AE Glass

A physical refraction engine for After Effects. Turn shapes, text, solids, masks, logos or track mattes into real refractive glass. Fully parametric and non-destructive.

INSTALLATION

Recommended: aescripts + aeplugins manager. The easiest way to install and license AE Glass is the free aescripts + aeplugins manager. It installs the plugin and activates your license automatically. To try it first, choose **Add Trial** from the manager's **Account** menu.

OR COPY THE PLUGIN MANUALLY TO:

MACOS

```
/Applications/Adobe After Effects <version>/
Plug-ins/
```

WINDOWS

```
C:\Program Files\Adobe\Adobe After Effects
<version>\Support Files\Plug-ins\
```

Requires After Effects 2025 or later · Restart AE after installation · Find under **Effect → SphereLab → AE Glass**

QUICK START

01

Pick a source.

A **shape**, **text**, **solid** or **masked** layer, or any layer that already has its own transparency (logo, PNG).

02

Turn on the Adjustment Layer switch.

On that layer, so the glass refracts everything below it through the layer's silhouette. **Required for every source.**

03

Apply AE Glass.

Effect → SphereLab → AE Glass. Dial Refraction, Depth, Dispersion and Light to taste.

WHY THE ADJUSTMENT SWITCH? AE Glass refracts the layers below through your layer's silhouette, so it needs the Adjustment Layer switch on. With the switch off it leaves the layer untouched and shows a "turn on the Adjustment Layer switch" reminder. Flip it on and the glass appears.

How It Works

HOW TO USE IT

Leave Adjustment on ONE MODE

Enable the **Adjustment Layer** switch on your source: shape, text, solid, mask, logo, PNG or precomp. AE Glass reads everything below and refracts it through that layer's silhouette, updating live as you work. One mode covers every source.

Nothing to choose

However the shape is defined (exact geometry, glyphs, a mask, or a layer's own alpha), the workflow is identical: just keep the Adjustment switch **on**. If it's off, AE Glass passes the layer through and reminds you to enable it.

AE Glass honors the layers below: their transforms, opacity, blend modes and track mattes are all refracted faithfully.

SUPPORTED SOURCES

`Parametric shapes`	**Rectangle, Ellipse, Polygon, Star.** Exact analytic edges give the sharpest, most stable result. Rounded corners and star/polygon points are all honored.
`Bezier paths`	Any freeform Shape-Layer path, including multi-subpath shapes (e.g. a counter inside a letter). Drawn with the Pen tool or pasted.
`Text layers`	Live text: the glyph outlines become the glass. Edit the words and the glass follows. (Track mattes don't apply to text hosts.)
`Solids`	A solid becomes a clean rectangular glass panel sized to the solid itself.
`Masks`	Mask a solid or layer to shape the glass. Mask modes are honored (**Add, Subtract, Intersect, Exclude**), so you can carve holes or combine shapes.
`Alpha layers`	Logos, PNGs or precomps with transparency: the layer's own alpha becomes the glass. Keep the Adjustment switch on, the same as every other source.
`Track mattes`	On an adjustment layer, an **Alpha** or **Luma** matte (and their inverted variants) defines the glass. Useful when the shape lives on another layer.

Parametric shapes use exact analytic edges; everything else is built from a high-precision distance field. Both are clean and stable. Glass renders where the backdrop is. A collapsed precomp's position, scale, rotation and mirroring are followed, including animation and nesting.

BEST PRACTICES

Stacking glass

Overlap multiple Glass layers with different Depth values for complex, Fresnel-style lenses.

Light direction

Match Light Angle to your comp's key light so the glass sits in the scene convincingly.

Carve with masks

Use mask modes (Subtract to punch holes, Intersect to clip) to build non-rectangular panels from a solid.

Performance & memory

On big comps (4K+) with several Glass layers, turn off **Composition › Preview › Cache Frames When Idle** (⌥⇧I). It can fill RAM and crash with "out of application memory." Keep *Effect Scale* low; it multiplies render cost.

