates particles. A system combines an emitter, particle appearance, and motion controls. Entropy calculates motion as time advances.

Entropy runs as an effect in After Effects. You can edit it in the Effect Controls panel, where After Effects lists the settings for a selected effect. You can also open Composer for a larger live preview. Entropy creates and moves particles automatically when you preview time.

Before you start

Install the Entropy build for your computer and restart After Effects. Use the compatibility requirements supplied with that build. Open the Entropy Licensing window if activation is required. Navigator has a **LICENSE** button.

Create a system

1. Create or open an After Effects composition.
2. Open **Entropy Navigator** from the **Window > Extensions** menu.
3. Select **ADD SYSTEM**. Entropy creates a solid layer and applies the effect. A solid is an After Effects layer with a single fill color; here it carries the effect.
4. Select the new system in Navigator to access its controls.
5. Set **Emitter Shape** to **Point** and **Emitter Behavior** to **Continuous**.
6. Set **Particles/sec** to **200**, **Life (seconds)** to **3**, and **Velocity** to **50**.
7. Set **Particle Type** to **Sprite** and **Size** to **10**.
8. Preview forward for several seconds. Particles should leave the source and disappear at the end of their life.

These values are a starting exercise, not a required preset. If particles are outside the view, adjust the emitter position to the center of your composition.

Change the look in Composer

1. Open **Composer** from the Entropy effect controls.
2. Confirm that the intended design appears. Use **Import from AE** to load the active Entropy layer again if needed. This replaces the current Composer settings.
3. Select a system row before editing its controls.
4. Change **Emitter Shape** to **Sphere**. Increase the emitter size to spread birth positions across a larger shape.
5. Adjust **Velocity** to change the starting speed. Adjust **Size** in the particle controls to change the particles themselves.
6. Select **OK** to apply the design to After Effects. Composer normally closes after a successful apply.
7. Preview the After Effects composition to check the result.

Emitter size controls the source. Particle size controls each particle. These are separate settings.

Use the preview

- Use the orbit tool and drag to turn the preview camera. Scroll to zoom. Double-click the viewport to reset the view.
- Use **Position** for a permanent source move. The preview move tool temporarily moves the emitter; it returns when you release it.
- Restart the simulation to replay from frame zero with the current settings. Turn on automatic replay to tune a repeating burst.
- Hide the ground grid or guides to inspect the look. These aids do not appear in the particle render.
- Change the preview background for contrast. This does not change the saved preset or After Effects render.

Edit a control

In Composer, drag a numeric control to adjust it. Double-click the control to reset it. Double-click its displayed value to type a number. Choose an item in a menu to change a mode. Hover over a control for its tooltip.

Some controls only apply to a particular source or particle type. If a control is unavailable, first check its related mode. See the [control reference](#).

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02 / Emitter

An emitter supplies particle birth positions. Its controls appear in **EMITTER** for the selected system. Use them to create a stream, a fixed arrangement, or a burst. Entropy creates particles according to **Emitter Behavior** as time advances.

Choose when particles appear

Emitter Behavior	Use it for
Continuous	An ongoing stream. Particles/sec sets the creation rate.
Static	A fixed particle field. Static particles do not age.
Burst	A one-shot release. Particle Count sets the total. Burst Frames spreads the release over time.
From Parent's Particles	A child that emits from living parent particles. The rate applies to each living parent particle.
On Parent Death	A child that emits when parent particles die.
From Parent Position	A child that emits from its parent's source position.

Parent-based behaviors require a child system. See [multiple systems](#).

For Burst, increase **Burst Decay** to put more of the release near the start. It changes the timing, not the total count. Restart the preview when you want to see the burst again.

Choose a source

Emitter Shape	Source
Point	One source position.
Line	A line that can also guide particle travel.
Cylinder	A cylindrical region.
Sphere	A spherical region.
Box	A region with width, height, and depth.
Mesh	A three-dimensional surface from an OBJ file. OBJ is a file format for 3D models.
Light	After Effects Light layers selected by a name prefix.
Text	Letter shapes. Composer provides text and font controls; After Effects provides a source text layer.
Formula	A Wave, Spiral, or Lissajous curve. A Lissajous curve combines repeating motion along separate axes.
Mask	A mask path in After Effects. A mask is an outline attached to a layer.
Layer	An After Effects layer's image and transparency.

Place and distribute particles

Position uses composition coordinates: X moves right, Y moves down, and Z moves deeper into the scene. Rotation turns the source around those axes.

Link source dimensions for uniform scaling, or adjust each axis separately. Sphere uses **Emitter Size X** as its diameter and ignores Y and Z.

Distribution chooses Fill, Edge, or Surface where supported. Edge and Surface have the same result on 3D shapes. Point and Line ignore this setting. Mask uses **Emit From** instead.

Spacing chooses random placement or a regular grid. Mesh surfaces use random placement. For a grid, set the counts along each axis. Stagger offsets alternate rows or rings; a half-cell offset makes a brick-like arrangement. Grid sampling can reduce positions around narrower parts of curved shapes.

Seed changes the repeatable random arrangement. Keep the seed when you want to compare another setting without also changing the random pattern.

Set starting motion

Velocity controls speed at birth. Speed variation gives particles different starting speeds. **Spread** controls the cone of starting directions: zero sends particles one way; 360 degrees sends them in all directions.

Source-motion inheritance adds emitter movement to newborn particles. Use it when an animated emitter should fling particles along its motion.

Emit from text or a mesh

Choose **Text** to use letter shapes. In Composer, enter the text and choose a font. Extrusion adds depth. Bevel controls shape the transition between the letter face and its sides. Increase bevel quality after the text shape is settled.

Choose **Mesh** and browse for an OBJ to emit from a model. Center the model if its authored origin puts it away from the emitter point. Emitter size still controls its scale.

Show Text or **Show Source** includes the solid source body in the rendered image. Turn it off to show only particles.

EMITTER MATERIAL changes the source body. Particle material changes the emitted particles.

Emit from After Effects layers

For a Layer emitter, select the source layer. Its alpha channel - the image's transparency - controls where particles are born. Select **Color Mode > From Layer** to use its image colors.

For a Mask emitter, choose a path or enable **All Masks**. **Path** emits along the outline. **Face (Closed Path)** fills the interior. An open path falls back to outline emission.

For a Light emitter, set the name prefix that identifies source lights. Every matching light becomes a source. Enable the light-intensity count option if brighter lights should emit more particles.

Check these sources in After Effects. Composer does not contain your composition's live layer and light context.

Make particles follow a path

Line, Formula, and Mask sources provide path controls. A path can place particles at birth or steer them after birth.

1. Choose **Formula**, then **Spiral**.
2. Set the source length and spiral radii to make a visible curve.
3. Match **Emit Start** and **Emit End** to create particles at one point on the path.
4. Raise **Follow Path** above zero.
5. Set **Path Speed** above zero to move forward, or below zero to move backward.
6. Preview the motion. Particles should travel along the curve.

Follow Path applies a force. Other forces can still move particles away from the curve. Path Speed has no effect while Follow Path is zero.

Path Radius gives the stream thickness. Radius Aspect flattens it into a ribbon. Twist changes the ribbon's rotation along the path. Use the end behavior to let particles continue, loop, stop, or die at the end.

Control reference

Emitter

Controls where, when, and in what direction this system creates particles.

Emitter Shape

Chooses the form that supplies particle birth positions. Some choices reveal source-specific controls.

Options: Point · Line · Cylinder · Sphere · Box · Mesh · Light · Text · Formula · Mask · Layer.

Emitter Behavior

Chooses when and where this system creates particles. Parent-based modes only affect child emitters.

Options: Continuous · Static · From Parent's Particles · On Parent Death · From Parent Position · Burst.

Particles/sec

Sets how many particles are created each second. Emission from parent particles applies this rate to each living parent particle.

Particle Count

Sets the total particles created for a static field or one-shot burst. Grid layouts can use their axis counts instead.

Position

Moves the source in three-dimensional composition space. X moves right, Y moves down, and Z moves deeper into the scene.

Emitter Size

Chooses whether one value scales every source dimension or each axis can be adjusted separately.

Options: XYZ Linked · Independent.

Emitter Size (Uniform)

Scales the source equally on all three axes.

Emitter Size X

Sets the source's size along X. Box and Line read it as the full width; Cylinder reads it as the full width of its base; Sphere uses it as the diameter for all three axes and ignores Y and Z, so a sphere fits the box of the same size.

Emitter Size Y

Sets the source's size along Y. Box and Line read it as the full height; Cylinder reads it as the full height. Sphere ignores it and takes its diameter from Emitter Size X.

Emitter Size Z

Sets the source's size along Z. Box and Line read it as the full depth; Cylinder reads it as the full depth of its base. Sphere ignores it and takes its diameter from Emitter Size X.

Direction Spread

Widens or narrows the cone of initial particle directions. Zero sends particles one way; 360 degrees sends them in all directions.

Direction Random

Blends area-source emission between firing outward from the shape and firing along the aimed Direction Spread cone. It does not affect point, light, or static emission.

X Rotation

Rotates the source around the X axis. Values can pass 360 degrees for continuous turns.

Y Rotation

Rotates the source around the Y axis. Values can pass 360 degrees for continuous turns.

Z Rotation

Rotates the source around the Z axis. Values can pass 360 degrees for continuous turns.

Velocity

Sets how fast particles move when they are born.

Velocity Random

Randomizes each particle's starting speed around the base velocity. Higher values create a wider speed range.

Inherit Velocity

Adds the source's movement to newly born particles. Higher values make moving or animated sources fling particles more strongly.

Spacing

Chooses random placement or a regular lattice inside the selected distribution. Mesh surfaces stay random - a lattice is not available there yet.

Options: Random · Grid.

Distribution

Chooses whether particles start throughout the shape, along its boundary, or on its surface. On 3D shapes Edge and Surface are the same thing. Point and Line ignore this, and Mask sources use Emit From instead.

Options: Fill · Edge · Surface.

Up Axis

Chooses the world axis used as the source's reference direction before rotation is applied.

Options: X · Y · Z.

Random Seed

Changes the repeatable random arrangement without changing the other settings. The same value recreates the same variation.

Mesh

Controls the OBJ surface that acts as a particle source.

Used with: **Emitter Shape = Mesh.**

Show Source Body

Shows the mesh source body in the rendered scene with the particles. Turn it off to keep only the emitted particles visible.

Grid

Controls how particles occupy an even grid across a supported emitter shape.

Used with: **Spacing = Grid.**

Grid Count X

Sets the number of lattice positions along the X axis.

Grid Count Y

Sets the number of lattice positions along the Y axis.

Grid Count Z

Sets the number of lattice positions along the Z axis.

Grid Sampling

Chooses whether a curved grid keeps every division or uses fewer positions where its physical width becomes smaller. Grid Count X remains the maximum around the widest ring.

Options: Fixed Divisions · Uniform Spacing.

Grid Stagger

Offsets alternating grid rows or rings by part of a cell. A half-cell value creates a brick or honeycomb arrangement.

Parent Particle Pattern

Controls where and when a child system emits from its parent system's live particles.

