Scene Layers - User Manual

Unity Editor Tool

Professional scene organization and management for Unity

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1. Introduction

What is Scene Layers?

Scene Layers is a professional Unity Editor tool that brings layer-based organization to your scenes. It provides an intuitive way to organize, hide, lock, and manage GameObjects without modifying your hierarchy structure.

Key Benefits

- Organize thousands of objects without hierarchy clutter
- Toggle visibility for entire groups instantly
- Lock layers to prevent accidental edits
- Save and restore visibility states
- Auto-assign objects based on components
- Share layer setups across scenes
- Color-code your hierarchy for visual clarity

Core Concepts

Layers Named groups of GameObjects that can be shown, hidden, and locked independently. Objects can belong to multiple layers simultaneously.

Layer Views Saved visibility states that let you instantly switch between different working modes (e.g., "Layout Mode", "Lighting Mode", "Final Review").

Auto-Assign Rules Automatic assignment of objects to layers based on what components they have (e.g., all Lights go to Lighting layer).

Layer Presets Reusable layer configurations that can be saved and loaded across different scenes, perfect for maintaining consistency in team projects.

Per-Scene Databases Each scene has its own independent layer setup, stored alongside the scene file. No conflicts when switching scenes.

Design Philosophy

Scene Layers is designed to:

- Work alongside Unity's hierarchy, not replace it
- Be completely non-destructive (doesn't modify GameObjects)
- Store data per-scene for maximum flexibility
- Feel intuitive for artists, designers, and programmers
- Minimize clicks and maximize efficiency
- Support both solo developers and team workflows

Unity Version Support

- Minimum: Unity 2021.3 LTS
- Recommended: Unity 2022.3 LTS or later
- Tested: 2021 LTS, 2022 LTS, 2023 LTS, 2024+

Compatible with all render pipelines: Built-in, URP, and HDRP.

2. Getting Started

Installation

Unity Package Manager

1. Download the Scene Layers package
2. In Unity, go to Assets > Import Package > Custom Package
3. Select the downloaded package
4. Click Import to import all files

Verify Installation

1. Open Unity
2. Check that Window > Scene Layers menu appears
3. You should see two menu items: • Layer Manager • Options

Opening the Window

Method 1: Menu Window > Scene Layers > Layer Manager

Method 2: Right-Click Right-click in the Hierarchy window and select Scene Layers > Layer Manager (if configured)

The window can be docked anywhere in your Unity layout, just like other Unity windows.

Interface Overview

The Scene Layers window has three main sections:

Top Section: Layer Views

- Quick-access buttons for saved visibility states
- Settings icon (⚙) to manage views
- Save icon (💾) to create new views

Middle Section: Layers

- Search bar to filter layers and objects
- Layer list with expand/collapse
- Each layer shows visibility, lock status, and object count
- Drag handles for reordering

Bottom Section: New Layer Button

- Always-visible button to create new layers
- Matches Unity's "Add Component" style

Your First Layer

Let's create a simple layer setup:

Step 1: Create a Layer

1. Click the "New Layer" button at the bottom
2. Enter a name: "Environment"
3. Choose a color: Green
4. Press Enter or click Create

Step 2: Add Objects

1. Select some GameObjects in your scene (trees, terrain, buildings)

2. Drag them onto the "Environment" layer header
3. The layer now shows the number of objects: "Environment (5)"

Step 3: Use the Layer

1. Click the 👁️ eye icon - all environment objects hide
2. Click it again - they reappear
3. Click the 🔒 lock icon - you can't select environment objects
4. Click it again - selection is re-enabled

Step 4: Expand the Layer

1. Click the layer name or the ▸ arrow
2. You see all 5 objects in a list
3. Each object has its own visibility and lock controls

First View

Now let's save this state:

Create a View

1. With environment visible, click the 💾 Save icon at top
2. Name it: "Full Scene"
3. Choose a color: Blue
4. Click Save

Test the View

1. Hide the environment layer (click 👁️)
2. Click the "Full Scene" view button
3. Environment becomes visible again

Views remember the exact state of all layers, making it easy to switch between different working modes.

3. Layer Management

Creating Layers

Method 1: New Layer Button (Recommended)

1. Click "New Layer" at the bottom of the window
2. Enter a descriptive name
3. Choose a color that represents the layer's purpose
4. Press Enter or click Create

Naming Tips:

- Use clear, descriptive names: "Lighting" not "Layer1"
- Include category prefixes: "ENV Terrain", "ENV Props"
- Keep names short for better display: "UI" not "User Interface Elements"

Method 2: Context Menu

1. Right-click in the layer list
2. Select "Create New Layer" (if available)

Method 3: Keyboard Shortcut

If configured, press your assigned hotkey to create a layer.

