LayoutGuides Easy

A **Unity Editor-only** tool that adds layout guides and smart snapping to both UI and 3D objects. Think of it like the alignment tools you'd find in Canva, Figma, or Photoshop. The tool is **performance-optimized** and only changes where objects are positioned without messing with anything else. It automatically turns off when you hit Play mode, so it won't slow down your game at all.

Features

Editor-Only & Performance-Optimized: Everything runs only in Edit mode. When you hit Play, the tool automatically shuts down so there's zero impact on your game's performance. It only moves objects around. Everything else like rotation, scale, and other properties stays exactly as you set them.

Zero Setup Required: Once you add the `LayoutGuidesEasy` component to a parent object, it just works with all the child elements. No need to add anything to the children, no extra setup, no hassle. All child elements automatically get smart guides, snapping, and alignment features right away.

Manual Guides

You can drag guide lines around in your scene, and they work for both UI and 3D objects. You get guides for X, Y, and Z axes, and you can lock them so you don't accidentally move them. In 3D mode, guides show up as semi-transparent planes. Feel free to change the colors, pick between solid or dotted lines, and you can even hide the planes until you're actually snapping something. When you drag objects near a guide, they'll snap automatically.

Center Snap Between Guides: When you have two manual guides on the same axis (e.g., two vertical guides for left and right), you can drag an object between them and it will snap to the center position. This works for X, Y, and Z axes, and you can snap to multiple centers simultaneously (e.g., both X and Y centers at the same time).

Visual Snap Feedback

When an object gets close enough to snap to a guide (whether it's manual or smart), you'll see a nice "Outline Glow" effect. This makes it super clear when snapping is about to happen, so you can position things confidently.

Smart Guides

These guides pop up on their own when you're dragging objects around. For UI elements, you get 9-point alignment (left, center, right, plus top, center, bottom). For 3D objects, it snaps border-to-border on all axes. The guides only show up between the objects that are actually aligning, which keeps things clean. It also handles parent center alignment and smartly ignores parents that have their own guides component.

Equal Spacing

The tool notices when you have 3 or more objects spaced evenly and shows you indicators. This works on all axes and helps you keep that spacing consistent while you're dragging things around.

Distance Display

Shows you the gap between objects when they overlap on one axis. It's similar to those smart distance indicators you see in design tools like Canva or Figma. You can customize the text and background colors however you like.

Multi-Mode Support

Everything works across different Canvas render modes (Screen Space Overlay, Screen Space Camera, and World Space) as well as regular 3D objects using Renderer or Collider bounds.

Installation

Just import the LayoutGuides Easy package into your Unity project. It works with Unity 2020.3 and later, and you don't need any extra dependencies.

Note: This is an Editor-only tool that automatically turns off during Play mode. It won't affect your builds or how your game runs.

Quick Start

For UI Elements (Canvas)

1. Select or create a Canvas.
2. Add the `LayoutGuidesEasy` component to it (or any parent), or add it to any of your prefabs. You can add it via **Component > Layout > Layout Guides Easy** menu, or by clicking **Add Component** in the Inspector and searching for "Layout Guides Easy".
3. Drag a child element around and you'll see smart guides appear. You can use your own prefabs as child elements.
4. Let go to snap.

For 3D Objects

1. Create a parent GameObject.
2. Add the `LayoutGuidesEasy` component via **Component > Layout > Layout Guides Easy** menu, or by clicking **Add Component** in the Inspector and searching for "Layout Guides Easy".
3. Add some child objects.
4. Drag the children around to see guides and snapping in action.

Important: Once the parent object has the `LayoutGuidesEasy` component, the child objects don't need anything else. The tool automatically works with all child elements without you having to modify them.

Manual Guides

Creating Manual Guides

Select a GameObject with the LayoutGuidesEasy component, then in the Inspector expand the Manual Guides list. Click the + button to add a new guide, then set the Value (where it sits on the coordinate) and pick the Axis (X, Y, or Z).

Dragging Guides

When Guides Enabled is checked, you'll see the guides in the Scene view. Just click and drag the guide handle to move it around.

Locking Guides

Turn on Guides Is Locked in the Inspector if you want to keep guides from moving. They'll still work for snapping, you just won't be able to drag them anymore.

Snapping to Manual Guides

When Snap Enabled is checked, objects automatically snap to nearby guides. This happens when you let go of the mouse button after dragging. You can customize the snap thresholds for both 2D (default is 10 pixels) and 3D (default is 0.5 units).

Center Snap: When you have two manual guides on the same axis (left/right, top/bottom, or front/back for 3D), dragging an object between them will show a center indicator line. When you release the mouse, the object will snap to the exact center position between the two guides. This works simultaneously for multiple axes (X, Y, and Z) if you have guides on multiple axes.

Smart Guides

How Smart Guides Work

Smart guides show up automatically when you're dragging an object. They show you when things align with sibling objects (other children of the same parent) and the parent's center (both horizontally and vertically).

