

# Bullet Physics Simulation

## Physic: Bullet Integration into A:M

As a replacement for the "Newton Physics" plug-in the [Bullet Physics Engine](#) is now integrated in Animation:Master.

It is implemented as a Constraint ("Bullet Body") for [dynamic objects](#) and properties for [static objects](#). Both are available for models and props.

The old "Rigid Body" constraint is still available, because it's used also in other situations (dropping anything into a choreography etc.).

To start a simulation You must add as minimum one "Bullet Body" constraint to a model, bone of a model or prop and than select the choreography -> Right Mouse Button -> hit in the pop-up menu "Simulate Bullet"

Remark: The simulation starts at the current choreography time.

If You want to remove the simulation data select the choreography -> Right Mouse Button -> hit in the pop-up menu "Remove Simulation Data"

To view detailed descriptions for each propertie , select the propertie -> RMB -> "Display help for the current property" or let the "Property Info" window open (toogling with Alt-7)

Some options for the simulation are reused from the "Dynamic" property in the choreography.

- **"Force"** the gravity and direction of gravity, where "Y -100%" is the earth gravity (9.80665 m/s<sup>2</sup>) in the negative Y - Axis
- **"Reduction Error Tolerance"** If this number is greater than zero, then after the simulation the resulting channels will be reduced. This number will represent the maximum error that will be permitted in the newly reduced channel.

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