Shape Operators

AE Glass reads two of AE's own path operators and matches what they draw, so the glass follows the shape you actually see instead of the paths underneath. Nothing to switch on: add the operator and the glass follows.

OFFSET PATHS · THE METABALL CLOSING

01

Merge Paths › Add.

Two or more shapes in **one group**, merged. This is the shape the glass will fill.

02

Offset Paths, Amount +R.

Set **Line Join** to **Round**. R is your blob radius, in pixels.

03

A second Offset Paths, −R.

Link it so it always matches: **content("Offset Paths 1").amount * -1**

WHAT THE GLASS DOES WITH IT

`Necks fill`	As two shapes approach, AE bridges them with a smooth neck. The glass now fills that neck with its own refraction and rim instead of drawing a seam across it.
`Pinch and cusps`	Just before the shapes part, AE pinches the neck and leaves a small cusp on each facing side. Both are reproduced, so separation reads as one surface tearing.
`Any source`	Parametric shapes, bezier paths, converted text, masks and track mattes all take the closing, and the radius follows layer and group scale.

ROUND CORNERS

`Straight geometry`	Fillets on rectangles, polygons, stars and the straight segments of freeform paths, including the crossings where two straight edges meet inside a merged union.
`Curves stay sharp`	AE's own operator leaves curve junctions untouched, and so does the glass. What you see in the comp is what gets lit.

LIGHT ACROSS A SPLIT. When a shape pinches into two lobes, each lobe is lit from its own centre, blended across the neck as it closes, so the inner glow ramps through the separation instead of jumping the frame the body becomes two. Every source: shapes, paths, text, alpha, mattes, masks.

GOOD TO KNOW

The pair, not a lone offset

Only the **+R then −R** pair after Merge Paths is read. A single Offset Paths, or Copies above 1, is not modelled.

Other operators

Zig Zag, Wiggle Paths, Pucker & Bloat, Twist and Repeater are still invisible to the parser. To use them, **precompose the shape** and put the glass on the precomp: the operator is baked into its alpha.

Controls & Tips

LIGHT

`Light Angle`	Direction of the edge highlight. Match it to your composition's main light source.
`Light Intensity`	Brightness of the highlight. **0 = off.**

MAIN CONTROLS

`Refraction`	Power of the lens. Higher values bend light more aggressively at the edges.
`Depth`	How far distortion reaches inward from the edge. Low values give a "thin glass" look.
`Dispersion`	Splits RGB channels at edges to simulate the refractive index of real glass.
`Frost`	Blurs the inside of the silhouette. With a high Light Intensity, reads as frosted glass.
`Splay`	Pushes distortion outward from the center.

ADJUSTMENTS

`Magnify`	Bulge outward or curve inward like a lens.
`Magnify Falloff`	How far magnification reaches in from the edge. **100 = default** ramp, 0 = even.
`Effect Scale`	Scales the whole effect: rim, refraction, light. **1.0 = default** (0.1–4.0). Higher multiplies render cost on heavy comps.
`Rim Scale`	Thickness of the lit edge rim, independent of the rest. **1.0 = default** (0.1–4.0). Compounds with Effect Scale.
`Tint`	The swatch colours the glass, Tint Amount sets the strength. **0 = off.**

STARTING POINTS

Optical Prism

Refraction	90
Depth	15
Dispersion	100

Frosted Modern

Refraction	40
Frost	25
Light Int.	100

LIMITATIONS

Fill required

Shape layers need a **Fill**. A stroke on its own gives the effect only a thin outline, not a shape.

2D only

Renders in 2D; 3D layer transforms and camera perspective aren't followed. Keep glass layers 2D.

Adjustment switch on

The host layer's Adjustment switch must stay on. With it off, the layer renders through unchanged (and AE Glass reminds you).