Used with: **Emitter Behavior = From Parent's Particles.**

Emission Pattern

Chooses how births move across a parent emitter's living particles. Use Random for an even sample, Cycle for a scan, or Pulse for timed bursts.

Options: Random · Cycle · Pulse.

Pattern Rate (Hz)

Sets how often the pattern scans or pulses each second.

Pattern Width

Sets the size of the scanning window or the active part of each pulse. Smaller values create tighter sweeps or shorter bursts.

Burst

Shapes a one-shot burst: how many frames it lasts and how quickly it tails off.

Used with: **Emitter Behavior = Burst.**

Burst Frames

Spreads a one-shot burst across this many frames. More frames create a slower, heavier release.

Burst Decay

Shapes how particles are distributed across a multi-frame burst. Higher values place more particles near the start without changing the total.

Emitter Material

Controls the visible color, glow, and surface response of a mesh or text emitter body.

Used with: **Emitter Shape = Mesh or Emitter Shape = Text.**

Color

Changes the visible source body's surface tint.

After Effects label: **Emitter Color.**

Metallic

Controls how strongly the visible source body reflects light like metal.

After Effects label: **Emitter Metallic.**

Roughness

Changes how sharp or broad the light highlight is on the visible source body. Specular controls how bright that highlight is.

After Effects label: **Emitter Roughness.**

Specular

Sets how bright the light highlight is on the visible source body. Roughness still controls how sharp or broad it is. At 0 the highlight is gone; at 1 it is at full strength.

After Effects label: **Emitter Specular.**

Environment

Lights the visible source body with the surrounding environment. It costs far less than Reflections because it adds light without tracing the particles. The environment type is shared with the particles' Environment setting.

After Effects label: **Emitter Environment**.

Reflections

Reflects the scene's particles and the body's own surfaces in the visible source body. Set it to 0 to leave the body flat, which is how it read before this control existed.

After Effects label: **Emitter Reflections**.

Reflection Blur

Softens the source body's reflections beyond its own Roughness. At 0 they match the body's Roughness; at 100 they are fully blurred. The body has its own control so blurring the particles' reflections no longer blurs it too.

After Effects label: **Emitter Reflection Blur**.

Glow

Makes the visible source body appear self-lit. Higher values create a brighter core.

After Effects label: **Emitter Glow**.

Fresnel

Adds a colored halo around the visible source body's silhouette. Higher values strengthen the rim.

After Effects label: **Emitter Fresnel**.

Light Options

Controls which After Effects lights emit particles and how their intensity affects emission.

Used with: **Emitter Shape = Light**.

Light Names

Sets the name prefix that marks which composition Light layers emit particles. Every light whose name starts with the prefix becomes a particle source.

Particles/sec from Intensity

Makes brighter selected lights emit more particles than dimmer lights. When off, every selected light uses the same base rate.

Text Options

Controls how a text layer's glyphs become a particle source.

Used with: **Emitter Shape = Text**.

Extrusion

Extends the text body into a three-dimensional solid. A value of zero keeps it flat.

Depth

Rounds or chamfers the front and back edges of extruded text. Higher values deepen the edge treatment.

After Effects label: **Bevel Depth**.

Steps

Controls how many segments form the text bevel. More steps make the edge rounder.

After Effects label: **Bevel Steps**.

Show Text

Shows the filled text body in the rendered scene with the particles. Turn it off to keep only the emitted particles visible.

Layer Options

Controls how a layer's image and alpha channel become a particle source.

Used with: **Emitter Shape = Layer**.

Freeze Source

Samples the layer source at its starting frame and keeps that emission pattern fixed. Leave it off to follow the source's frame-by-frame changes.

Path

Turns a path source from a shape particles are scattered on into a path they travel along. Available on Line, Formula and Mask sources.

Used with: **Emitter Shape = Line or Emitter Shape = Formula or Emitter Shape = Mask**.

Emit Start

Sets where along the curve particles start being born, as a percentage of its length. Match it to Emit End to birth everything at a single point, so particles travel the path instead of already covering it.

Emit End

Sets where along the curve particles stop being born. An end below the start wraps the span across the curve's seam, the way a hue range does, which is what closed figures need.

Follow Path

Steers particles along the emitter's curve. The curve pulls as a force rather than pinning position, so gravity, turbulence and every other force still apply at any setting. At 0 the curve only places particles; it does not move them.

Path Speed

Sets how fast particles travel along the curve, in pixels per second. Negative values run them backwards. It does nothing until Follow Path is above 0.

Path Radius

Gives the curve thickness so it reads as a stream rather than a wire. Distribution picks solid or hollow: Fill makes a solid tube, Surface and Edge make only its skin.

Radius Aspect

Flattens the tube into a ribbon. 0 keeps it round; positive values flatten it into the curve's own plane, negative values stand it up into depth. Whichever axis survives keeps the full Path Radius.

Twist Start

Rolls the ribbon around the curve at the start of the path. It only shows once Radius Aspect is off 0 - a round tube looks the same at every roll.

Twist End

Rolls the ribbon at the end of the path, blending from Twist Start along the way. Equal values hold the ribbon at a constant angle; a difference of 180 gives it a half turn over the path.

At End

Chooses what a particle does when it reaches the end of the curve: carry on with the velocity it had, loop back to the start, park there, or die. A curve that closes on itself carries on around either way.

Options: Release · Loop · Stop · Die.

Formula

Builds a particle source from a parametric curve. Curve Type picks a wave, a spiral or a Lissajous figure, and each one has its own controls below.

Used with: **Emitter Shape = Formula.**

Curve Type

Chooses the curve the Formula emitter lays particles along: a line displaced by a waveform, a helix, or three independent sine axes. Each type has its own controls below, and the inactive ones grey out.

Options: Wave · Spiral · Lissajous.

Wave

Shapes the Formula curve as a line displaced by one or two waveforms.

Used with: **Curve Type = Wave.**

Wave 1 Type

Chooses the waveform used to shape the first curve.

Options: Sine · Triangle · Square · Sawtooth · Noise.

Wave 1 Frequency

Sets how many first-wave cycles fit across the source line.

Wave 1 Amplitude

Sets how far the first wave displaces the source line. Negative values flip the wave.

Wave 1 Phase

Moves the first wave along the source line without changing its shape. Animate it to make the wave travel.

Wave 1 Axis

Chooses whether the first wave bends vertically or into depth.

Options: Vertical · Depth.

Wave 2 Type

Chooses the waveform used to shape the second curve.

Options: Sine · Triangle · Square · Sawtooth · Noise.

Wave 2 Frequency

Sets how many second-wave cycles fit across the source line.

Wave 2 Amplitude

Sets how far the second wave displaces the source line. Negative values flip the wave.

Wave 2 Phase

Moves the second wave along the source line without changing its shape. Animate it to make the wave travel.

Wave 2 Axis

Chooses whether the second wave bends vertically or into depth.

Options: Vertical · Depth.

Mix Mode

Chooses whether the two waves crossfade or add together. The blend amount only affects Fade mode.

Options: Fade · Sum.

Phase Offset

Moves both waves along the source line together. Animate it to make the full curve travel.

Mix

Balances the first and second waves in Fade mode. The endpoints use only one wave.

Spiral

Shapes the Formula curve as a helix advancing along its length.

Used with: **Curve Type = Spiral.**

Turns

Sets how many full revolutions the spiral makes over its length. Negative values wind it the other way.

Start Angle

Rotates the whole spiral around its long axis. Animate it to spin the coil.

Start Radius

Sets the spiral's radius where the curve begins. Match it to End Radius for an even helix, or set it to 0 for a cone that opens out.

End Radius

Sets the spiral's radius where the curve ends.

Radial Bias

Skews how the radius travels from start to end. 50 spreads it evenly. Lower values keep a tight core with loose outer coils; higher values flare early then creep.

Length Bias

Skews how the coils space out along the curve. 50 spaces them evenly; lower values bunch them at the start, higher values at the end.

Lissajous

Shapes the Formula curve from three independent sine axes, so the figure is three-dimensional by nature. The emitter size sets each axis's reach.

Used with: **Curve Type = Lissajous**.

Frequency X

Sets how many cycles the curve makes along X. The ratio between the three frequencies is what picks the figure. Whole numbers close the figure; fractional ones leave it open.

Frequency Y

Sets how many cycles the curve makes along Y.

Frequency Z

Sets how many cycles the curve makes along Z. At 0 the figure stays flat and faces the camera; raise it to lift the curve into depth.

Phase Y

Shifts Y against X. This is what opens a flat diagonal line out into a figure - at 90 degrees a matched pair of frequencies becomes a circle.

Phase Z

Shifts Z against X. X carries no phase of its own - it is the reference the other two are measured against.

Phase Offset

Advances every axis together along the curve. Animate it on a continuous emitter to make particles stream around the figure.

After Effects label: **Lissajous Phase Offset**.

Mask Options

Controls which After Effects mask path becomes a particle source.

Used with: **Emitter Shape = Mask**.

Path

Chooses the mask outline that supplies particle birth positions.

All Masks

Uses every mask on the source instead of only the selected path.

Emit From

Chooses whether particles are born along the mask outline or fill a closed mask's interior. An open mask cannot be filled, so it falls back to the outline. Masks use this instead of Distribution.

Options: Path · Face (Closed Path).

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03 / Particle

Particle controls define what each particle looks like. They appear in **PARTICLE** for the selected system. Entropy draws the selected particle type as the simulation advances.

Choose a particle type

Particle Type	What it draws	Useful starting point
Sprite	A flat shape or image.	Dust, sparks, graphic shapes, image particles.
Geometry	A three-dimensional mesh for each particle.	Debris, beads, crystals, solid objects.
Volume	Density combined into a cloud or merged form.	Smoke, plumes, soft clouds, liquid-like blobs.
Tracer	A three-dimensional tube along particle paths.	Trails, filaments, flowing lines.

Start with life, size, and opacity. Then tune the controls for the selected type.

Life, size, and opacity

Life (seconds) sets how long timed particles survive. Longer life keeps more particles in the scene when the creation rate stays constant. **Size** sets their base scale. **Opacity** sets their visibility.

An over-life curve changes a value as a particle ages. In **Size & Opacity Graphs**, choose a channel and a domain. A domain is the input that moves through the graph: particle life, or an axis of a static emitter.

For a timed particle fade:

1. Select Opacity and the Life domain.
2. Choose a fade-in/out curve, or draw a curve that starts low, rises, and ends low.
3. Replay the system. Particles should appear and disappear gradually.

For Static emission, use X, Y, or Z to vary the result across the source. Static particles do not progress through life.

Click empty graph space to add a point. Drag a point to move it. Double-click an interior point to remove it. Reverse flips a curve horizontally; Invert flips it vertically.

Color and gradients

A gradient is a row of color stops. Entropy selects colors from that row.

Color Mode	Result
Solid	One color swatch.
Gradient	A gradient sample selected by the Gradient Axis.
Random from gradient	A random gradient sample for each particle.
From Parent / Light	Color from the parent or source light.
From Layer	Color from the source layer.

Gradient Axis can use Life, X position, Y position, Z position, or Index. Index means the particle's position in the sequence.

