

FIMPOSSIBLE *CREATIONS*

BONES STIMULATOR V2 **USER MANUAL**

About Bones Stimulator:

- Bones Stimulator is component which will improve feeling of keyframe animations
- It can add new motion to body elements of your game characters / creatures
- Simulate real muscle-like behaviour to make animations look more natural
- Component is highly optimized and delivers self-optimization features

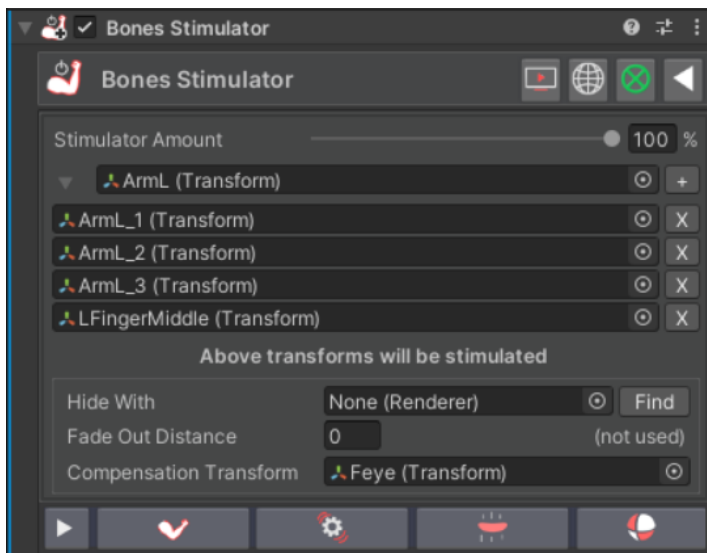
Contact and other links you will find in Readme.txt file

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1: Setting Up

With Bones Stimulator you can add new motion to single transform or whole transform-child chain. Just hit the “+” button inside the inspector window to assign new transforms to animate.



With “**Stimulator Amount**” you will control the amount of all translation/rotation/scaling done by component.

Bones Stimulator is providing a very compact inspector window with few categories to choose.

With the upper tab you will set up your transforms chain to stimulate and enable optimization methods.

With the lower one you will tweak animation behaviour with the package's features. Most of the fields have their own tooltips, hold cursor at them.

Optimization Settings:

With the “**Hide With**” field you choose renderer, Unity is automatically detecting if some renderer is not visible in any camera view (including editor view) so Bones Stimulator will use it to disable itself if a certain camera is not seen by any camera.

With the “**Fade Out Distance**” you can smoothly disable Bones Stimulator when the main camera is far away from Stimulator game object.

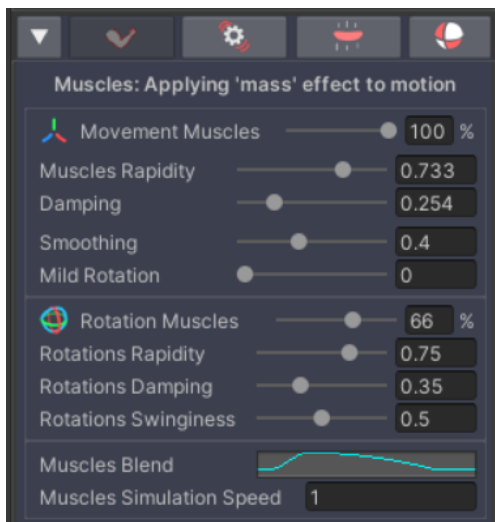
“**Compensation Transform**” will enable the “**Motion Influence**” field for “**Movement Muscles**” with which you can limit how much muscles will react with translation in world space.

Setting different features “**Amount**” value to 0% will turn them off completely resulting in optimized work of the Bones Stimulator component, so for example you can use just “**Vibrate**” features on different objects in a performant way.

2: Animation Tweaking

Muscles Tab:

Bones Stimulator V2 provides new algorithms for the package such as “Muscles”



Muscles must be applied to at least two transforms added in setup chain (below “Stimulator Amount” field)

Muscles will make your character limbs react with translation/rotation in the world space or in keyframe animation.

You can make your animations look smoother and more alive than with traditional animation, characters will become more connected with the world, with less artificial movement.

“**Movement Muscles**” will react with character translation and rotation in world space. (Including keyframed animation)

You can adjust how much of this effect should be used.