Layer Header

Each layer header displays important information and controls:

Left Side: Status Icons

Foldout Arrow (▼/▸)

- Click to expand/collapse the layer
- Shows all objects in the layer when expanded
- Collapsed: ▸ Expanded: ▼

Eye Icon (👁️)

- Shows whether layer is visible
- Click to toggle visibility for all objects
- Open eye: Visible, Closed eye: Hidden

Lock Icon (🔒)

- Shows whether layer is pickable (selectable)
- Click to toggle picking for all objects
- Open lock: Pickable, Closed lock: Locked

Center: Layer Information

Layer Name

- Shows the layer's name
- Double-click to rename
- Right-click for context menu

Object Count (##)

- Shows number of objects in layer
- Updates automatically

- Helps track layer size

Right Side: Action Buttons

Select All (★)

- Selects all objects in the layer
- Useful for bulk operations
- Also pings the first object

Rules (⚙)

- Opens auto-assign rules panel
- Configure component-based assignment
- Set up automatic object detection

Delete (×)

- Deletes the layer
- Asks for confirmation
- Doesn't delete GameObjects, only the layer organization

Layer Operations

Renaming Layers

Method 1: Double-Click

1. Double-click the layer name
2. Type new name
3. Press Enter to confirm, Escape to cancel

Method 2: Context Menu

1. Right-click the layer header
2. Select "Rename Layer"
3. Type new name and press Enter

Tips:

- Names can include spaces and special characters
- Keep names under 20 characters for best display
- Use consistent naming across your project

Reordering Layers

1. Click and hold on a layer header
2. Drag up or down
3. A blue line shows where it will be inserted

4. Release to drop in new position

Why Reorder?

- Group related layers together
- Put frequently-used layers at the top
- Organize by workflow priority

Duplicating Layers

Right-click the layer header and choose:

"Duplicate Layer (structure only)"

- Creates a copy with same name, color, and settings
- Copies auto-assign rules
- Does NOT copy object assignments
- Use for creating similar layers

"Duplicate Layer + Objects"

- Creates complete copy including all objects
- Useful for variations or backups
- Original and copy are independent

Changing Layer Colors

1. Click the ⚙ (gear) icon on the layer
2. Click the color picker at top of rules panel
3. Choose new color
4. Color updates immediately in window and hierarchy

Color Selection Tips:

- Use similar colors for related layers
- Bright colors for temporary/debug layers
- Muted colors for background layers
- Consider color-blind accessibility

Deleting Layers

Method 1: Delete Button

1. Click the ✕ button on layer header
2. Confirm deletion

Method 2: Context Menu

1. Right-click layer header

2. Select "Delete Layer"
3. Confirm deletion

Important:

- Deleting a layer does NOT delete GameObjects
- Objects remain in the scene unchanged
- Only the layer organization is removed
- This action can be undone (Edit > Undo)

Isolating Layers

Quickly focus on a single layer by hiding everything else:

Method 1: Shift+Click Eye Icon

1. Hold Shift key
2. Click the 👁 (eye) icon on any layer
3. Everything in the scene is hidden
4. Only objects in the clicked layer remain visible

Method 2: Context Menu - Focus Layer

1. Right-click the layer header
2. Select "Focus Layer (hide other layers)"
3. All other layers are hidden
4. Objects not in any layer remain visible
5. Multi-layer objects become visible if they're in the focused layer

Method 3: Context Menu - Isolate Layer

1. Right-click the layer header
2. Select "Isolate Layer (hide everything else)"
3. Everything in the entire scene is hidden
4. Only objects in this layer are shown
5. Complete isolation - perfect for detailed work

When to Use Each:

- **Shift+Click (Isolate)** - Fastest method, hides absolutely everything except this layer
- **Focus Layer** - Hides other layers but keeps unlayered objects visible
- **Isolate Layer** - Same as Shift+Click, complete isolation

Tip: Isolate is perfect when you need to:

- Work on detailed models without distraction
- Review lighting on specific objects

- Check object placement in isolation
- Export or screenshot specific layer contents

Layer Context Menu

Right-click any layer header for these options:

Focus Layer (hide other layers)

- Hides all other layers
- Objects not in any layer remain visible
- Multi-layer objects become visible if in this layer
- Quick way to reduce clutter

Isolate Layer (hide everything else)

-
- Hides EVERYTHING in the entire scene
- Shows ONLY objects in this layer
- Complete isolation for focused work
- Same as Shift+clicking the eye icon

Layer Rules

- Opens auto-assign configuration
- Same as clicking ⚙ button

Scan Scene Now

- Applies auto-rules to existing objects
- Only available if rules are configured

Select All Objects

- Selects all objects in the layer
- Shows object count

Assign Selection

- Adds selected objects to layer
- Shows how many were added

Remove Selection

- Removes selected objects from layer
- Only affects objects actually in the layer

