

9.9.1 Physics - Rigid Body - Introduction

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Rigid Body

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Introduction

The rigid body simulation can be used to simulate the motion of solid objects. It affects the position and orientation of objects and does not deform them.

Unlike the other simulations in Blender, the rigid body sim works closer with the animation system. This means that rigid bodies can be used like regular objects and be part of parent-child relationships, animation constraints and drivers.

Creating a Rigid Body

Creating the Rigid Body.

Right now only mesh objects can participate in the rigid body simulation. To create rigid bodies, either click on *Rigid Body* button in the *Physics* context of the *Properties* window or use the *Add Active/AddPassive* buttons in the *Physics* tab of the *Tool Shelf*.

There are two types of rigid body: active and passive. *Active* bodies are dynamically simulated, while *passive*

bodies remain static. Both types can be driven by the animation system when using the *Animated* option.

During the simulation, the rigid body system will override the position and orientation of dynamic rigid body objects. Note however that the location and rotation of the objects is not changed, so the rigid body sim acts similar to a constraint. To apply the rigid body transformations you can use the *Apply Transformation* button in the *Physics* tab of the *Tool Shelf*.

The scale of the rigid body object also influences the simulation, but is always controlled by the animation system.

Rigid Body physics on the object can be *removed* with the *Rigid Body* button in the *Physics* context or *Remove* button in the *Physics* tab of the *Tool Shelf*.