Alignment Points

For UI Elements:

- Vertical Lines (X-axis): Left edge, center, right edge
- Horizontal Lines (Y-axis): Top edge, center, bottom edge

For 3D Objects:

- X, Y, Z axes: Min, center, max bounds

Smart Guide Features

Line Display

The lines only show up between the two objects that are actually aligning. This keeps things much cleaner than having lines stretch across your entire screen. By default they're magenta and dashed, but you can change that.

Parent Ignore

If a parent object has its own LayoutGuidesEasy component, it gets ignored for alignment purposes. This stops unwanted snapping to parents when you're just trying to align siblings.

3D Border Snapping

In 3D mode, smart guides focus on border-to-border alignment, so you can easily snap objects to the edges of others. Think snapping a book onto a shelf or a picture against a wall.

3D Size Matching

When resizing 3D objects using the Rect Tool, the tool can detect when your object's width or height matches a sibling object's dimensions. Visual guides appear showing the matching size, and the object can snap to match the exact dimensions. This works for width (when dragging left/right edges or corners) and height (when dragging top/bottom edges or corners).

Always Show Mode

Turn on Show Smart Always if you want to see the guides even when you're not actively dragging anything. This is handy when you're trying to figure out how different elements relate to each other in your layout.

Preventing Unwanted Snaps

The tool only snaps when you actually drag and move an object. Just clicking on something won't trigger a snap, which prevents accidental position changes.

Spacing & Distance Indicators

Overview

The tool provides multiple spacing and distance indicators to help you create consistent layouts. All of these are controlled by a single **Show Spacing** setting for simplicity.

Equal Spacing Detection

This feature notices when objects are evenly spaced and helps you keep that spacing consistent. When you drag an object, the system looks at groups of three objects. If it finds two gaps that are pretty much equal, spacing indicators show up and the object can auto-snap to keep that perfect equal spacing.

Detection Patterns: The system checks three patterns where the object you're dragging is:

1. Last in sequence: $Prev2, Prev1, Selected$
2. Middle in sequence: $Prev1, Selected, Next1$
3. First in sequence: $Selected, Next1, Next2$

Distance labels show up between objects showing the gap size between their bounding boxes. This works independently on X, Y, and Z axes (Z-axis spacing is available for 3D objects only).

Sibling Distance Indicators

This shows distances between the selected object and its siblings when their bounding boxes overlap on one axis.

For example:

- Two buttons stacked vertically will show the horizontal distance between them
- Two buttons placed side-by-side will show the vertical distance between them

Manual Guide Center Distance

When you have two manual guides on the same axis and drag an object between them, a center indicator line appears. The center line is always visible when dragging objects between guides, regardless of the **Show Spacing** setting.

Visual Style

By default, you get white text with a dark semi-transparent background. There are distance lines connecting the objects. The whole thing is designed to stay out of your way while still being easy to see.

Customization

You can adjust these in the Inspector:

- Distance Text Color: Changes the color of the distance number
- Distance Text Background Color: Changes the background behind the text

Enabling/Disabling

Toggle **Show Spacing** in the Inspector to control all distance labels, including:

- Equal spacing indicators between objects
- Sibling distance indicators

When Show Spacing is off, the center indicator lines for manual guides still appear (for visual feedback).

Settings

Component Settings (Inspector)

Global Settings

- Is Enabled: Master switch for the entire component

Guides Settings

- Guides Enabled: Show or hide all guides
- Guides Is Locked: Lock manual guides so they can't be dragged
- Snap Enabled: Turn snapping behavior on or off

Smart Guides Settings

- Auto Smart Snap: Enable smart alignment with sibling objects
- Show Spacing: Display spacing indicators and distance labels (equal spacing and sibling distances)
- Always Show Smart Guides: Show smart guides even when not dragging

Snap Settings

- Snap Threshold 2D: Distance threshold for snapping in UI mode (pixels, default: 10.0)
- Snap Threshold 3D: Distance threshold for snapping in 3D (units, default: 0.5)
- Show Plane On Snap: Keeps the scene clean by hiding 3D planes until you're dragging an object near them (default: enabled)

Visuals Settings

- Guide Color: Color for manual guides (default: cyan)
- Smart Color: Color for smart guides (default: magenta)
- Guide Line Type: Solid or dotted lines

Snap Highlight Settings

- Show Snap Highlight: Enable/disable the visual feedback glow
- Snap Highlight Color: Color of the highlight glow effect
- Snap Highlight Intensity: Intensity of the glow effect (0-1)

Distance Text Settings

- Distance Text Color: Color for distance numbers
- Distance Text Background Color: Background behind distance text

Global Settings Window

Go to **Tools > LayoutGuides Easy > Settings** to open the Settings window and configure global default values for newly added LayoutGuidesEasy components. Changes in the Settings window apply to all new components, and you can apply them to existing ones using the "Reset to Default" button.

The Settings window allows you to configure:

- Guide colors
- Smart guide colors
- Snap thresholds (separate for 2D and 3D)
- Distance text appearance
- Line styles
- Snap highlight settings
- Show Plane On Snap setting

Reset to Default

Click Reset to Default in the Inspector to bring all settings back to their default values. Your manual guides will be preserved and not cleared.