Rename Layer

- Starts rename mode
- Same as double-clicking name

Duplicate Layer

- Two options: with or without objects
- Creates independent copy

Delete Layer

- Removes the layer
- Asks for confirmation

4. Working with Objects

Adding Objects to Layers

Method 1: Drag & Drop (Fastest)

1. Select one or more GameObjects in Hierarchy
2. Drag them onto a layer header in Scene Layers window
3. Release to add
4. Notification confirms how many were added

Works with:

- Individual GameObjects
- Multiple selected GameObjects
- Prefab instances
- Objects from Project window (creates instances)

Method 2: Assign Button

1. Select objects in Hierarchy or Scene view
2. Click the + button on desired layer
3. Objects are added to the layer

Method 3: Context Menu

1. Select objects in Hierarchy
2. Right-click layer header
3. Select "Assign Selection"

Method 4: Drag onto Expanded Layer

1. Expand a layer (click the ▸ arrow)
2. Drag objects from Hierarchy

3. Drop between existing objects
4. Blue line shows insert position
5. Objects are added at that position in the layer's order

Object Row Display

When you expand a layer, each object shows:

Left Side: Controls

Eye Icon (👁️)

- Individual visibility control
- Overrides layer visibility
- Open: Visible, Closed: Hidden

Lock Icon (🔒)

- Individual picking control
- Overrides layer lock
- Open: Pickable, Closed: Locked

Center: Object Information

Object Icon

- Shows Unity's default icon for the object type
- Indicates prefab status (blue for prefab)

Object Name

- Shows the GameObject's name
- Grayed out if object is inactive in hierarchy
- Click to ping in Hierarchy
- Double-click to select (or configure in Options)

Right Side: Actions

Select Button (✓)

- Selects the object
- Also pings it in Hierarchy
- Quick way to find and focus on an object

Remove Button (−)

- Removes object from THIS layer only
- Doesn't delete the GameObject
- Doesn't affect other layers

Removing Objects from Layers

Method 1: Remove Button

1. Expand the layer
2. Click the − button next to the object
3. Object is removed from layer

Method 2: Selection Remove

1. Select objects in scene
2. Click the − button on layer header
3. All selected objects are removed from that layer

Method 3: Context Menu

1. Right-click an object row
2. Select "Remove from [Layer Name]"

Reordering Objects

Objects within a layer can be reordered:

Drag to Reorder

1. Expand a layer
2. Click and hold on an object row
3. Drag up or down
4. Blue line shows insert position
5. Release to drop

Why Reorder?

- Logical grouping (e.g., ground, mid-height, sky)
- Priority ordering
- Personal preference
- Makes scanning the list easier

Moving Between Layers

1. Expand both source and destination layers
2. Drag object from one layer
3. Drop onto another layer's header OR between objects in expanded layer
4. Object moves (doesn't copy) to new layer

Multi-Layer Objects

Objects can belong to multiple layers simultaneously.

Adding to Additional Layers

1. Object is already in "Environment" layer
2. Also add it to "Collision" layer
3. Object now appears in both layers
4. Changes in one layer don't affect the other

Visual Indicator

In the Hierarchy window (if Layer Colors enabled):

- Single layer: Solid color tint
- Multiple layers: Striped colors
- Stripe direction: Set in Options

Finding All Layers for an Object

1. Right-click an object row
2. View "Also in layers:" section
3. Lists all other layers containing this object

Object Context Menu

Right-click any object row for these options:

Select

- Selects the object in Unity
- Pings in Hierarchy

Ping in Hierarchy

- Highlights object in Hierarchy without selecting
- Useful for locating without changing selection

Remove from "[Layer Name]"

- Removes from current layer only
- Object stays in other layers if applicable

Also in layers:

- Shows all other layers containing this object
- List is for information only (not clickable)

Object Click Behavior

You can configure what happens when you click an object name:

Ping Mode (Default)

- Clicking highlights the object in Hierarchy
- Selection doesn't change
- Less disruptive to workflow

Select Mode

- Clicking selects the object
- Opens in Inspector
- Faster for editing properties

Change in Options: Window > Scene Layers > Options > Clicking Object Row

5. Layer Views

Layer Views save complete visibility states so you can instantly switch between different working modes.

What Views Remember

When you save a view, it captures:

- Which layers are visible (👁️)
- Which layers are locked (🔒)
- Which layers are expanded (▼/▸)

For every single layer in your scene.