Click the gradient bar to add a stop. Use Reverse to reverse color order. Use Distribute Evenly to space stops evenly without changing their order or colors.

Sprites

Choose Circle, Square, Star, or Custom. Custom uses an assigned image from Custom Sprites. **Color Apply** offers None, Tint, and Fill when you need to control how particle color affects that image.

Star controls adjust two sets of rays and the center glow. Glow adds a soft halo. Drop Shadow adds an offset, softened copy behind each sprite to separate overlaps.

Geometry and materials

Choose a built-in Mesh Type, Custom for an OBJ model, or Mixed for a selection of shapes. Built-in shapes include Sphere, Cube, Pyramid, Torus, Icosahedron, Cylinder, Cone, Octahedron, and Capsule.

A material controls how the surface responds to light. **Material** presets set Roughness and Metallic together. Choose **Custom** to edit those two values yourself. **Specular** remains available to control highlight brightness.

Roughness changes highlight width. Metallic shifts the surface toward a metal response. Specular changes highlight brightness. These controls solve different problems.

For glass-like Geometry, increase Transmission. **IOR** means index of refraction; it controls how strongly light bends. Thickness changes apparent depth and absorption. White Absorption keeps glass clear. A colored Absorption produces a tint that grows with the light's path through the shape.

Dispersion separates red, green, and blue refraction. Start low. Any value above zero adds substantial glass rendering work.

Volumes

Volume Density controls optical thickness. Diffusion lets aging particles spread and become thinner. Erosion breaks up cloud edges. Metaball blends the soft density toward a merged, hard surface.

Curl controls fold the density into billows. Lower Curl Scale makes broader folds; higher values make finer folds. Curl Evolution changes how quickly the pattern evolves. These controls shape the rendered density. Turbulence changes particle motion.

Voxel Detail raises the detail budget. A voxel is one cell of the 3D volume grid. Higher detail costs more to render. Render Margin enlarges the region used to draw the volume. Increase it if the cloud clips at its bounds, then check whether fine detail remains sufficient.

Diffusion depends on age, so it does not spread a Static emitter over time.

Tracers

Tracers turn motion into connected tubes. Establish a useful particle path before tuning the tube.

Tube Sides changes the cross-section from angular to round. Taper Start narrows the oldest tail. Taper End narrows the leading tip. Trail Fade fades toward the oldest tail.

When a tracer follows its own particles, **Trail Follows Forces** lets the recorded trail continue moving with Wind, Vortex, and Turbulence. Turn it off to leave the recorded path in place. Geometry and Tracer surfaces share the 3D Material controls.

Control reference

Particle

Controls the life, size, color, opacity, and render style of each particle.

Particle Type

Chooses how each particle is drawn: as a flat sprite, a 3D shape, a volume, or a tube that follows its path.

Options: Sprite · Geometry · Volume · Tracer.

Life (seconds)

Sets how long each particle remains alive after it is born.

Life Random

Adds a stable random spread around the set lifetime. A value of 0 gives every particle the same life.

Size

Sets the base size of every particle before random variation and the size-over-life curve.

Size Random

Varies each particle's size above and below the base size. A value of 0 keeps sizes uniform.

Size Over Life

Shapes how particle size changes from birth to death. The curve multiplies the base size.

After Effects label: **Size Graph**.

Opacity

Sets the base visibility of every particle before random variation and the opacity-over-life curve. Lower values make particles more transparent.

Opacity Random

Varies each particle's transparency around the base opacity. A value of 0 keeps opacity uniform.

Opacity Over Life

Shapes how particle opacity changes from birth to death. The curve multiplies the base opacity.

After Effects label: **Opacity Graph**.

Color Mode

Chooses how each particle receives color: one swatch, a gradient, a random gradient sample, a parent or light, or a layer.

Options: Solid · Gradient · Random from gradient · From Parent / Light · From Layer.

Color

Sets the swatch used by Solid mode. It also provides the fallback when an inherited color source is not available.

Gradient

Defines the colors used by Gradient and Random from gradient modes. Add or move stops to change the color sequence.

Gradient Axis

Chooses what selects a point along the gradient: particle age, position, or index.

Options: Life · X position · Y position · Z position · Index.

Blend Mode

Controls how particle colors combine where particles overlap. Normal preserves transparency, Add accumulates light, and Screen gives a softer brightening.

Options: Normal · Add · Screen.

Sprite

Controls the appearance of flat, camera-facing or oriented sprite particles.

Used with: **Particle Type = Sprite**.

Sprite Shape

Chooses the silhouette used to draw each sprite. Custom uses the texture assigned in Custom Sprites.

Options: Circle · Square · Star · Custom.

Color Apply

Chooses how particle color combines with a custom texture: preserve its color, tint it, or fill its alpha shape.

Options: None · Tint · Fill.

Facing

Chooses whether sprites face the camera or behave as flat cards in 3D space, with optional lighting.

Options: 2D at Camera · 3D · 3D (with Lighting).

Particle Feather

Controls the width of each sprite's soft edge. A value of 0 gives a hard edge; higher values soften more of the particle.

Star Options

Controls the ray counts, ray lengths, and center glow of star-shaped sprites.

Used with: **Sprite Shape = Star**.

Points 1

Sets the number of primary rays in each star particle.

P1 Size

Sets the length of the primary star rays.

Points 2

Adds a second set of rays to each star particle. Set zero to remove them.

P2 Size

Sets the length of the secondary star rays.

Star Glow

Brightens and enlarges the luminous core at the center of each star particle.

Custom Sprites

Loads and mixes custom images for sprite particles.

Used with: **Particle Type = Sprite**.

Clip Playback

Chooses how an animated sprite source advances for each particle, including timeline sync, birth-based playback, looping, lifetime fit, and frozen frames.

Options: Sync to Timeline · Play from Birth · Loop from Birth · Fit to Lifetime · Freeze Random Frame · Play from Random · Loop from Random · Freeze First Frame.

Playback Seed

Changes the random starting frame used by the random playback modes without changing particle order.

Custom Sprite 1

Includes texture slot 1 in the set assigned across custom-sprite particles.

Custom Sprite 2

Includes texture slot 2 in the set assigned across custom-sprite particles.

Custom Sprite 3

Includes texture slot 3 in the set assigned across custom-sprite particles.

Custom Sprite 4

Includes texture slot 4 in the set assigned across custom-sprite particles.

Sprite Order

Chooses whether enabled texture slots are dealt randomly or cycled in sequence as particles are born.

Options: Random · Sequential.

Order Seed

Reshuffles which enabled texture slot each particle receives when the order is Random.

Glow

Adds and shapes a soft light halo around sprite particles.

Used with: **Particle Type = Sprite**.

Soft Glow

Adds a soft halo around each sprite. Set it to 0 to remove the halo.

Glow Size

Changes how far the halo extends beyond each sprite. Higher values make a broader glow.

Drop Shadow

Adds a soft offset shadow behind each sprite particle to separate overlapping particles.

Used with: **Particle Type = Sprite**.

Shadow Opacity

Controls how strongly the displaced sprite shadow appears. Set it to 0 to hide the shadow.

Shadow Color

Changes the tint of the shadow beneath each sprite.

Shadow Direction

Rotates the shadow offset around the sprite. At 135 degrees, the shadow falls down and to the right.

Shadow Distance

Moves the shadow farther from or closer to the sprite. The offset scales with particle size.

Shadow Softness

Blurs the shadow edge. Higher values make the shadow broader and softer.

Geometry

Controls which three-dimensional meshes particles use and how those meshes are built.

Used with: **Particle Type = Geometry**.

Mesh Type

Chooses one 3D shape for all particles, or a mix of enabled shapes.

Options: Sphere · Cube · Pyramid · Torus · Icosahedron · Cylinder · Cone · Octahedron · Capsule · Custom · Mixed.

Bevel

Rounds cube edges while keeping the faces flat. Higher values make the corners more curved.

Mesh Quality

Sets how finely the round shapes are built (spheres, toruses, cylinders, cones and capsules), so a close-up stops showing facets on the silhouette. The cost is per particle, so raise it for a few large shapes rather than a million small ones.

Sphere

Controls the proportions and detail of sphere particles.

Used with: **Mesh Type = Sphere or Mesh Type = Mixed**.

Use Sphere

Includes spheres when Mesh Type is Mixed. Particles divide across all enabled shapes.

Sphere Aspect

Stretches or compresses spheres along their local Y axis.

Sphere Size

Scales spheres on all axes without changing the other enabled shapes.

Cube

Controls the proportions and edge treatment of cube particles.

Used with: **Mesh Type = Cube or Mesh Type = Mixed**.

Use Cube

Includes cubes when Mesh Type is Mixed. Particles divide across all enabled shapes.

Cube Aspect

Stretches or compresses cubes along their local Y axis.

Cube Size

Scales cubes on all axes without changing the other enabled shapes.

Pyramid

Controls the proportions and detail of pyramid particles.

Used with: **Mesh Type = Pyramid or Mesh Type = Mixed.**

Use Pyramid

Includes pyramids when Mesh Type is Mixed. Particles divide across all enabled shapes.

Pyramid Aspect

Stretches or compresses pyramids along their local Y axis.

Pyramid Size

Scales pyramids on all axes without changing the other enabled shapes.

Torus

Controls the ring proportions and detail of torus particles.

Used with: **Mesh Type = Torus or Mesh Type = Mixed.**

Use Torus

Includes torus shapes when Mesh Type is Mixed. Particles divide across all enabled shapes.

Torus Aspect

Stretches or compresses torus shapes along their local Y axis.

Torus Size

Scales torus shapes on all axes without changing the other enabled shapes.

Icosahedron

Controls the proportions and detail of icosahedron particles.

Used with: **Mesh Type = Icosahedron or Mesh Type = Mixed.**

Use Icosahedron

Includes icosahedra when Mesh Type is Mixed. Particles divide across all enabled shapes.

Icosahedron Aspect

Stretches or compresses icosahedra along their local Y axis.

Icosahedron Size

Scales icosahedra on all axes without changing the other enabled shapes.

Cylinder

Controls the proportions and detail of cylinder particles.

Used with: **Mesh Type = Cylinder or Mesh Type = Mixed.**

Use Cylinder

Includes cylinders when Mesh Type is Mixed. Particles divide across all enabled shapes.

Cylinder Aspect

Stretches or compresses cylinders along their local Y axis.

Cylinder Size

Scales cylinders on all axes without changing the other enabled shapes.

Cone

Controls the proportions and detail of cone particles.

Used with: **Mesh Type = Cone or Mesh Type = Mixed.**

Use Cone

Includes cones when Mesh Type is Mixed. Particles divide across all enabled shapes.

Cone Aspect

Stretches or compresses cones along their local Y axis.

Cone Size

Scales cones on all axes without changing the other enabled shapes.

Octahedron

Controls the proportions and detail of octahedron particles.

Used with: **Mesh Type = Octahedron or Mesh Type = Mixed.**

Use Octahedron

Includes octahedra when Mesh Type is Mixed. Particles divide across all enabled shapes.

Octahedron Aspect

Stretches or compresses octahedra along their local Y axis.

Octahedron Size

Scales octahedra on all axes without changing the other enabled shapes.