Keyboard Shortcuts

Toggle All Guides

Go to Tools > LayoutGuides Easy > Toggle All Guides to toggle IsEnabled for all LayoutGuidesEasy components in the scene at once. If they're all enabled, this will turn them all off. If any are disabled, this will turn them all on.

You can also use the Toggle All Guides button in the Settings window (Tools > LayoutGuides Easy > Settings) for quick access.

You can assign a custom keyboard shortcut to this in Unity's Shortcut Manager if you want faster access.

Best Practices

For UI Design

Add LayoutGuidesEasy to your Canvas root. Use manual guides for consistent margins and padding. Turn on Always Show Smart Guides when you're actively designing so you can see how things align. Lock guides once you've got them where you want to prevent accidental changes.

For 3D Layouts

Use parent objects to create logical groupings with LayoutGuidesEasy. You can combine this with Unity's built-in grid snap for maximum precision. Adjust the snap threshold based on what you need - lower values for precise alignment, higher values for easier snapping.

Performance Tips

LayoutGuides Easy is **performance-optimized** and designed for editor use only:

- Automatically turns off in Play mode for **zero runtime overhead**
- Only changes object positions (Transform.position or RectTransform.anchoredPosition), leaving everything else untouched

- Efficient calculation methods keep editor performance impact low
- Turn off the component (IsEnabled off) when you're not actively designing
- Use Toggle All Guides to quickly turn everything off when doing a final scene review
- If you have many children (100+), you may experience slight editor slowdown during active dragging, especially on lower-end hardware. **Solution**: Split your layout into multiple parent objects, each with its own LayoutGuidesEasy component. This distributes the calculation load and maintains smooth performance.

Troubleshooting

Guides not appearing

Make sure IsEnabled and GuidesEnabled are both checked. Check that the object is selected in the Scene view and that the component is on the correct parent object.

Snapping not working

Make sure SnapEnabled is checked. You need to actually drag and release the object (not just click). The object needs to be a direct child of the LayoutGuidesEasy parent. Also check that your Snap Threshold makes sense for your object size and scale.

Smart guides not showing

Make sure AutoSmartSnap is enabled. The selected object needs to be a child of the LayoutGuidesEasy component, and there need to be sibling objects to align with. You also need to be actively dragging the object (unless you've turned on ShowSmartAlways).

Distance display not visible

Make sure Show Spacing is enabled. This controls all distance labels including equal spacing indicators and sibling distances. The objects need to have overlapping bounds on one axis for sibling distances to show. If the text is invisible, check that it contrasts with your scene background.

UI guides in wrong position

This can happen because of Canvas coordinate system differences. Make sure your Canvas has the correct Render Mode set. For Screen Space Camera mode, assign the correct camera. The system handles coordinate conversions automatically for all Canvas modes, but it needs the right setup to work.

Use Cases

You can use this for UI layout design - aligning buttons in menus, creating consistent spacing in lists, centering UI elements in panels, and keeping margins and padding consistent.

For 3D object arrangement, it's useful for aligning architectural elements, creating evenly spaced object arrays, positioning level design elements, and organizing inventory item displays.

It's also handy for responsive design work - setting up guides for different screen sizes, keeping alignment consistent across resolutions, and testing how flexible your layout is.

Technical Details

Editor-Only & Performance

LayoutGuides Easy is built with **performance as a top priority**:

- **Editor-only execution**: All functionality runs in Editor scripts and automatically turns off when `Application.isPlaying` is true
- **Zero runtime impact**: No code runs during Play mode, so your builds and runtime performance stay completely unaffected
- **Position-only modifications**: The tool only changes object coordinates (`Transform.position` for 3D objects, `RectTransform.anchoredPosition` for UI elements) without touching rotation, scale, or anything else
- **Optimized algorithms**: Efficient calculation methods and caching keep editor overhead low

- **Undo support**: All position changes are recorded in Unity's undo system so you can easily undo them

Coordinate Systems

The tool automatically handles different coordinate systems:

- Screen Space Overlay: Uses direct screen coordinates
- Screen Space Camera: Uses camera-relative coordinates
- World Space: Uses 3D world coordinates
- 3D Objects: Uses world space with Renderer or Collider bounds

Snapping Behavior

The snapping uses a "magnetic snap" approach - once an object snaps to a guide, it stays there until you drag it outside the threshold. This prevents jittering from continuous snap/unsnap behavior. You can snap on multiple axes at once (X and Y simultaneously, or X, Y, and Z for 3D objects). The priority order is: sibling alignment first, then parent center, then equal spacing.

Edge-Aware Snapping: When using Unity's Rect Tool to resize objects (dragging edges or corners), the tool intelligently detects which edge you're dragging and only snaps that specific edge. The opposite edge stays fixed, allowing you to resize objects while maintaining alignment. This works for both UI elements and 3D objects.

Nested Components

You can nest LayoutGuidesEasy components, but here's how it works: If a parent object already has LayoutGuidesEasy and you add another LayoutGuidesEasy component to one of its children (let's call it child A), that child A won't benefit from the parent's snapping and alignment features anymore. However, child A's own children will still work perfectly with child A's LayoutGuidesEasy component. This is by design - each LayoutGuidesEasy component only affects its direct children, not objects that have their own component.