Creating a View

Step 1: Set Up Your Scene

1. Hide/show layers as desired
2. Lock/unlock layers as needed
3. Expand/collapse layers to your preference

Step 2: Save the View

1. Click the 💾 Save icon at the top of the window
2. Enter a descriptive name (e.g., "Layout Mode")
3. Choose a color for the view button
4. Press Enter or click Save

Step 3: View Appears

- A colored button appears in the Layer Views section

- Button uses the color you chose
- Button text shows the view name

Using Views

Applying a View

Method 1: Click Button

- Simply click the view button
- All layer states restore instantly
- Notification confirms which view was applied

Method 2: Context Menu

- Right-click the view button
- Select "Apply View"

View Buttons

View buttons automatically adapt to window width:

- Wide window: Full text visible
- Medium window: Abbreviated text
- Narrow window: Initials only

Colors remain consistent for easy identification.

Managing Views

Opening View Manager

Click the ⚙ Settings icon next to the Save icon.

The view manager panel shows all saved views with these controls for each:

View Name

- Double-click to rename
- Press Enter to confirm, Escape to cancel

Color Picker

- Change the button color
- Updates immediately

Overwrite Button (🔄)

- Updates the view with current layer states
- Useful for refining a view after changes
- No confirmation needed

Delete Button (🗑️)

- Removes the view
- Asks for confirmation
- Cannot be undone

Updating a View

Method 1: Overwrite Button

1. Set layers to new desired state
2. Open view manager (⚙)
3. Click 🔄 next to the view
4. View is updated

Method 2: Context Menu

1. Right-click view button
2. Select "Overwrite View"

Deleting a View

Method 1: View Manager

1. Open view manager (⚙)
2. Click 🗑️ next to the view
3. Confirm deletion

Method 2: Context Menu

1. Right-click view button
2. Select "Delete View"
3. Confirm deletion

Common View Setups

"Layout Mode"

- Hide: UI, VFX, Audio visualizers
- Show: Environment, Gameplay objects
- Expand: Main gameplay layers
- Use for: Level design, object placement

"Lighting Mode"

- Hide: Everything except lights and environment
- Show: All light types, reflection probes
- Expand: Lighting layers
- Use for: Lighting passes, baking

"Performance Test"

- Hide: Expensive rendering (high-poly, complex VFX)
- Show: Gameplay essentials
- Use for: Testing frame rate, optimization

"Final Review"

- Show: Everything
- Collapse: All layers
- Use for: Seeing complete scene as players will

"Debug Mode"

- Show: Collision objects, triggers, debug helpers
- Hide: Visual elements
- Use for: Gameplay debugging, collision testing

"Export Ready"

- Hide: All editor-only objects, debug helpers
- Show: Only game-ready content
- Use for: Pre-export verification

View Tips

Keep It Under 10 Too many views becomes confusing. If you need more, consider if some can be combined or removed.

Use Clear Names "Layout Mode" is better than "View 1". Names should indicate purpose at a glance.

Color Code by Purpose

- Blue tones: Work modes
- Green tones: Complete/ready states
- Yellow/Orange: Testing modes
- Red tones: Debug/diagnostic modes

Update Regularly As your scene evolves, update views to match current needs. Don't let views become outdated.

6. Auto-Assign Rules

Auto-assign rules automatically add objects to layers based on what components they have.

Why Use Auto-Rules?

Benefits:

- Automatically organize new objects as you create them
- Maintain organization as you add components
- Scan existing scenes to quickly organize
- Reduce manual clicking and dragging
- Ensure consistency across scenes

Use Cases:

- Lighting layer: All objects with Light components
- Audio layer: All objects with AudioSource components
- VFX layer: All objects with ParticleSystem components
- Physics layer: All objects with Rigidbody components

Opening Rules Panel

Click the ⚙ (gear) icon on any layer header.

The rules panel shows:

- Layer name and color picker at top
- Current rules section (if any exist)
- Quick Picks section (common Unity components)
- Browse/Search section (all available components)
- Scan Scene Now button at bottom

Adding Rules

Method 1: Quick Picks (Fastest)

1. Open rules panel for a layer
2. Look at "Quick Picks" section
3. Click a component type button
4. Rule is added immediately

Available Quick Picks:

- Light
- Camera
- MeshRenderer

- SpriteRenderer
- AudioSource
- Rigidbody
- Rigidbody2D
- BoxCollider
- BoxCollider2D
- Collider
- Animator
- ParticleSystem

Method 2: Search

1. Type in the search field
2. Browse filtered results
3. Click "Add" next to desired component
4. Rule is added

Search Tips:

- Type partial names: "audio" finds AudioSource, AudioListener, etc.
- Use multiple keywords: "mesh render" for MeshRenderer
- Case doesn't matter
- Searches namespace and class name

Current Rules Display

Shows all rules currently configured for this layer:

- Component type name (full namespace)
- Remove button for each rule
- Count of how many rules exist

Removing Rules

1. Click "Remove" next to any rule
2. Rule is deleted immediately
3. Already-assigned objects remain in layer

Scanning the Scene

After adding rules, apply them to existing objects:

1. Click "Scan Scene Now" button
2. Scene Layers searches all objects
3. Matching objects are added to the layer
4. Notification shows how many were added

Important:

- Only finds objects not already in the layer
- Doesn't duplicate assignments
- Scans entire scene (all hierarchies)
- Includes inactive objects

Real-Time Auto-Assignment

Once rules are configured, they work automatically:

New Objects: When you create a GameObject with a matching component, it's automatically added to the layer.