Capsule

Controls the proportions and detail of capsule particles.

Used with: **Mesh Type = Capsule or Mesh Type = Mixed.**

Use Capsule

Includes capsules when Mesh Type is Mixed. Particles divide across all enabled shapes.

Capsule Aspect

Stretches or compresses capsules along their local Y axis.

Capsule Size

Scales capsules on all axes without changing the other enabled shapes.

Custom

Loads and configures a custom OBJ mesh for geometry particles.

Used with: **Mesh Type = Custom or Mesh Type = Mixed.**

Use Custom Mesh

Includes the selected custom mesh when Mesh Type is Mixed. Particles divide across all enabled shapes.

Custom Aspect

Stretches or compresses the selected custom mesh along its local Y axis.

Custom Size

Scales the selected custom mesh on all axes without changing the other enabled shapes.

Tracer

Turns particle paths into continuous three-dimensional trails and controls their shape.

Used with: **Particle Type = Tracer.**

Tube Sides

Changes the tube cross-section from angular to round. Higher values look smoother and use more geometry.

Taper Start

Narrows the tracer's oldest tail toward a point across the chosen percentage of its current length. Set it to 0 for a flat-width tail.

Taper End

Narrows the tracer's leading tip toward a point across the chosen percentage of its current length. Set it to 0 for a flat-width tip.

Trail Fade

Fades tracer opacity from the leading tip toward the oldest tail across the chosen percentage of its current length. Set it to 0 to keep opacity even along the trail.

Trail Follows Forces

When the tracer follows its own particles, this lets the recorded trail continue moving with Wind, Vortex, and Turbulence. Turn it off to leave the recorded path in place.

3D Material

Controls how geometry and tracer particles respond to light and color.

Used with: **Particle Type = Geometry** or **Particle Type = Tracer**.

Material

Sets the surface finish from a named pair of Roughness and Metallic values. Custom hands both back to the sliders; any other choice drives them, and the two sliders turn off so they cannot show one value while the render uses another. Glass is separate and is not affected.

Options: Custom · Matte Plastic · Plastic · Glossy Plastic · Rubber · Ceramic · Brushed Metal · Polished Metal · Chrome.

Emission

Adds a body-colored highlight at the camera-facing center of each Geometry or Tracer particle. Higher values make the core brighter.

Fresnel Intensity

Boosts the lit surface at the silhouette with positive values, or at the camera-facing center with negative values, tinted by the highlight color. Dark regions stay dark. Set it to 0 to remove the effect.

Fresnel Sharpness

Controls how narrow the edge or center highlight is. Higher values make the highlight tighter.

Fresnel Color

Changes the color used by the edge or center highlight.

Reflections

Sets reflections of scene content, including particles and Tracers. Environment Strength controls the selected environment map separately.

Environment Strength

Sets the amount of the selected environment map in Geometry and Tracer surfaces. Reflections controls scene content separately. Use Environment can mute the map without changing this value.

Environment

Selects this emitter's environment map. Each emitter keeps its own choice. Use Environment and Environment Strength control its contribution.

Options: Studio · Sunset · Sky · Night · Neon · Aurora · Vapor · Candy · Ember · Ocean · Golden Hour · Ultraviolet · Emerald · Nebula · Prism · Disco · Zebra · Cyber · Checker · Rings · Duotone · Skyline · Downtown · Loft · Atrium · Corridor · Cathedral · Alley · Storm · Plasma.

Reflection Blur

Softens reflections beyond the surface's own Roughness. At 0 they match Roughness exactly; at 100 they are fully blurred whatever Roughness says. Use it to sit a tight highlight on a soft reflection.

Reflection Falloff

Fades environment reflections toward the edges of Geometry and Tracer surfaces. At 0 they wrap evenly around the shape. At 100 they fade out at the silhouette. Negative values invert it: full at the silhouette, fading toward the point that faces the camera. The default is 50 so a sphere falls off around the edges instead of looking uniformly wrapped.

Reflection Quality

Sets how many rays each blurred reflection casts. Higher settings remove grain at a higher render cost. Sharp reflections cost the same at every setting.

Options: Low · Medium · High.

Roughness

Changes how sharp or broad the light highlight is on Geometry and Tracer surfaces. Specular controls how bright that highlight is. It is only editable while Material is set to Custom - any other preset drives this value.

Specular

Sets how bright the light highlight is on Geometry and Tracer surfaces. Roughness still controls how sharp or broad it is. At 0 the highlight is gone; at 1 it is at full strength. This stays available when a Material preset is selected.

Metallic

Makes Geometry and Tracer surfaces behave more like metal. Higher values give stronger colour-tinted highlights and less matte body colour. It is only editable while Material is set to Custom - any other preset drives this value.

Transmission

Makes Geometry particles see-through. IOR and Thickness bend the view of text, meshes, volumes, sprites, and tracers behind them. Use Opacity to fade the whole particle.

IOR

Sets how strongly the glass bends what is behind it, and how much of the far face turns to mirror inside the gem. Around 1.33 reads as water, 1.5 as glass, 2.4 as diamond. Higher values widen the bright band inside; Thickness does not change it.

Thickness

Sets how deep the glass reads. Scales the Absorption tint by the light's path, and how far the background is warped. With Absorption at white only the warp changes. It does not shape the interior, which comes from IOR and the mesh.

Dispersion

Splits the refraction into separate red, green and blue paths. Small values give a chromatic fringe; high values smear the background into rainbows. Any value above 0 runs the glass three times per pixel.

Absorption

Tints the glass by how far light travels through it, scaled by Thickness. White stays clear at any Thickness; a teal or amber reads as bottle glass, deepest where the mesh is thickest.

Environment

Controls whether this emitter uses its selected environment map.

Use Environment

Includes the selected environment map. Turn off to keep scene reflections and transmission while preserving the saved environment amounts.

Volume

Controls the density, shape, shading, and detail of volumetric particles.

Used with: **Particle Type = Volume**.

Volume Density

Sets how much optical mass each particle contributes to Volume rendering. Higher values make the smoke thicker and more opaque.

Render Margin

Expands the predicted box used to render the volume. More margin can prevent clipping, but it spreads detail across a larger space.

Voxel Detail

Raises the voxel budget used to build the volume. Higher values make forms smoother and reveal finer structure, at a higher render cost. Dense scenes reach the grid's ceiling before the top of the range.

Diffusion

Spreads each volume splat as it ages while preserving its mass. Older smoke becomes larger and thinner instead of simply shrinking away. Static emitters don't age, so this has no effect on them.

Diffusion Fade In

Holds a particle at its authored size before diffusion begins. Higher values preserve a crisp emission area longer without changing the final spread.

Erosion

Carves irregular detail into the outer density of the cloud while keeping the dense core more solid. Raise it to break up smooth, spherical edges.

Erosion Detail

Sets the size of carved edge features. Lower values create broad soft lobes; higher values create finer shredded wisps.

Metaball

Blends translucent smoke density toward a hard, merged surface. A value of 0 keeps wispy volume shading; 1 creates liquid-like blobs and can hide erosion detail.

Curl Strength

Warp the volume's density with a curl field. A value of 0 disables the warp; higher values create stronger folds and billows.

Curl Scale

Sets the size of curl features in the volume. Lower values create broad billows; higher values create smaller, finer folds.

Curl Octaves

Adds progressively finer layers to the volume curl warp. More layers increase detail while keeping the overall strength similar.

Curl Evolution

Sets how quickly the volume's curl pattern changes over time. A value of 0 freezes the warp.

Curl Fade In

Keeps curl deformation out of the plume's base, then ramps it into the body. Higher values preserve a longer clean neck before folds appear.

Curl Follows Motion

Controls whether curl detail follows average cloud motion or the individual material. Values near 1 follow material more closely; lower values stay smoother and values above 1 exaggerate smear.

Curl Aspect

Stretches curl features along the direction of travel. A value of 1 keeps features round; higher values lengthen them and lower values compress them.

Directional Scatter

Biases scattered light to travel forward through the volume. Higher values emphasize view-dependent rims and backlighting.

Multiple Scattering

Adds the appearance of light bouncing through dense material, lifting dark interiors and keeping clouds brighter. A value of 0 uses single scattering only.

Shadow Density

Sets how strongly the volume blocks light within itself. Higher values sculpt deeper shaded sides and lobes; 0 removes self-shadowing.

Rotation

Controls each particle's starting orientation and how it turns over its life.

Orient to Motion

Aligns each particle's local Y axis with its direction of travel. Applies to Geometry particles and to sprites set to a 3D facing. Intermediate values blend it with the manual rotation.

Orient to Motion Fade-in

Eases motion alignment in over this many frames after a particle is born. At 0 the orientation applies immediately.

Rotate X

Adds a fixed rotation around each particle's local X axis.

Rotate Y

Adds a fixed rotation around each particle's local Y axis.

Rotate Z

Adds a fixed rotation around each particle's local Z axis.

Random Rotation

Gives each particle a stable random angle on every axis. Higher values create a wider spread of orientations.

Spin X

Rotates particles continuously around their local X axis as they age. Negative values reverse the direction.

Spin Y

Rotates particles continuously around their local Y axis as they age. Negative values reverse the direction.

Spin Z

Rotates particles continuously around their local Z axis as they age. Negative values reverse the direction.

Random Spin

Varies each particle's spin speed around the values set on the three Spin axes. Higher values create more variation.

Random Spin Distribution

Biases the random spin speeds toward slower or faster values. A value of 0.5 keeps the spread even.

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04 / Forces

The **FORCES** controls move particles after birth. Use them on the selected system to bend paths, create flow, or bring particles back toward their starting points. Entropy applies forces automatically as simulation time advances.

A force changes motion over time. A displacement changes the drawn position without permanently changing that motion. Use forces for drifting paths. Use displacements for a shape that must come apart and return.

Choose a force

Force	Effect
Gravity	Constant vertical acceleration. Positive values make particles fall; negative values lift them.
Buoyancy	Lift that fades as particles cool. It needs aging particles.
Drag	Reduces velocity over time.
Wind	Pushes continuously along X, Y, and Z.
Turbulence	Bends motion with an evolving curl field.
Vortex	Spins particles around an axis and can pull them toward it.
Attractor	Pulls toward a target. Negative strength pushes away.
Spring	Pulls particles toward their birth positions. Damping reduces bouncing.

Set one force at a time so you can see its effect.

Turbulence Scale controls the size of swirls: higher values make finer motion. Speed controls pattern evolution. Octaves adds finer layers. Fade In delays full turbulence for newborn particles; Static emission does not use this age-based fade.

Vortex strength sets spin. Pull sets attraction toward the axis. A negative value reverses each effect. Vortex Anchor selects whether the center follows the emitter or uses an absolute scene position.

Attractor can use up to eight After Effects Light layers whose names start with **Attractor**. Composer cannot preview those composition lights; enabling this option removes its manual attractor preview.

Reversible motion

Fractal Noise Displacement offsets particles with layered noise. **Disperse** scatters them along stable random directions. Return either strength to zero to remove that offset.

Movement offsets released particles along X, Y, and Z. **Oscillate** creates repeating wave motion or random shimmer. A wave's frequency controls cycles per second; wavelength controls distance between crests.