“**Muscles Rapidity**” will make muscles react more sudden

“**Damping**” will make motion more stiff, when this value is too low motion will become too bouncy

“**Smoothing**” will limit motion and smooth out suddenness

“**Mild Rotation**” will make rotations slower but smoother

“**Rotation Muscles**” will react only with character rotation and keyframe animation rotations. Rotation muscles are dedicated to enhance keyframe animations.

“**Rotations Rapidity**” and “**Rotations Damping**” works similar like above.

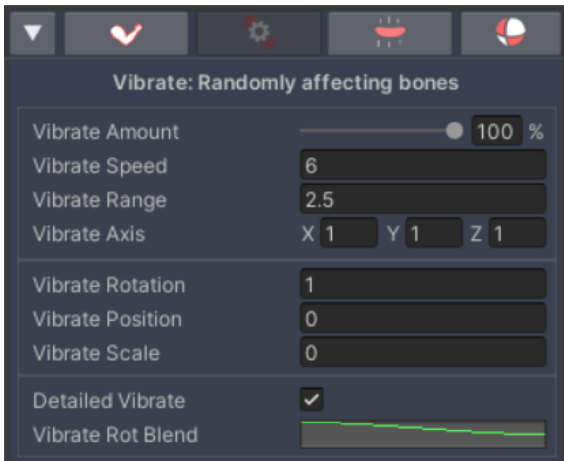
“**Swinginess**” will make rotations slower but swing a bit stronger and can be helpful to adjust muscles with keyframe animation.

With the “**Muscles Blend**” **curve** you will apply different amount of muscle effects over included bones. Left side - first transform Right side - last transform

With “**Muscles Simulation Speed**” you can make muscles animate slower or faster if motion you want needs to be quicker, sometimes muscles can react a bit slow, depending on your rig setup.

Vibration Tab:

Bones Stimulator V2 provides new algorithms for the package such as “Muscles”

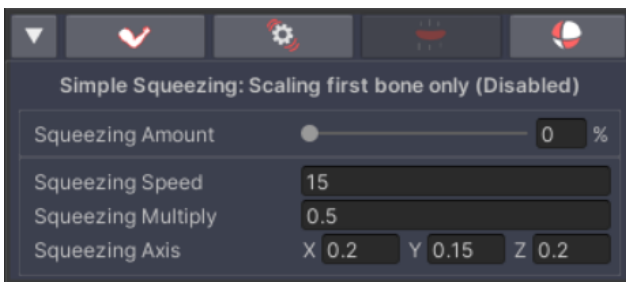


With vibrating you will apply additive randomly generated rotation/translation/scaling to the transforms.

It can give your character less repetitive feeling of animations.

If you have monster creatures with different body elements it's worth applying vibrate to them.

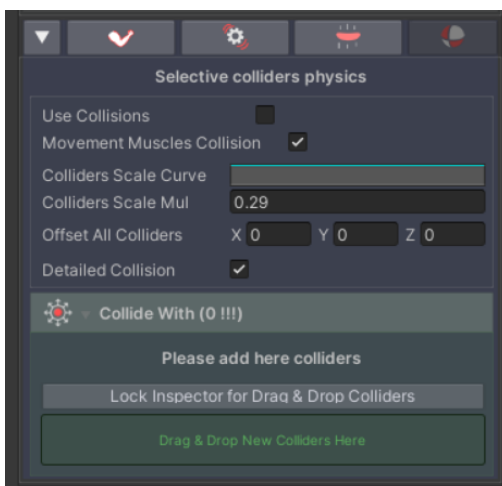
Squeezing Tab:



Squeezing is a very simple algorithm which will add pulsating feeling to affected transform object.

You can also use it on whole toony characters instead of using it just on limbs.

Collisions Tab:



With **Collisions** you can make your transforms offset on selected colliders (not supporting mesh colliders)

To use it correctly you have to define the scale of the detector sphere for transforms to fit your 3D model with available inspector window fields.

To collider with some collider you must put them in the “**Collide With**” list.

“**Movement Muscles Collision**” will make collisions look more organic but “Movement Muscles” must have setted high % amount to make it look right.

3. Source Code Access:

Bones Stimulator's parameters can be accessed through code.

To see Bones Stimulator class you need to use namespace "**FIMSpace.BonesStimulation**" or define variable using:

```
public FIMSpace.BonesStimulation.BonesStimulator myBonesStimulator;
```

Now you can control it's variables like:

```
myBonesStimulator.StimulatorAmount = myValue;
```