Adding Components: When you add a component to an existing GameObject, if it matches a rule, the object is added to that layer.

No Manual Work: Just create and work - Scene Layers handles the organization.

Example Rule Setups

Lighting Layer

Purpose: Organize all light sources

Rules to Add:

- UnityEngine.Light
- UnityEngine.ReflectionProbe
- UnityEngine.LightProbeGroup

Result: All directional, point, spot, and area lights automatically organized.

Audio Layer

Purpose: Find all audio sources

Rules to Add:

- UnityEngine.AudioSource
- UnityEngine.AudioReverbZone
- UnityEngine.AudioListener

Result: All audio-related objects in one place.

VFX Layer

Purpose: Organize all visual effects

Rules to Add:

- UnityEngine.ParticleSystem
- UnityEngine.VFX.VisualEffect
- UnityEngine.TrailRenderer
- UnityEngine.LineRenderer

Result: All particle effects and trails organized.

Cameras Layer

Purpose: Track all camera objects

Rules to Add:

- UnityEngine.Camera

Result: Main camera, secondary cameras, UI cameras all organized.

Physics Layer

Purpose: Find all physics objects

Rules to Add:

- UnityEngine.Rigidbody
- UnityEngine.Rigidbody2D
- UnityEngine.CharacterController

Result: All physics-driven objects in one layer.

UI Layer

Purpose: Organize all UI elements

Rules to Add:

- UnityEngine.UI.Canvas
- UnityEngine.UI.Image
- UnityEngine.UI.Text
- UnityEngine.UI.Button

Result: All UI components organized automatically.

Best Practices

Start Broad, Then Specific Begin with general rules (e.g., "Light" for all lights), then create specialized layers if needed (e.g., "Directional Lights").

One Component Type Per Rule Each rule should match one specific component. Don't try to combine multiple types.

Test with Scan After adding rules, use "Scan Scene Now" to verify they're catching what you expect.

Review Auto-Assignments Occasionally check layers to ensure auto-rules are still appropriate as your scene evolves.

Combine with Manual Assignment Auto-rules don't have to do everything. Use them for broad categorization, manual assignment for specific organization.

7. Layer Presets

Layer Presets let you save your entire layer setup and reuse it in other scenes.

What Presets Save

A preset captures:

- All layer definitions (names, colors, visibility, lock states)
- Auto-assign rules for each layer
- All layer views (including their colors)
- Expand/collapse states for each layer

What Presets Don't Save

Presets do NOT save:

- Specific object assignments (these are scene-specific)
- Object order within layers
- Scene-specific GameObject references

Why? Object assignments are tied to specific GameObjects via GlobalObjectId, which is scene-specific. Presets are designed to be scene-agnostic templates.

Opening Preset Manager

Click the preset icon (⚙) in the top-right corner of the Scene Layers window.

The preset manager shows:

- Save section at top
- Scene management section
- List of available presets
- Load and delete options for each

Creating a Preset

Step 1: Set Up Your Layers

Create and configure all layers exactly as you want them:

- Layer names and colors
- Auto-assign rules
- Layer views
- Default visibility and lock states

Step 2: Save the Preset

1. Click the preset icon (⚙) in top-right
2. Enter a preset name in the "Save Current Setup" section
3. Click "Save" button
4. Preset appears in the list

Step 3: Preset is Saved

- Preset file is created in Assets/SceneLayers/Presets/
- File is named [PresetName].asset
- Can be version controlled and shared

Loading a Preset

Step 1: Open Preset Manager

Click the preset icon (⚙) in top-right corner.

