

# SHADOW CASTER BEHAVIOR

View online: <https://www.construct.net/en/make-games/manuals/construct-3/behavior-reference/shadow-caster>

The **Shadow caster behavior** marks an object as casting a shadow from a **Shadow light** object. For more information, see the documentation for *Shadow light*.

Shadows are cast from the object's collision polygon, if it has one, otherwise its bounding rectangle.

## Scripting

When using JavaScript or TypeScript coding, the features of this behavior can be accessed via the **IShadowCasterBehaviorInstance** script interface.

## Collision polygon shape

Objects with the *Shadow caster* behavior must use **convex collision polygons**. Shadows will not render correctly if they use concave polygons. If you need a concave shape, this can always be achieved by placing multiple shadow caster objects next to each other to compose a concave shape out of convex parts.

## Shadow caster properties

### Height

The simulated height of the object, which adjusts the length of shadow it casts. If the *Shadow light* height is less than or equal to the object height, it casts an "infinite" shadow which goes all the way offscreen; if it is higher, it uses the relative heights to calculate how long a shadow to cast. For example two objects with different heights will cast different length shadows.

### Tag

A tag for this shadow casting object. A *Shadow light* object also has a tag, and can be set to only cast shadows from shadow casters with the same or different tags to itself. This can be used to have different *Shadow lights* casting shadows off different sets of objects, such as to have shadows working at different levels of Z order.

### Enabled

Whether the behavior is initially enabled or disabled. If disabled, the object will not cast a shadow.

## Shadow caster conditions

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### Compare height

Compare the current height property of the behavior to a value.

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### Is enabled

True if the behavior is currently enabled so it can cast shadows.

## Shadow caster actions

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### Set enabled

Enable or disable the behavior. If disabled, the object will not cast a shadow.

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### Set height

Set the height property of the behavior. For more information see *Shadow caster properties*.

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### Set tag

Change the tag of the behavior. For more information see *Shadow caster properties*.

## Shadow caster expressions

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### Height

Return the current height property.

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### Tag

Return the currently set tag for the behavior.