Displacement can also affect size, opacity, and hue. Its size effect works even with displacement strength at zero. The opacity effect only dims particles; it does not exceed the base opacity.

Returning a displacement to zero removes that displacement. If forces also moved the particles, their simulated positions can still have changed.

Release particles with Force Mapping

Force Mapping uses a pattern to hold or release particles. The pattern can come from an editable graph or an After Effects layer's alpha channel. Each particle reads the map at its birth position, so its place in the map stays fixed as it moves.

Amount in Force Mapping controls how strongly the map gates Wind, Turbulence, Vortex, and Attractor. At full amount, low or transparent regions hold particles and high or opaque regions release them.

For a graph-driven breakup:

1. Create a Static Text or Mesh system.
2. Choose Graph as the Force Mapping source and raise **Amount** to full.
3. Choose the map axis that crosses the shape in the desired direction.
4. Set Dissolve to **-1** to hold the particles.
5. Add Disperse and use Affect Disperse to suppress it while particles are held.
6. Animate Dissolve toward **+1** in After Effects.
7. Preview the transition. The shape should release across the chosen axis.

Feather controls the width of the release band. Stagger gives particles separate release moments within that band. Reverse mirrors the curve. Affect Size, Opacity, and Hue change the appearance during release. Negative size or opacity affects can bring a second system into view where the first disappears.

Release Kills ends each particle at the selected release threshold. This can trigger an **On Parent Death** child, including from a Static source. Erode Body dissolves a visible text or mesh body across the same band.

Graph-source Delay postpones mapped appearance and displacement changes after release. Composer previews the graph source. Layer-source maps and map inversion require an After Effects check.

Time and keyframes

A keyframe stores a control value at a particular time in After Effects. Use keyframes there to animate changes such as source position or Dissolve.

Physics Time Scale changes simulation speed for every system on the layer. Zero freezes motion without clearing the current frame. Pre-run simulates time before frame zero so the first visible frame can contain an established stream.

Composer imports a snapshot of an animated layer. Inspect any keyframe warning when you apply it back. See [presets and After Effects](#).

Control reference

Forces

Controls the motion fields and constraints that move particles after emission.

Gravity

Adds constant vertical acceleration. Positive values make particles fall; negative values lift them.

Buoyancy

Adds lift that fades as particles cool, creating rising and rolling plumes. Negative values create a cooling downdraft. Static emitters don't age, so this has no effect on them.

Cooling

Sets how quickly buoyant lift fades over each particle's life. Higher values make particles rise sharply and stall sooner.

Drag

Reduces particle velocity over time. Higher values make motion settle sooner.

Force Mapping

Varies selected force strengths across the emitter, driven by a layer's alpha or by an editable curve.

Amount

Sets how strongly the map gates wind, turbulence, vortex, and attractor forces. At full amount, transparent regions hold particles while opaque regions release them.

Source

Chooses whether the gating pattern comes from an After Effects layer's alpha or the editable graph. Composer previews the graph source; the layer source resolves in After Effects.

Options: Layer · Graph.

Dissolve

Raises or lowers the entire graph to sweep particles from held to released. -1 holds all particles; +1 releases all particles.

Feather

Sets how wide the release band is as Dissolve sweeps. Lower values give a narrow front that travels across the whole shape; the Force Curve then only decides which parts go first.

Stagger

Spreads each particle's release moment across the Feather band. At 0 everything in the band is partly released together; at 100 each particle waits for its own moment and leaves from where it stood, like the crumbling body.

Force Curve

Shapes force release across the emitter, left to right. Each particle is read at the position it was born, so it keeps its place on the curve as it moves. Low points hold particles, high points release them.

Axis

Chooses which axis of the emitter's content the Force Curve runs along, so a graph wipe can travel across, down, or through the shape.

After Effects label: **Map Axis**.

Options: X · Y · Z.

Reverse

Mirrors the Force Curve so the wipe runs from the opposite side, for any curve shape.

Map Layer

Chooses the layer whose alpha gates the forces when Source is set to Layer. It is sampled at each particle's birth position across the emitter, so a particle keeps its place on the map as it moves.

Invert

Reverses which map regions hold or release particles. Composer currently stores this setting but does not apply it in the preview.

Affect Size

Scales particles by their Force Mapping release. Positive shrinks released particles away; negative grows them in from nothing, so a second system can appear where the first dissolves.

Affect Opacity

Fades particles by their Force Mapping release. Positive fades released particles out; negative fades them in from invisible, so a second system can take over where the first dissolves.

Affect Hue

Rotates particle color as the map releases each particle. The value sets the maximum hue shift in degrees.

Affect Delay

Delays the mapped size, opacity, hue, displacement, disperse, and oscillate changes after forces release a particle. The delay is measured in frames and applies to the Graph source.

Affect Feather

How much of a particle's release the Affects take to complete. Lower values make Affect Size and Opacity snap in or out the moment a particle releases; 1 spreads them over the whole release.

Affect Displacement

Suppresses fractal displacement while particles are held. At 100%, held particles stay crisp and released particles receive the full effect.

Affect Disperse

Suppresses disperse motion while particles are held. At 100%, held particles stay in place and released particles receive the full scatter.

Affect Oscillate

Suppresses oscillation while particles are held. At 100%, held particles stay still and released particles receive the full wave or shimmer.

Release Kills Particle

Kills each particle the moment its Force Mapping release reaches Kill At, so an On Parent Death child system can be born in its place. Works on static shapes too.

Kill At

The release level, in percent, at which Release Kills fires.

Erode Body

Dissolves the 3D text or mesh body across the Force Mapping band, so the surface crumbles at the same rate its particles appear. A wider Feather gives a wider zone of emergence.

After Effects label: **Release Erodes Body**.

Erode Scale

Sets the size of the largest bites the erosion takes out of the body, in pixels. Finer detail scales with it.

Wind

Pushes particles continuously in one direction.

Wind X

Pushes particles continuously along the horizontal X axis.

Wind Y

Pushes particles continuously along the vertical Y axis.

Wind Z

Pushes particles continuously forward or backward along the Z axis.

Turbulence

Adds flowing, irregular motion to particle paths.

Turbulence Strength

Sets how strongly the evolving curl field bends particle motion.

Turbulence Scale

Sets the size of turbulent swirls. Higher values produce smaller, finer motion.

Turbulence Speed

Sets how quickly the turbulence pattern changes over time. A value of 0 freezes the field.

Turbulence Octaves

Adds progressively finer layers to the broad turbulent motion. More layers create a busier, more detailed flow.

Turbulence Fade In

Sets how many seconds a new particle takes to receive full turbulence. Raise it to keep emission clean before the field takes hold. Static emitters don't age, so this has no effect on them.

Coherence

Blends stationary world-space noise toward larger swirls that travel with the flow. Higher values organize motion into broader rolls and shear.

Vortex

Pulls particles into rotating motion around a center or axis.

Vortex Strength

Sets the tangential force that spins particles around the vortex axis. Negative values reverse the rotation.

Vortex Pull

Pulls particles toward the vortex axis to tighten their orbit. Negative values push them away from the axis.

Vortex Axis X

Sets the X component of the vortex's rotation axis. Combine it with Y and Z to tilt the swirl.

Vortex Axis Y

Sets the Y component of the vortex's rotation axis. Combine it with X and Z to tilt the swirl.

Vortex Axis Z

Sets the Z component of the vortex's rotation axis. Combine it with X and Y to tilt the swirl.

Vortex Anchor

Chooses whether the vortex center follows the live emitter or stays at an absolute scene position.

Options: Emitter · World.

Vortex Center X

Places the vortex center along X. The value is an emitter-relative offset or an absolute scene position, according to Vortex Anchor.

Vortex Center Y

Places the vortex center along Y. The value is an emitter-relative offset or an absolute scene position, according to Vortex Anchor.

Vortex Center Z

Places the vortex center along Z. The value is an emitter-relative offset or an absolute scene position, according to Vortex Anchor.

Attractor

Pulls or pushes particles relative to a target point.

Use Lights

Uses up to eight After Effects Light layers whose names start with Attractor as force centers. Composer has no comp lights, so turning this on removes the manual attractor from the preview.

Attractor Strength

Pulls particles toward the attractor. Negative values turn it into a repulsor that pushes particles away.

Attractor X

Places the manual attractor along the horizontal X axis.

Attractor Y

Places the manual attractor along the vertical Y axis.

Attractor Z

Places the manual attractor forward or backward along the Z axis.

Attractor Range

Sets how far the attractor reaches. Its pull fades to zero at the edge of this range.

Spring

Pulls particles back toward the position they were born at, so they oscillate around a fixed point instead of drifting away.

Spring Strength

Pulls each particle back toward its birth position. Higher values create a tighter, faster return.

Spring Damping

Removes velocity from spring motion. Higher values reduce bouncing and make particles settle sooner.

Displacement

Groups the displacements: offsets that move particles away from where the simulation put them and let go when turned back down, unlike the forces above, whose push accumulates.

Fractal Noise

Displacement, reversible: offsets particles with layered noise to create detailed, organic distortion.

Strength

Offsets every particle with an evolving fractal-noise field. Returning the value to 0 restores the undisplaced shape.

After Effects label: **Displacement Strength**.

Scale

Sets the size of displacement features. Lower values make broad sweeps; higher values create finer variation.

After Effects label: **Displacement Scale**.

Speed

Sets how quickly the displacement pattern evolves. A value of 0 freezes the pattern for still looks.

After Effects label: **Displacement Speed**.

Octaves

Adds progressively finer layers to the broad displacement pattern. More layers create a more detailed, textured offset.

After Effects label: **Displacement Octaves**.

Emphasis

Sets how much strength each finer displacement layer keeps. Higher values make fine detail harsher. Raise Octaves above 1 first - with a single layer there is nothing to emphasise.

After Effects label: **Displacement Emphasis**.

Fade In

Sets how many seconds a new particle takes to receive full displacement. Raise it to keep the emission area clean before the noise appears. Static emitters don't age, so this has no effect on them.

After Effects label: **Displace Fade In**.

Affect Size

Varies each particle's drawn size using the same noise field that displaces them, so the boil and the shimmer stay in step. It works even at Strength 0, for shimmer without motion.

After Effects label: **Displacement Affect Size**.

Affect Opacity

Fades particles in and out using the displacement noise field, for twinkle without moving anything. It only ever dims: particles never brighten past the opacity you set. At 100% the darkest cells reach fully transparent.

After Effects label: **Displacement Affect Opacity**.

Affect Hue

Shifts each particle's hue using the displacement noise field. Every amount already rotates both ways around the base colour; the sign picks which way each half of the field goes.

After Effects label: **Displacement Affect Hue**.

Disperse

Displacement, reversible: spreads particles along stable random directions and lets them return when the strength falls.

Disperse Strength

Scatters particles along stable random directions without permanently changing their simulation. Returning the value to 0 reassembles the original shape.

Fade In

Sets how many seconds a new particle takes to reach full scatter. Raise it to make particles peel away after they are born. Static emitters don't age, so this has no effect on them.

After Effects label: **Disperse Fade In**.