Step 2: Choose Run Rule Scan Option

Toggle: "Run rule scan on load"

- ✓ Enabled: Immediately assigns objects matching rules
- ✗ Disabled: Just creates layer structure, no assignments

Step 3: Load Preset

1. Find desired preset in the list
2. Click "Load" button
3. Confirm (this replaces current layers)
4. If rule scan enabled, objects are automatically assigned

Managing Presets

Viewing Preset Details

Each preset in the list shows:

- Preset icon
- Preset name
- Number of layers
- Number of views

Deleting Presets

1. Click the ✕ button next to preset
2. Confirm deletion
3. Preset file is deleted from project

Scene Management

The preset manager includes scene management options:

Clear All Layers

Purpose: Remove all layers and start fresh

Process:

1. Click "Clear All Layers" button
2. Confirm the action
3. All layers and views are removed
4. Scene database is cleared

Use When:

- Starting a new scene organization from scratch
- Cleaning up before loading a preset
- Resetting after experimentation

Common Preset Use Cases

Team Standards

"Studio Standard Layers"

- Create once with team-agreed layer structure
- Everyone loads it for new scenes
- Ensures consistency across project
- Easy to update and redistribute

Project Types

"FPS Game Layers"

- Weapons, Enemies, Cover, Pickups, etc.
- Appropriate views for FPS development

- Auto-rules for common FPS components

"Archviz Layers"

- Environment, Furniture, Lighting, Cameras
- Views for client presentations
- Rules for architectural elements

"UI-Heavy Project"

- Multiple UI layers for different screens
- Animation layers
- Background/foreground separation

Personal Templates

"My Preferred Setup"

- Your personal layer preferences
- Quick start for any new scene
- Customize for your workflow

8. Advanced Features

Drag and Drop Details

Drag Sources

Scene Layers accepts drags from:

- Unity Hierarchy window
- Unity Scene view
- Project window (prefabs)
- Internal (reordering within Scene Layers)

Drop Targets

You can drop onto:

- Layer headers (adds to layer)
- Empty space in expanded layer (inserts at end)
- Between objects in expanded layer (inserts at position)
- Blue insertion line shows where objects will go

Prefab Handling

Dropping Prefab Assets: When you drag a prefab from Project window onto a layer:

Option 1: Apply to Asset

- Adds an auto-rule for this prefab type
- All future instances automatically assigned
- Existing instances can be assigned via "Also update existing instances" checkbox

Option 2: Instantiate in Scene

- Creates an instance in the scene
- Adds that instance to the layer
- Instance placed at scene view pivot point

Search Functionality

Basic Search

Type in the search box to filter by name:

- Searches both layer names and object names
- Case-insensitive
- Partial matches work
- Results update as you type

Search Results Display

- Matching layers remain visible
- Non-matching layers are hidden
- Layers with matching objects are shown and auto-expanded
- Matching objects are highlighted
- Object count shown for matches

Clearing Search

- Click the "Clear" button next to search field
- Or delete all text in search field
- All layers become visible again

Multi-Layer Management

Objects in Multiple Layers

Objects can belong to as many layers as needed:

- Add to first layer normally
- Add same object to additional layers
- Each layer manages it independently
- Removing from one layer doesn't affect others

Visual Indicators

In Scene Layers Window:

- Object appears in each layer it belongs to
- Context menu shows "Also in layers:" list

In Hierarchy Window: (If Layer Colors enabled in Options)

- Single layer: Solid color tint
- Multiple layers: Striped pattern
- Stripe direction: Vertical or Horizontal (set in Options)

Keyboard Shortcuts

General

- Double-click layer name: Start rename
- Double-click view name: Start rename
- Double-click object name: Select (or Ping, based on settings)

During Rename

- Enter: Confirm rename
- Escape: Cancel rename
- Tab: Confirm and move to next field (if available)
-

Layer Interactions

- Double-click layer name: Start rename
- Double-click view name: Start rename
- Double-click object name: Select (or Ping, based on settings)
- Shift+Click eye icon: Isolate layer (hide everything else)
- Right-click anywhere on layer: Open context menu

Undo Support

Scene Layers fully supports Unity's Undo system:

- Edit > Undo (Ctrl/Cmd+Z)
- Edit > Redo (Ctrl/Cmd+Shift+Z)

Undoable Operations:

- Creating layers
- Deleting layers
- Renaming layers

- Changing layer colors
- Adding/removing objects
- Creating/deleting views
- Changing layer visibility/lock states

Performance Considerations

Large Scenes (1000+ objects)

- Layer operations are optimized
- Visibility changes use batch operations
- No performance impact on Unity's runtime
- Smooth scrolling even with many expanded layers

Many Layers (50+)

- No slowdown with many layers
- Search helps manage large lists
- Views provide quick navigation
- Consider naming conventions for organization

9. Options & Settings

Access options via: Window > Scene Layers > Options

Layer Colors

Toggle: Show/Hide colored backgrounds in Hierarchy

When Enabled:

- Objects show their layer color as subtle tint in Hierarchy
- Helps identify layer membership at a glance
- Multiple-layer objects show striped pattern
- Colors are subtle for readability

When Disabled:

- No visual indication in Hierarchy
- Layer colors only visible in Scene Layers window
- Cleaner Hierarchy appearance
- Better for those who prefer minimal UI

Default: Enabled

Clicking Object Row

Setting: What happens when you click an object name

Option 1: Ping (Default)

- Clicking highlights object in Hierarchy
- Doesn't change selection
- Less disruptive to workflow
- Good for locating objects

Option 2: Select

- Clicking selects the object
- Opens in Inspector immediately
- Faster for
- Clicking selects the object
- Opens in Inspector immediately
- Faster for editing properties
- Good for rapid iteration

Recommendation:

- Use Ping if you frequently locate objects but don't always need to edit them
- Use Select if you primarily use Scene Layers for quick access to properties

Multi-Layer Objects

Setting: Color Split Direction

When an object belongs to multiple layers, it shows combined colors in the Hierarchy (if Layer Colors enabled).

