

# STEALTH COMPONENT

The Stealth Component functions as a defensive system that reduces how easily an actor can be detected by another actor's Senses Component. When the Senses Component attempts to evaluate a target, it checks for the presence of a Stealth Component and applies its calculated Total Stealth Buff as a detection reduction modifier. The higher this stealth value is, the more effectively the target can hide, making them harder to spot, track, or identify. In essence, the Stealth Component serves as the target's protection against being sensed, directly weakening the detection strength of any system trying to locate them.

## Total Stealth Buff

The **Total Stealth Buff** is the average of all currently active stealth buff values:

- Stealth Buff
- Lumen Stealth Buff (included only if the Lumen add-on is enabled)
- Zooner Stealth Buff (included only if the Zooner add-on is enabled)

Disabled add-ons do not contribute to the calculation and are not included in the divisor.

When the Stealth Component is disabled, the Total Stealth Buff is always 0.

### Example 1 (Enabled Lumen, Disabled Zooner)

- Stealth Buff = 0.5
- Lumen Stealth Buff = 0.5 (enabled)
- Zooner Stealth Buff = not included (disabled)

**Calculation:** Total Stealth Buff =  $(0.5 + 0.5) / 2 = \mathbf{0.5}$

### Example 2 (Enabled Lumen, Enabled Zooner)

- Stealth Buff = 0.5
- Lumen Stealth Buff = 0.5
- Zooner Stealth Buff = 1.0

**Calculation:** Total Stealth Buff =  $(0.5 + 0.5 + 1.0) / 3 \approx \mathbf{0.66}$

## God Modes

The Stealth Component supports God Mode for both the Lumen and Zooner add-ons.

When a God Mode is active:

- If the associated Stealth Buff equals 1.0,
- Then the Total Stealth Buff is forced to 1.0, regardless of all other values.

This applies individually to each add-on.

### Example 3 (God Mode Lumen, Disabled Zooner)

- Stealth Buff = 0.5
- Lumen Stealth Buff = 1.0 (God Mode active)
- Zooner Stealth Buff = *not included*

**Result:** Total Stealth Buff = **1.0**

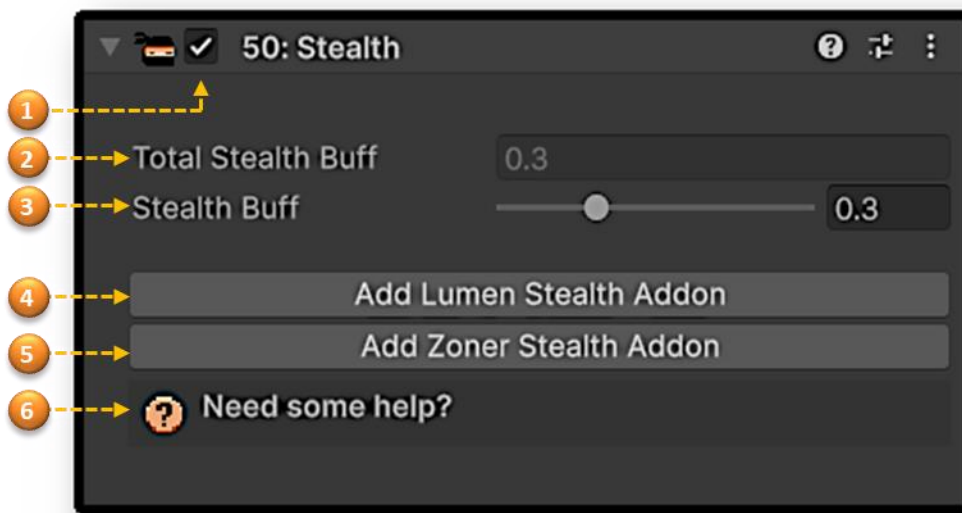
### Total Stealth Buff vs. See Awareness

**!** Total Stealth Buff decreases the Delta ( $\Delta$ ) See Awareness value according to the equation:  
 $\Delta \text{ See Awareness}' = \Delta \text{ See Awareness} * (1 - \text{Total Stealth Buff})$ .