Oscillate

Displacement, reversible: moves particles with a reversible repeating wave or shimmer.

Amplitude

Sets the maximum distance particles move from their base positions during each oscillation. A value of 0 turns the effect off.

Frequency

Sets the number of oscillation cycles per second. Higher values create a faster shimmer or traveling wave.

Mode

Chooses random per-particle shimmer or one coherent wave that travels through the particle field.

Options: Shimmer · Wave.

Axis

Chooses the world-space direction in which particles move during Wave mode.

Options: X · Y · Z.

Wavelength

Sets the distance between wave crests in pixels. Larger values create broader, more widely spaced bends.

Fade In

Sets how many seconds a new particle takes to reach full oscillation. Raise it to keep newborn particles straight before the motion begins. Static emitters don't age, so this has no effect on them.

After Effects label: **Oscillate Fade In**.

Phase Random

Offsets each particle's wave phase at random, so a wave stops moving everything in unison and reads as many particles instead of one surface.

After Effects label: **Oscillate Phase Random**.

Movement

Displacement, reversible: moves released particles by a fixed vector without changing their simulation, so Force Mapping can carry parts of a shape away and back.

Movement X

Offsets every released particle along X by this many pixels, scaled by its Force Mapping release. Returning to 0 reassembles the shape.

Movement Y

Offsets every released particle along Y by this many pixels, scaled by its Force Mapping release. Returning to 0 reassembles the shape.

Movement Z

Offsets every released particle along Z by this many pixels, scaled by its Force Mapping release. Returning to 0 reassembles the shape.

Fade In

Seconds a newly born particle takes to ease into its full Movement offset. Static emission ignores it.

After Effects label: **Movement Fade In**.

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05 / Render

Lighting controls shade the scene. Material controls determine each surface's response. Use these in Entropy to make forms readable before increasing render quality. Entropy recalculates their result when it draws the frame.

Light the scene

Start with a lighting preset. The **key** is the main light. The **fill** softens contrast. The **back** light separates edges from the background. Each has an on/off control and an intensity multiplier. Ambient Color adds base light from all directions.

Enable composition lights to use After Effects Light layers. The top three non-ambient lights become key, fill, and back. Ambient lights contribute to ambient color. With no composition lights, Entropy falls back to the preset. Composer continues to show the preset rig.

Ambient occlusion darkens nearby creases and contact areas. Strength controls its effect, Radius sets its reach, and Bias helps prevent self-shadow speckles. Excessive Bias removes fine contact shading.

Environment and scene reflections

An environment map represents light around a surface. Select an environment per emitter. Use Environment turns its contribution on or off while keeping saved amounts. Environment Strength controls its amount on Geometry and Tracer surfaces.

Reflections controls reflected scene content, including particles and tracers. This is separate from environment lighting. The visible source body also has its own Environment and Reflections controls.

Use environment lighting when you want surface interest without the extra work of tracing scene reflections. Increase scene reflections when reflected objects are part of the intended look.

Reflection Blur softens reflections separately from Roughness. Reflection Quality reduces grain in blurred reflections at a higher rendering cost. Sharp reflections cost the same at every Reflection Quality setting.

Motion blur

Motion blur creates streaks during the camera exposure. Choose Comp Settings, On, or Off. Comp Settings also needs the layer's motion-blur switch in After Effects.

Shutter controls exposure length. A 180-degree shutter exposes for half a frame. Phase places the exposure window in time; -90 degrees centers a 180-degree exposure. More samples smooth stepping at a higher cost.

Depth of field

Depth of field keeps one depth sharp and blurs objects in front of or behind it. Focus selects the sharp depth. Focus Range controls the width of the sharp band. Aperture controls blur strength; zero keeps particles sharp.

Enable the composition-camera option to follow the active After Effects camera's focus and blur settings. Manual values apply when the option is off or no camera is available. Focus Range and Chromatic Aberration remain active either way.

Tune performance

Change one quality control, then compare the same frame in After Effects.

1. Reduce particle creation rate or life if there are more particles than the image needs. Check child rates as well as parent rates.
2. Reduce geometry detail or tracer Tube Sides when small particles do not need smooth silhouettes.
3. Tune volumes at moderate Voxel Detail. Raise it after their motion and scale are correct.
4. Add scene reflections, glass Dispersion, and more blur samples only when their contribution is visible.
5. Check the result at the intended output resolution before your final render.

A hidden system still simulates. A larger volume Render Margin can prevent clipping but spreads detail across more space. Pre-run establishes the initial particle state but also requires simulation before the first visible frame.

Control reference

Lighting

Controls the lights, shadows, and ambient response used to shade particles.

Use Comp Lights

Lights the scene with the composition's own Light layers instead of the preset. The top three non-ambient lights become key, fill and back; ambient lights add to the Ambient colour. With no lights in the comp it falls back to the preset. Composer has no composition, so it keeps previewing the preset rig.

Light Preset

Chooses a three-light mood that sets the scene's key, fill, back, and ambient balance.

Options: Neutral · Soft Studio · Backlit · Bottom-lit · Dramatic · Cinematic · Warm · Cool.

Key Intensity

Scales the main light that defines form and direction. A value of 1 keeps the selected preset's authored level.

Key Light

Includes or removes the main light from the scene's lighting rig.

Fill Intensity

Scales the secondary light that softens shadows created by the key. A value of 1 keeps the selected preset's authored level.

Fill Light

Includes or removes the secondary light that softens contrast in the scene.

Back Intensity

Scales the rear light that separates particles from the background and creates rim highlights. A value of 1 keeps the preset's authored level.

Back Light

Includes or removes the rear light that creates edge separation and rim highlights.

Ambient

Sets the base light color applied from all directions, lifting areas that the key, fill, and back lights do not reach.

AO Strength

Darkens nearby creases and contact areas to add depth between overlapping surfaces. A value of 0 disables ambient occlusion.

AO Radius

Sets how far the ambient-occlusion pass searches for nearby surfaces. Larger values create broader contact shadows.

AO Bias

Sets the depth separation required before a nearby surface counts as an occluder. Raise it to reduce self-shadow speckles; too much removes fine contact shading.

AO Color

Sets the tint blended into areas darkened by ambient occlusion.

Motion Blur

Controls the streaking produced by particle motion during the camera exposure.

Motion Blur

Chooses whether blur follows the composition settings, stays on, or stays off. Comp Settings also needs the layer's motion-blur switch enabled. In Composer, Comp Settings behaves as On.

Options: Comp Settings · On · Off.

Shutter Angle

Sets how much of each frame contributes to the exposure. Wider angles create longer motion streaks; 180 degrees exposes for half a frame.

Shutter Phase

Moves the exposure window earlier or later relative to the current frame. With a 180-degree shutter, -90 degrees centers the exposure.

Motion Blur Samples

Sets how many subframe copies smooth each accumulated motion streak. Higher values reduce visible stepping but cost more to render.

Motion Blur Opacity

Adjusts the brightness retained when normal-blend sprite or geometry motion is spread into a streak. Add and Screen sprites ignore this control.

Depth Of Field

Controls which particle depths stay sharp and how strongly other depths blur.

Focus Distance

Sets the scene depth that stays sharp. Particles in front of or behind this plane become more blurred.

Focus Range

Sets the depth of the sharp band around the focus distance. Smaller values create a faster transition into blur.

Aperture

Controls the strength of out-of-focus blur. Zero keeps every particle sharp.

Chromatic Aberration

Adds red and blue color fringing to out-of-focus particles near the frame edges. It only appears when depth-of-field blur is active.

Use Comp Camera

Follows the active composition camera's focus distance and blur settings. Manual focus and aperture values apply when this is off or no camera is available. Focus Range and Chromatic Aberration stay live either way.

Time

Controls the speed and time offset of the complete particle simulation.

Physics Time Scale

Speeds up or slows down the simulation for every system on the layer. A value of 0 freezes motion without clearing the current frame.

Pre-run (seconds)

Runs the simulation invisibly before frame zero so the first visible frame can begin with an established particle state.

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06 / Navigator and systems

A system contains an emitter, its particles, and its motion controls. Navigator manages these systems inside After Effects. Composer also provides system rows for selecting and editing a design. Each system runs as part of the particle setup when you preview time.

A **parent** supplies settings or emission events to a **child**. A cascade is a chain of these related systems.

Build a hierarchy

Entropy has three levels: **Main**, **Child**, and **Sub Child**. Add a child with the **+** on a Main or Child row. A Sub Child cannot have another child. Add another Main for an independent source.

For a spark with a trail:

1. Create a Main system and name it **Sparks**.
2. Set Sparks to Burst and give it visible starting velocity.
3. Add a Child and name it **Trail**.
4. Set Trail to **From Parent's Particles**.
5. Give Trail smaller particles and a short life.
6. Replay. Each living Spark should create Trail particles along its motion.

The child's Particles/sec rate applies to each living parent particle. Ten living parents at 20 particles per second produce about 200 child births per second while all ten are alive. More parent particles can therefore increase the child workload quickly.

Choose On Parent Death for a secondary release at the end of a parent's life. A normal Static parent does not age into death. Force Mapping's Release Kills can supply a death event for it.

Select, name, and copy

Select a row to edit that system. Double-click its name to rename it. In Navigator, renaming changes the display name without changing parent links.

Duplicate copies the selected system with its role and parent. Hold Shift when duplicating to include descendants. If Navigator reports that graphs or curves stayed at defaults, re-edit the copy's curves and gradients before using it.

Navigator's remove action removes the system and its descendants. Check the branch before selecting ✕.

Inherit settings

Inheritance makes a child follow its parent's settings. The Emitter, Particle, and Forces links control separate groups. Turn a link off to restore the child's own saved values.

For example, link Particle if a trail should follow its parent's appearance. Unlink it when the trail needs its own size or color. Expand linked Forces to choose which individual force groups follow the parent. A local force group starts from its

own defaults.

Hide a system

Select the colored pip to hide or show rendered particles. Hidden systems continue to simulate and preserve their child relationships.

This lets a parent drive a visible child without showing its own particles. Hiding a system does not remove its simulation cost.

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07 / Presets and After Effects

A preset stores a reusable particle design. Entropy presets use the **.wcx** file extension. Use the preset library in Composer to load designs and save your own. Loading and saving are manual actions.

Load a preset

Open the preset drawer, or press **P** in Composer. Search by name and select a preset. When loading into an existing design, choose the scope offered by the dialog.

Action	What changes
Replace selected	Replaces the selected system and its children. Keeps other systems and scene settings.
Replace scene	Replaces the scene, including scene settings.
Add as new layer	Adds the preset's systems. Keeps the current scene, lighting, and camera settings.
Cancel	Keeps the current design.

Some source resources are shared. If adding a preset reports a resource conflict or a sprite limit, use Replace if you want the new design, or cancel and keep the current design. Add the required sprite to the Sprite Library when the message identifies a missing sprite.

An **Emitter Preset** is a smaller setup for one emitter. It replaces emitter settings without replacing particle appearance or forces. Use it to change the source while keeping an established look.

Save and manage presets

Use Save Preset, enter a clear name, choose a category, and save. The preset includes the current multi-system look and a preview thumbnail.