Option 1: Vertical Stripes (Default)

- Colors appear side-by-side
- Left to right progression
- Works well with wide Hierarchy windows
- Easier to distinguish individual colors

Option 2: Horizontal Stripes

- Colors appear stacked
- Top to bottom progression
- Works well with narrow Hierarchy windows
- More compact appearance

Note: This setting only affects Hierarchy display, not Scene Layers window.

10. Tips & Best Practices

Organization Strategies

By Object Type

Create layers based on what objects are:

- Environment (terrain, buildings, props)
- Lighting (directional, point, area lights)
- Audio (sources, reverb zones)
- VFX (particles, trails, effects)
- UI (canvas, buttons, text)
- Cameras

Best For: Technical organization, clear separation of concerns

By System

Create layers based on gameplay systems:

- Player System (player, input handlers, cameras)
- Enemy System (spawners, AI, patrol paths)
- Collectibles (pickups, rewards, objectives)
- Environment Interaction (doors, levers, destructibles)
- Save System (checkpoints, save points)

Best For: Gameplay-focused projects, system-based development

By State

Create layers based on when objects are active:

- Always Visible (core environment)
- Conditional (doors, interactive elements)
- Debug Only (gizmos, helpers, test objects)
- Optional Content (side quests, secrets)

Best For: Managing runtime states, optimization work

By Detail Level

Create layers based on visual complexity:

- High Detail (close-up assets, hero props)
- Medium Detail (standard environment)
- Low Detail (distant objects, LODs)

- Background (skybox, distant mountains)

Best For: Performance optimization, LOD management

Performance Tips

Scene Complexity Management

- Use layers to isolate expensive objects
- Create "Performance Test" view that hides heavy rendering
- Layer profiler targets separately for easier analysis
- Toggle post-processing, particles, etc. by layer

Build Preparation

- Create "Build Ready" view showing only shippable content
- Hide debug objects, editor-only helpers
- Verify nothing essential is hidden
- Use as pre-build checklist

Iteration Speed

- Hide UI while working on 3D environment
- Hide environment while working on UI
- Lock background to prevent accidental selection
- Focus on one system at a time

11. Troubleshooting

Common Issues

Objects Not Appearing After Scene Reload

Symptom: After saving and reopening a scene, some objects don't appear in their layers.

Cause: GlobalObjectId updates after scene load. Brief delay while Unity processes the scene.

Solution:

- Wait a few seconds after scene load
- Objects will reappear automatically
- No action needed - this is normal Unity behavior

If objects truly missing:

- Check if objects still exist in Hierarchy
- Re-assign them to layers if necessary
- Verify scene file saved correctly

Can't See Layer Colors in Hierarchy

Symptom: Objects don't show colored backgrounds in Hierarchy window.

Cause: Layer Colors option is disabled.

Solution:

1. Window > Scene Layers > Options
2. Enable "Layer Colors" toggle
3. Colors appear immediately

Can't Select Objects in Scene

Symptom: Clicking objects in Scene view doesn't select them.

Cause: Layer is locked (picking disabled).

Solution:

1. Find the layer containing these objects
2. Check the lock icon (🔒)
3. If closed, click to unlock
4. Objects become selectable again

Database File Missing

Symptom: Error message about missing database file.

Cause: The scene's layer database file was deleted or moved.

Solution:

1. Create a new layer in Scene Layers window
2. Database file is automatically created
3. Will be named [SceneName]_SceneLayers.asset
4. Located next to your scene file
5. Previous layer data is lost - need to recreate

Preset Not Applying Correctly

Symptom: Loading a preset doesn't create expected layers or rules.

Cause: Preset file may be corrupted or incompatible.

Solution:

1. Try loading a different preset
2. If that works, original preset may be damaged
3. Recreate the preset from a working scene
4. If none work, reinstall Scene Layers

Search Shows No Results

Symptom: Typing in search box shows "No layers or objects match".

Cause: Search query doesn't match any layer or object names.

Solution:

1. Check spelling
2. Try shorter search term
3. Clear search and browse manually
4. Verify layers and objects actually exist

Performance Slowdown

Symptom: Unity editor becomes slow when Scene Layers window is open.