$\Delta \text{ See Awareness} = (12.47 - 8.57) / 12.47 = 0.31$   
 Total Stealth Buff = 0.5  
 $\Delta \text{ See Awareness}' = 0.31 * (1 - 0.5) = 0.155$

**!** Total Stealth Buff = 0  $\rightarrow \Delta \text{ See Awareness}' = 0.31 * (1 - 0) = 0.31$   
 Total Stealth Buff = 0.5  $\rightarrow \Delta \text{ See Awareness}' = 0.31 * (1 - 0.5) = 0.155$   
 Total Stealth Buff = 1  $\rightarrow \Delta \text{ See Awareness}' = 0.31 * (1 - 1) = 0$

## Stealth Component Inspector Tab



1	Enable	Allows enabling Stealth Component, when disabled Total Stealth Buff equal 0;
2	Total Stealth Buff	Current Value of Total Stealth Buff, same as value returned from ProvideTotalStealthBuff();
3	Stealth Buff	Set float value of StealthBuff.
4	Add Lumen Stealth Addon	Allows enabling Lumen Stealth Addon.
5	Add Zoner Stealth Addon	Allows enabling Zoner Stealth Addon.
6	'Need some help?'	Displays Help Information.

## Properties

Property	Description
<b>StealthBuff</b>	Base stealth buff value applied when the component is enabled.
<b>OffsetAxisY</b>	Vertical offset used when calculating the PositionLumenMeasurement.
<b>PositionLumenMeasurement</b>	World-space position (X/Z from transform, Y from OffsetAxisY) used for Lumen detection.
<b>UseLumenStealthAddon</b>	Whether the Lumen stealth add-on is enabled.
<b>LumenStealthBuff</b>	Current Lumen-based stealth buff (set internally by LumenHandler).

<b>UseZonerStealthAddon</b>	Whether the Zoner stealth add-on is enabled.
<b>ZonerStealthBuff</b>	Current Zoner-based stealth buff (sum of overlapping StealthZones).
<b>UseCustomDetectionRadius</b>	Enables use of RadiusZonerStealthAddon instead of auto-calculated collider radius.
<b>RadiusZonerStealthAddon</b>	Custom radius for Zoner stealth detection (used only if UseCustomDetectionRadius is true).
<b>UseDebugDrawRadius</b>	Enables debug gizmo that draws the Zoner detection radius in the Scene view.
<b>LimitCollidersDetectionZoner</b>	Maximum number of colliders checked during OverlapSphereNonAlloc scan.
<b>UseZonerGodMode</b>	If true and ZonerStealthBuff reaches 1f, ProvideTotalStealthBuff returns 1f.
<b>UseLumenGodMode</b>	If true and LumenStealthBuff reaches 1f, ProvideTotalStealthBuff returns 1f.

## Public Methods

Method	Description
<b>SetStealthBuff(float value)</b>	Sets the base StealthBuff value.
<b>SetOffsetAxisY(float value)</b>	Sets the OffsetAxisY used for Lumen position calculations.
<b>ProvideTotalStealthBuff()</b>	Returns the combined stealth buff from Base, Lumen, and Zoner add-ons. Returns 1f if any active God Mode condition is met.
<b>SetUseLumenStealthAddon(bool state)</b>	Enables or disables the Lumen add-on and registers/unregisters with LumenHandler.
<b>SetUseZonerStealthAddon(bool state)</b>	Enables or disables the Zoner add-on; resets colliders and clears previous buff values.
<b>ProvideZonerStealthAddon(bool returnZeroIfDisabled = false)</b>	Returns the ZonerStealthBuff value, or 0 if disabled (optional).
<b>ProvideLumenStealthAddon(bool returnZeroIfDisabled = false)</b>	Returns the LumenStealthBuff value, or 0 if disabled (optional).
<b>SetZonerGodMode(bool state)</b>	Enables or disables Zoner God Mode.
<b>SetLumenGodMode(bool state)</b>	Enables or disables Lumen God Mode.
<b>SetUseCustomDetectionRadius(bool state)</b>	Enables or disables using a custom Zoner detection radius.
<b>SetRadiusZonerStealthAddon(float value)</b>	Sets the custom detection radius for Zoner stealth scanning.
<b>SetLimitCollidersDetectionZoner(int limit)</b>	Adjusts how many colliders can be detected during OverlapSphereNonAlloc and resizes the internal array.