Fingerprint Placer Tool - User Manual

A visual tool for placing fingerprints directly in the Scene View. Click where you want the smudge, and it's done!

📦 Opening the Tool

Menu: `SingularBear > Tools > Fingerprint Placer`

The tool window will appear. You can dock it anywhere in your editor layout.

🎛️ Interface

Element	Description
Target Material	The Glass material you want to add fingerprints to
Slot (1-4)	Which fingerprint slot to use (the shader supports up to 4)
Default Radius	Size of the fingerprint when placed
Start/Stop Button	Toggle placement mode on/off

🚀 How to Use

Step 1: Setup

1. Open the tool via `Tools > SingularBear > Fingerprint Placer`
2. Drag your **Glass material** into the "Target Material" field
3. Choose which **Slot** you want to use (1-4)
4. Adjust the **Default Radius** if needed

Step 2: Prepare Your Object

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Important: Your glass object **must have a Collider** (Box, Mesh, etc.) for the raycast to work!

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If clicking doesn't place anything, add a collider:

- Select your glass object
- Add Component > Physics > Box Collider (or Mesh Collider)

Step 3: Place Fingerprints

1. Click 🎯 **START PLACEMENT** (button turns green)
2. Hover over your glass object in the Scene View
3. A **green circle** shows where the fingerprint will be placed
4. **Left-click** to place the fingerprint
5. Press **ESC** or click 🛑 **STOP** when done

🎯 Visual Feedback

When placement mode is active:

Visual	**Meaning**
🟢 **Green circle**	Fingerprint preview (shows size)
🟢 **Green line**	Surface normal direction
No circle	Mouse isn't over a valid surface (needs collider)

⚙️ What Happens When You Click

The tool automatically:

1. ✅ Enables the fingerprint feature for that slot
2. ✅ Sets mapping mode to **World** (local space)
3. ✅ Sets the **position** in object's local space
4. ✅ Sets **radius** if it was zero
5. ✅ Sets **intensity** if it was zero

> 💡 The fingerprint position is stored in **local space**, so it follows the object if you move/rotate it!

🔢 Using Multiple Slots

The shader supports **4 fingerprint slots**. Use them for variety:

Slot	Use Case
Slot 1	Main visible fingerprint
Slot 2	Secondary smudge
Slot 3	Partial print / thumb
Slot 4	Additional detail

Workflow:

1. Place Slot 1
2. Change slider to Slot 2
3. Place Slot 2
4. Repeat for 3 & 4

> 💡 Each slot can have a different **texture**, **size**, **rotation**, and **intensity** configured in the material inspector.

🎨 Fine-Tuning After Placement

After placing, go to the **Material Inspector** (Effects > Fingerprints) to adjust:

Parameter	Description
Texture	Change the fingerprint pattern
Radius	Resize the fingerprint
Rotation	Rotate the pattern
Intensity	Make it more/less visible
Roughness Add	How matte the smudge appears
Edge Falloff	Soften the edges

🔧 Troubleshooting

"Nothing happens when I click"

→ Your object needs a **Collider** component → Make sure the collider covers the glass surface

"Fingerprint appears but in wrong position"

→ Check that mapping mode is set to **World** in the material → The tool sets this automatically, but it might have been changed

"Can't see the green preview circle"

→ Make sure placement mode is **active** (green button) → Hover directly over the object with the collider

"Fingerprint doesn't move with the object"

→ This shouldn't happen - positions are stored in local space → Check if the material is shared between objects

"I placed on the wrong slot"

→ Just place again on the correct slot → Or manually reset the wrong slot in the material inspector

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⌨️ Shortcuts

Key	Action
Left Click	Place fingerprint
ESC	Stop placement mode

💡 Tips & Tricks

For Realistic Results

- Place fingerprints where people would actually touch (handles, edges, center of panels)
- Vary the **rotation** for each slot
- Use different **textures** for thumb vs fingers
- Keep **intensity** around 0.5-0.7 for subtlety

For Stylized/Obvious Prints

- Crank up **intensity** to 1.0
- Increase **roughness** for very matte smudges
- Use larger **radius** values

Performance

- Each active slot has a small GPU cost
- For mobile, stick to **1-2 slots** max
- Disable unused slots in the material

📋 Requirements

Requirement	Details
Material	Must use `SingularBear/Glass` shader
Collider	Object needs any collider type
Scene View	Must click in Scene View (not Game View)

Works with SingularBear Glass Shader v1.0