Cause: Very large scene with many layers/objects, or other performance issues.

Solution:

1. Close unneeded editor windows
2. Use search to filter visible layers
3. Collapse layers you're not using
4. Check Unity's overall performance
5. Restart Unity if problems persist

Layer Reordering Not Working

Symptom: Can't drag layers to reorder them.

Cause: Search is active - reordering disabled during search.

Solution:

1. Clear the search box
2. Reordering becomes available
3. This prevents confusion during filtered views

Objects Assigned to Wrong Layer

Symptom: Objects appear in unexpected layers.

Cause: Auto-assign rules may be assigning them automatically.

Solution:

1. Check layer's auto-rules (click ⚙)
2. Review which components trigger assignment
3. Remove rules if not desired
4. Manually remove objects from unwanted layers

Error Messages

"No layers yet"

Meaning: Scene has no layers created yet. **Action:** Click "New Layer" to create your first layer.

"No objects selected"

Meaning: Trying to assign objects but none are selected. **Action:** Select objects in Hierarchy first, then click assign button.

"Object already in layer"

Meaning: Trying to add object that's already assigned. **Action:** This is informational - no action needed.

"Scene not saved"

Meaning: Current scene hasn't been saved to disk. **Action:** Save scene (Ctrl/Cmd+S) before creating layers. Layer data requires saved scene.

Data Recovery

If Layer Data Appears Lost

Scenario 1: After Domain Reload

- Wait a moment - data is reloading
- Check if database file exists next to scene
- If file exists, data should reappear

Scenario 2: After Scene Switch

- Each scene has its own database
- Layer data is per-scene, not global
- Check correct scene is open

Scenario 3: After Unity Crash

- Check for scene backup files
- Look for [SceneName]_SceneLayers.asset
- If missing, layer data is lost
- Will need to recreate from memory or preset

Backup Strategy

Recommended:

1. Use version control (Git, Perforce, etc.)
2. Commit scene files AND database files together
3. Save presets of important layer setups
4. Document layer organization in wiki

12. Technical Reference

Data Storage

Layer Database File

File: [SceneName]_SceneLayers.asset **Location:** Same folder as scene file **Type:** ScriptableObject **Format:** Unity asset (binary/YAML)

Contains:

- Layer definitions (names, colors, GUIDs)
- Object assignments (as GlobalObjectId strings)
- Auto-assign rules
- Layer views
- Default visibility/lock states

Important:

- One database per scene
- Must be committed to version control with scene
- Deleting this file loses all layer data
- Can be manually edited in Inspector (not recommended)

Object Membership

Storage Method: GlobalObjectId strings

Why GlobalObjectId:

- Persists through scene reloads

- Survives prefab operations
- Unique per object per scene
- Standard Unity identifier

Limitations:

- Scene-specific (can't reference across scenes)
- Temporary objects (unsaved) won't persist
- Requires scene to be saved

UI State Storage

Storage Method: EditorPrefs (Unity's editor preferences)

Stored Per-Scene:

- Foldout states (which layers are expanded)
- Selected layer
- Scroll position
- View manager open/closed state

Key Format: SceneLayers.[StateName].[SceneKey].[LayerGuid]

Persistence:

- Survives Unity restart
- Survives domain reload
- Survives scene switching
- Per-user (not shared in version control)

Object Order

Storage Method: EditorPrefs

Per-Layer Storage: List of GlobalObjectId strings in desired order.

Persistence:

- Survives Unity restart
- Survives domain reload
- User-specific

Compatibility

Unity Versions

- **Minimum:** Unity 2021.3 LTS
- **Tested:** 2021.3, 2022.3, 2023.3, 2024.1+
- **APIs Used:** Standard Unity Editor APIs

- **Future:** Should work with future Unity versions barring API changes

Render Pipelines

- **Built-in Render Pipeline:** ✓ Fully supported
- **Universal Render Pipeline (URP):** ✓ Fully supported
- **High Definition Render Pipeline (HDRP):** ✓ Fully supported
- **Custom Pipelines:** ✓ Should work (uses standard APIs)

Platforms

Editor Platforms:

- Windows ✓
- macOS ✓
- Linux ✓

Note: Scene Layers is editor-only. No runtime components.

Package Manager

Scene Layers can be used as:

- Imported .unitypackage
- Local package (package.json)

Credits & Attribution

Scene Layers for Unity Version 1.0.0

Version History

Version 1.0.0 - Initial Release

- Complete layer management system
- Layer views for visibility states
- Auto-assign rules
- Layer presets
- Drag & drop support
- Color-coded hierarchy
- Per-scene databases
- Multi-layer object support
- Comprehensive documentation

End of Manual

For additional support and resources: cheekychopslabs@gmail.com

Thank you for using Scene Layers!