Right-click a preset card for available file actions. Duplicate creates an editable user copy. Reveal opens the folder for a user preset. Trash moves the user preset file to the operating system's Trash or Recycle Bin.

Save a preset before importing another layer or replacing the scene if you need to keep the current Composer design.

Transfer a design

Import from AE replaces Composer's current state with settings from the active Entropy layer. Select the intended layer in After Effects first.

OK applies the current Composer design to After Effects and normally closes Composer. If apply fails, Composer stays open so you can read the error and keep the design. If apply succeeds with a keyframe warning, the button changes to **Close**. Read the warning before closing. Applying to controls that already have animation adds keyframes to those

controls. Check the target time before applying.

Composer and After Effects are separate editing contexts. Use Import from AE to refresh the design after changes in After Effects. Use OK to send Composer edits back.

Composer and After Effects preview differences

Feature	What to expect
Preview background	Changes Composer contrast only. It does not change the saved preset or After Effects render.
Composition lights	After Effects can use the composition's lights. Composer previews the preset lighting rig.
Light-driven attractors	After Effects resolves the matching lights. Composer has no composition lights and removes the manual attractor when this mode is enabled.
Layer Force Mapping	After Effects resolves the source layer. Composer previews Graph mapping.
Force-map inversion	Composer stores the setting but does not apply it to its preview.
Motion Blur: Comp Settings	After Effects needs the relevant composition settings and layer switch. Composer treats this mode as On.
Camera depth of field	After Effects can follow the active composition camera. Composer has no active composition camera.
Animated controls	Import uses the current frame's settings. It is not a transfer of the full After Effects animation.

Check the final composition in After Effects, especially when using sources from other layers, animation, lights, or cameras.

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08 / Interface reference

These descriptions explain the actions and editors around the particle controls. Wording follows the product tooltip catalog.

Graph and gradient editors

Size & Opacity Graphs

Shapes particle size or opacity over life, or across a static emitter's X, Y, or Z extent.

Choose a channel and domain, then edit the curve.

Curve channel

Chooses whether the graph changes particle size or particle opacity.

Select Size or Opacity.

Curve domain

Chooses whether the curve runs over particle life or across one axis of a static emitter.

Choose Life for timed emission, or X, Y, or Z for static emission.

Curve presets

Replaces the active curve with a designed response shape.

Select the preset button, then choose a curve.

Curve reverse

Flips the active curve from left to right.

Choose Reverse from the curve functions menu.

Curve invert

Flips the active curve vertically so high values become low values and low values become high values.

Choose Invert from the curve functions menu.

Curve add point

Adds a control point at this position and changes the curve through it.

Click empty graph to add a point.

Curve move point

Changes the timing and output value at this point on the curve.

Drag to move it. Double-click to remove it.

Curve delete point

Removes an interior control point while keeping the required endpoints.

Double-click an interior point.

Gradient

Defines how particle color changes across the selected gradient axis.

Click the bar to add a stop.

Gradient presets

Replaces the current color stops with a designed gradient from the library.

Select the preset button, then choose a gradient.

Gradient reverse

Flips the gradient so its colors run in the opposite direction.

Choose Reverse from the gradient functions menu.

Gradient distribute

Spaces all color stops evenly while keeping their current order and colors.

Choose Distribute Evenly from the gradient functions menu.

Gradient add stop

Adds a new color transition point using the color already visible at that position.

Select empty space on the gradient bar.

Gradient move stop

Changes where this color enters the gradient.

Drag to move it. Click to recolour, double-click to remove.

Gradient color

Changes the selected stop's color.

Select a stop without dragging it, then choose a color.

Gradient delete stop

Removes an interior color stop while keeping the required end stops.

Double-click an interior stop.

Force dissolve

Raises or lowers the complete Force Curve to release or hold more particles without changing its shape.

Drag from negative values for more hold to positive values for more release.

Force Curve

Shapes force release across the emitter, left to right. Each particle is read at the position it was born, so it keeps its place on the curve as it moves. Low points hold particles, high points release them.

Edit the curve when Force Map Source is Graph.

Height

Sets how far the bevel stands out from the face of each glyph.

Drag to adjust.

Join

Chooses how the bevel turns a corner: kept sharp, rounded off, or decided per corner.

Choose a corner treatment.

Placement

Chooses whether the bevel keeps the original face, sits centred on the edge, or eats into the face.

Choose a placement.

Quality

Sets how finely the bevel is built. Higher quality gives smoother corners and costs more to generate.

Raise it once the shape is right.

Shape

Bends the bevel profile between a hollow cove and a rounded bulge, with a flat chisel in the middle.

Drag to adjust.

Type

Chooses a ready-made bevel profile. Custom keeps whatever shape the Shape control is set to.

Choose a profile.

Width

Sets how far the bevel reaches in from the edge of each glyph.

Drag to adjust.

Composer viewport

Tooltips

Shows or hides the help that appears when you hover a control. Your choice is remembered.

Turn it off once the panel is familiar.

Bg color

Changes only the Composer preview background color. It does not change the saved preset or After Effects render.

Choose a color for contrast while you work.

Camera reset

Returns the preview camera to its front view.

Select this button or double-click the viewport.

Gizmo toggle

Shows or hides transform handles, emitter bounds, and force guides in the preview. This does not change the rendered particle look.

Select to toggle all guides. Right-click the viewport to choose guide families.

Grid toggle

Shows or hides the preview ground grid. This does not change the rendered particle look.

Select to toggle the grid.

Guide bounds

Shows or hides the outline of the emitter's spawn shape.

Choose from the viewport menu.

Guide forces

Shows or hides visual guides for force positions, directions, and ranges.

Choose from the viewport menu.

Guide handles

Shows or hides the handles used to move and rotate the emitter in the preview.

Choose from the viewport menu.

Loop sim

Restarts the preview automatically so you can tune a repeating burst without manual replay.

Select to turn automatic replay on or off.

Move tool

Lets you drag the emitter temporarily to inspect the look from another source position. The emitter returns when you release it.

Drag in the viewport. Use Position for a permanent move.

Orbit tool

Lets you rotate the preview camera around the particle system.

Drag to orbit. Scroll to zoom. Double-click to reset the view.

Restart sim

Starts the particle simulation again at frame 0 while keeping all current settings.

Select to replay burst emission and particle motion.

Navigator

ADD SYSTEM

Creates a new After Effects solid, applies Entropy, and adds it as a Main system.

Select Add System in an active composition.

Refresh

Scans the active composition again and rebuilds the Entropy system tree.

Select after adding, removing, or changing Entropy layers outside Navigator.

Select system

Selects this Entropy effect in After Effects and makes it the active Navigator row.

Double-click to rename.

Rename

Changes the effect display name without changing the system's identity or parent links.

Double-click the name and enter a new one.

Visibility

Shows or hides this system's rendered particles while its simulation and child relationships continue.

Select the colored pip.

Inherit emitter

Makes this child use its parent's emitter settings. Turning the link off restores the child's own values.

Select the emitter inheritance icon.

Inherit particle

Makes this child use its parent's particle appearance settings. Turning the link off restores the child's own values.

Select the particle inheritance icon.

Inherit forces

Makes this child use its parent's force settings. Turning the link off restores the child's own values.

Select the force inheritance icon.

Force expand

Opens the force list so individual force groups can follow the parent or remain local.

Select the chevron beside linked Forces.

Force group link

Makes this force group follow the parent. A local group starts from its own default values.

Check to follow the parent. Clear to keep a local force group.

Emitter preset

Applies a quick emitter setup to this system without replacing its particle or force settings.

Select or hold the preset icon, then choose a setup.

Add child

Creates a child Entropy system under this row in the active composition.

Select +. A Sub Child cannot add another level.

Duplicate

Duplicates this Entropy system with the same role, parent, and settings.

Shift-click to include its children.

Remove

Removes this Entropy system and all of its descendants from the active composition.

Select × to remove the branch.

LICENSE

Opens the Entropy Licensing window for activation, renewal, and machine management.

Select License.

Renew

Opens license management when the current license or maintenance period is near its end.

Select Renew to continue license access or updates.

BETA FEEDBACK

Opens a private review drawer for feedback about the current Entropy build.

Select to open or close the drawer.

Retry

Tries the beta feedback connection again after it failed to open.

Select Retry.

Composer source controls

Cancel

Closes Composer without applying the current look to the active After Effects layer.

Select Cancel to leave the layer unchanged.

Ok

Applies the current Composer look to the active Entropy layer, then closes Composer.

Select OK to send the settings to After Effects.

Emission Weight

Biases where on the mesh particles are born, along the chosen axis. Drag the curve down where you want fewer particles.

Drag the curve, then pick the axis it runs along.

Emitter Preset

Applies a ready-made emitter setup to this system, replacing its emitter settings.

Choose a setup from the list.

Center

Balances the mesh on the emitter point. Turning it off respects the origin the OBJ was authored with. Emitter Size still controls scale either way.

Turn on when an OBJ sits off-centre.

Text

Sets the words the Text emitter builds its shape from. Each glyph becomes a surface particles are born on.

Type the text you want to emit from.

Font

Chooses the typeface used to build the text shape. Different faces change the letterforms particles are born on.

Choose an installed font.

Custom controls

Amplitude

Sets how far a sine or wiggle motion moves away from its base value.

Drag to change the motion range. Units follow the selected target.

Axis

Chooses which axis receives sine motion.

Choose X, Y, Z, or all axes.

Delay (s)

Waits for the selected number of seconds before this motion starts.

Set the start delay in seconds.

Frequency

Sets how quickly random wiggle motion changes.

Drag to increase or decrease the change rate.

Orient to Motion

Turns the emitter so it aims along the direction its modulators are moving it. Rotates on Z only, in the screen plane.

Turn on when particles should face their procedural path.

Phase

Shifts where a sine or circular motion starts within its cycle.

Set the cycle offset in degrees.

Plane

Chooses the two axes that contain the circular path.

Choose XY, XZ, or YZ.

Radius

Sets the size of a circular position path, the angular swing of a circular rotation, or - when Target is Size - how far the emitter breathes.

Drag to set distance for position or degrees for rotation.

Rate (Hz)

Sets how many sine or circular motion cycles complete each second.

Set the speed in hertz.

Seed

Selects a different repeatable random wiggle pattern without changing its strength or speed.

Change the seed to explore another pattern.

Target

Chooses whether this motion changes position, rotation, or size.

Choose one target for this slot.

Type

Chooses whether the slot is off or creates sine, circular, or random wiggle motion.

Choose Off, Sine, Circle, or Wiggle.

Modulator

Creates one independent motion layer that can be turned off or set to Sine, Circle, or Wiggle.

Open a slot to configure it.

Modulators

Adds repeatable procedural motion to the active system's position, rotation, or size.

Open the group, then configure up to four independent slots.

feedback**Cancel queued**

Removes this unsent report from the local delivery queue.

Select Cancel beside the queued report.

Close

Closes the feedback drawer without sending the current draft.

Select ×, click the backdrop, or press Escape.

Open

Opens the local feedback workflow. Nothing is sent until you review and confirm it.

Select Beta Feedback.

