Mask Painter Guide

Requirements & Setup

1. **MeshCollider required**
   UV picking uses `RaycastHit.textureCoord`, which only comes from a **MeshCollider**. Add a MeshCollider to any object you want to paint (or assign one via *Target Collider*). Non-mesh colliders will warn in the inspector.
2. **MaskPaintable Component**
   Select your GameObject → Add Component → MaskPaintable. Assign or create a mask asset (see next section). The inspector also has Open Mask Painter and Clear Mask actions.

Mask Assets

- Create: Menu Tools → Mask Painter → Create Mask Asset, set *Width/Height*, *Channels* (R, RG, or RGBA), *Linear Color*, and defaults; click Create Mask Asset. The created asset contains a Texture2D sub-asset.
- Inspector shortcut: On a MaskPaintable, Create & Assign Mask Asset makes one and links it immediately. Ping Mask pings the asset.
- **Texture details**:
  - Format auto-selects by channels: **R8** (R), **RG16** (RG), **RGBA32** (RGBA).
  - `FilterMode.Point`, `WrapMode.Clamp`, linear/sRGB based on your choice.
  - Defaults are written across the texture on reinit.

Painting Workflow (Scene View)

1. Select an object with MaskPaintable and a valid MaskAsset. The window shows object and mask info (name, resolution, channels).
2. Click Start Painting in the window. The Mask Painter Tool becomes active.
3. Paint in the Scene view. The brush preview is a world-space circle (dashed/occluded-aware rings + lifted fill to avoid z-fighting). Painting is world-size correct across meshes (internally maps your world radius onto UVs).
4. Click Stop Painting anytime to restore the previous tool.

Tools & Channels

- **Tools**: **Paint**, **Erase**, **Smooth**, **Fill**. Help text explains each tool.
- **Channels**: Target **Red / Green / Blue / Alpha** depending on your mask asset's channel count; the window limits choices accordingly and shows a channel preview.

Shortcuts

These work only while the Mask Painter Tool is active and appear in Unity's Shortcuts window.

- **Hardness**: `Shift +` decrease, `Shift +` increase.
- **Strength**: - decrease, = increase.
- **Quick adjust (drag)**: **Ctrl + Right-Mouse drag** → horizontal = size, vertical = hardness.
  Mouse wheel: **Ctrl + Wheel** = radius, **Shift + Wheel** = strength.

Menu Paths

- **Window**: *Tools → Mask Painter → Mask Painter Window*
- **Create Mask Asset**: *Tools → Mask Painter → Create Mask Asset*