Refresh queue

Reads the reports waiting on this installation and updates their delivery states.

Select Refresh Local Queue.

Report text

Records what happened or what you want Entropy to do differently.

Describe the result, the steps, and what you expected.

Report type

Classifies the report so the team can separate bugs, requests, and other feedback.

Choose the category that best matches the report.

Retry

Tries again to connect to the private feedback service running on this computer.

Select Retry after a connection error.

Review

Builds the exact outgoing report so you can inspect its text and diagnostics before anything is sent.

Select Review Report after writing the report.

Review back

Returns to the report form without sending the reviewed report.

Select Back to revise the report.

Send

Sends the exact reviewed report to Wild Construct or queues it locally if delivery is not available.

Select only after you have reviewed the outgoing payload.

Tab build

Shows the exact Entropy build and release channel attached to feedback.

Select Build.

Tab privacy

Lists the diagnostics included automatically and the project data that is not collected.

Select Privacy before sending if you want to review the data policy.

Tab reports

Shows reports waiting on this installation and their delivery state.

Select Reports.

Tab send

Shows the form used to describe and review a new report.

Select Feedback.

library**Cancel**

Closes the asset library without changing the current selection.

Select Cancel.

Category

Shows or hides the assets in this category.

Select the category heading to expand or collapse it.

Close

Closes the asset library without changing the current selection.

Select × or press Escape.

Import

Adds a compatible file from your computer and selects it for the current control.

Select Import, then choose a supported file.

Item

Selects this asset for the control that opened the library.

Select the tile to use the asset and close the library.

Search

Filters the current OBJ, sprite, gradient, or preset library by item name.

Type any part of an item name.

licensing

Close

Closes the Licensing window without changing the current license state.

Select ×.

Deactivate all

Releases every machine activation attached to this Entropy license.

Select only when you intend to sign in again on each machine.

Deactivate this

Releases this machine's Entropy activation so the seat can be used on another machine.

Select only when you can reactivate later if needed.

Key

Provides the Entropy license key used to validate or manage this machine.

Paste or type the key. Do not share it in screenshots or feedback.

Primary

Performs the action required by the current license state, such as validate, activate, refresh, renew, or manage.

Read the current state message before selecting the button.

Renew

Opens the correct web page to renew maintenance, resume a subscription, or manage the active license.

Select the renewal or management link shown for the current state.

Support

Opens Wild Construct support in the default web browser.

Select Support.

mobile**Params**

Shows the controls for the selected system on a narrow screen.

Select to switch from systems to parameters.

Systems

Shows the system tree on a narrow screen.

Select to switch from parameters to systems.

Parameter interactions**Boolean reset**

Turns an option on or off without changing other controls.

Select to toggle. Double-click to restore the default state.

Inheritance lock

Shows that this control currently follows the parent system and cannot be edited locally.

Turn off the matching inheritance link in the system row to edit this child value.

Override dot

Marks a child value that differs from its parent. Removing the local exception makes the value follow the parent again.

Select the blue dot to re-inherit from the parent. This does not restore the factory default.

Section reset

Restores every control in this section to its default value.

Select the reset arrow in a section header.

Slider reset

Changes a numeric value within its allowed range.

Drag to adjust. Double-click to reset to default.

Value field

Shows the current numeric value and accepts an exact value when needed.

Double-click the value, type a number, then confirm it.

Preset library**Category toggle**

Shows or hides the presets in this category.

Select the category heading to expand or collapse it.

Close

Closes the preset library and returns the full width to the preview.

Select or press Escape.

Duplicate

Creates an editable copy of this preset in your user library.

Select from the preset card menu.

Load

Loads this preset. If the scene has non-default settings, lets you replace the scene or add the preset as new layers.

Select to load. Right-click for file actions.

Replace the selected system and its children, replace the whole scene, or add new layers.**Replacing selected keeps other systems and scene settings.**

Explains the choices for replacing the selected system, replacing the scene, or adding new layers.

Choose how to load this preset.

Replace selected

Replaces the selected system and its children with this preset. Keeps other systems and the current scene settings.

Select Replace selected.

Replace scene

Replaces the current scene with this preset, including the preset's scene settings.

Select Replace scene.

Add as new layer

Adds every system in this preset as new layers and keeps the current scene, lighting, and camera settings.

Select Add as new layer.

Cancel

Closes the dialog without loading the preset or changing the scene.

Select Cancel or press Escape.

Reveal

Opens the folder that contains this user preset file.

Select from the preset card menu.

Search

Filters preset cards by name as you type.

Type any part of a preset name.

Trash

Removes this user preset from the library by moving its file to the operating-system Trash or Recycle Bin.

Select from the preset card menu.

Save preset

Cancel

Closes the dialog without storing a preset.

Select Cancel.

Category

Chooses the library group where this preset will appear.

Choose an existing category or the current offered category.

Close

Closes the dialog without storing a preset.

Select × or press Escape.

Confirm

Stores the current look and preview thumbnail in the selected library category.

Select Save after entering the preset details.

Name

Sets the name shown for this preset in the library.

Type a clear, unique preset name.

Composer actions

Import ae

Replaces the current Composer state with settings from the active Entropy layer in After Effects.

Select to import the active layer. Current Composer changes are replaced.

Preset browser

Opens the preset library so you can load a saved particle look.

Select to open or close the library.

Preset tab

Opens the preset library without covering the live preview.

Select or press P to open the drawer.

Reset all

Restores every system and control to the original Entropy defaults.

Select to reset the complete composition setup.

Save preset

Stores the current multi-system look as a reusable preset with a thumbnail.

Select to name and categorize the preset.

Source libraries

Custom sprite

Opens the sprite library so this custom slot can use a built-in or imported image.

Select Choose, then pick or import an image.

Source OBJ

Opens the OBJ library so the selected mesh surface can emit particles.

Select Browse, then choose or import a mesh.

Particle obj

Opens the OBJ library so geometry particles can use a built-in or imported mesh.

Select Browse OBJ, then choose or import a mesh.

System rows

Add child

Creates a child system that emits relative to this system.

Select + on a Main or Child row. Sub Children cannot add another level.

Add main

Creates a new independent particle system in the current Entropy setup.

Select to add a Main system.

Duplicate

Creates a copy of this system with the same role, parent, and settings.

Select to copy only this system. Hold Shift to include descendants.

Inherit emitter

Makes this child use its parent's emitter settings. Turning inheritance off restores the child's own saved emitter values.

Select the emitter inheritance icon to toggle the link.

Inherit forces

Makes this child use its parent's force settings. Turning inheritance off restores the child's own saved force values.

Select the force inheritance icon to toggle the link.

Inherit particle

Makes this child use its parent's particle appearance settings. Turning inheritance off restores the child's own saved particle values.

Select the particle inheritance icon to toggle the link.

Remove

Removes this system from the current Entropy setup. The last remaining system cannot be removed.

Select × to remove the system.

Rename

Changes the display name used to identify this system and its relationships.

Double-click the system name, then type a new name.

Select

Makes this system active so the parameter panel edits it and the preview highlights it.

Select the system row.

Visibility

Shows or hides this system's rendered particles while its simulation and child relationships continue.

Select the colored pip to change visibility.

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09 / Troubleshooting

Use these checks in After Effects unless the problem is specifically in Composer. Keep the error message when reporting a problem. It identifies which operation failed.

Navigator shows no system

Navigator reads Entropy effects from the composition and selected layer. It should show a system row when it finds an Entropy effect.

1. Open the intended composition and select its Entropy layer.
2. Select Refresh if you added or changed effects outside Navigator.
3. If the layer has no Entropy effect, select ADD SYSTEM or apply Entropy to a layer.
4. Confirm that Navigator now shows the system.

“No layer targeted” means no layer is selected. “No effects applied” means the selected layer has no effects. A report of zero emitters with other effects means that none of those effects is Entropy.

No particles appear

An emitter needs a valid source and an active emission behavior. Its particles also need visible size and opacity.

1. Select the intended system and turn on its visibility pip.
2. For Continuous, raise Particles/sec above zero and preview forward. For Burst, restart and check Particle Count.
3. Check particle size, opacity, and curves for zero values.
4. Check that the source is within view. For layer-based sources, select a valid source layer.
5. For a child, check its parent and emission event. A Static parent will not age into an On Parent Death event.
6. Temporarily use a Point source with Sprite particles to check the basic setup.

A control is unavailable or has no visible effect

Mode-specific controls only affect their related mode. For example, Path Speed needs Follow Path above zero. Roughness and Metallic are editable only with Material set to Custom. Star controls need Star sprites.

1. Check the selected source and particle types.
2. Check inheritance if a child should use its own values.
3. Read the tooltip for the control's required mode.
4. Set that mode, change one value, and compare the same frame.

Static particles do not age. Age-based features such as buoyancy cooling, diffusion, and fade-in timing will not progress on a Static emitter. Use a spatial graph for size or opacity across a Static shape.

A duplicated system looks different

Navigator can report that numeric values copied while graphs and curves stayed at defaults.

1. Duplicate a system that uses a custom opacity curve.
2. Read the duplication status.
3. If it reports default graphs, reopen the copy's curve and restore the intended shape. Check its gradient too.
4. Compare the original and copy at the same time.

This affects copies that depend on non-default graphs when that status appears. Re-editing the graphs is a workaround for that build.

Composer and After Effects look different

Composer has its own preview context. Composition lights, source layers, and camera settings can change the After Effects result.

1. Select the intended Entropy layer and frame in After Effects.
2. Save your Composer look if needed, then use Import from AE.
3. Check the [preview differences](#).
4. Compare in After Effects with the required sources and lights present.

Composer reports AE not ready or Failed

Composer applies settings to After Effects when you select OK. If that operation fails, the window stays open.

1. Keep Composer open or save the design as a preset.
2. Confirm that After Effects is running with the intended composition and layer available.
3. Read the error, correct the reported condition, and retry.
4. Verify the design on the target layer after apply succeeds.

If OK changes to Close after a keyframe warning, the apply already succeeded. Read the warning and check the animated controls in After Effects.

A preset will not add

Adding a preset preserves the current scene, so it must fit the available systems, sprite slots, and shared sources.

Read the named conflict. Add a missing sprite to the Sprite Library, free a slot, or use Replace if you want the preset to replace the current design. Cancel keeps your current scene. Do not repeatedly add the same preset while an operation is still running.

Volume edges clip or the cloud looks too coarse

Volumes use a bounded 3D grid. A cloud can reach that boundary, especially with a large spread.

Increase Render Margin gradually, then inspect the same frame. If detail is too coarse, raise Voxel Detail within a usable render cost. Recheck a later frame where the cloud has spread further.

Motion does not return when a value reaches zero

Displacements are reversible. Forces accumulate changes to particle motion.

For example, raising Disperse and then returning it to zero removes its scatter offset. Wind applied during that time can still have moved the underlying particles. Restart with Wind off to check the reversible displacement by itself.

Contact support

Include your Entropy build, After Effects version, operating system, and the exact message. Describe the source type, particle type, and shortest steps that reproduce the issue. State whether it occurs in Composer, After Effects, or both. Include a small preset or project when possible, with any required source assets.

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