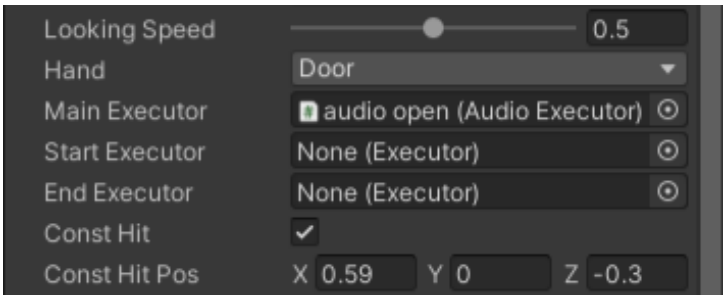
Content

1. Discription

Asset offers a solution for physical interaction with objects from the scene environment in Unity.

Main asset feature is ready to work “out of the box” without creating of new layer, a tag or a parameter in the Input System. It is important to read documentation to easy create your own prefabs used asset. Every field has a description.



General parameters

Looking Speed – the rotation coefficient of the camera speed (Player Looking component) during object interaction. If value is 0 the camera will be stationary when moving the mouse. A value of 1 will leave the camera rotation unchanged.

Hand – a parameter that determines which cursor sprite will be displayed at the point of contact with the object: Default, Button, Door or Grab. See index Hand UI below to get more information.

Main, **Start** & **End Executor** are executors who perceive the signal from the objects of interaction: lever, slider, button, etc. Main Executor get signal in individual order according by children class of Interactable Object, Start Executor get signal in start of interaction, End Executor in end of interaction.

Const Hit is a parameter that determines the place of interaction with the subject. If true, the predefined Const Hit Pos value is used (see Gizmos for visual display). If false, then the interaction with the object will be at the actual point of contact.

Important!

Turn on Gizmos for full understanding of interactions on scene. Gizmos visualize links with connected executors and key states of interaction objects.

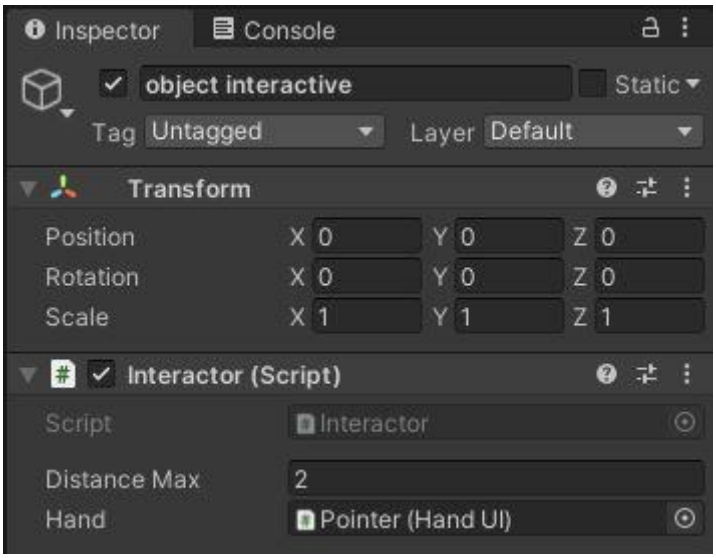
2. Interactor

Main element of interaction object control. As a rule, it is a part of player prefab. it get link on main camera in Start() void.

Parameters

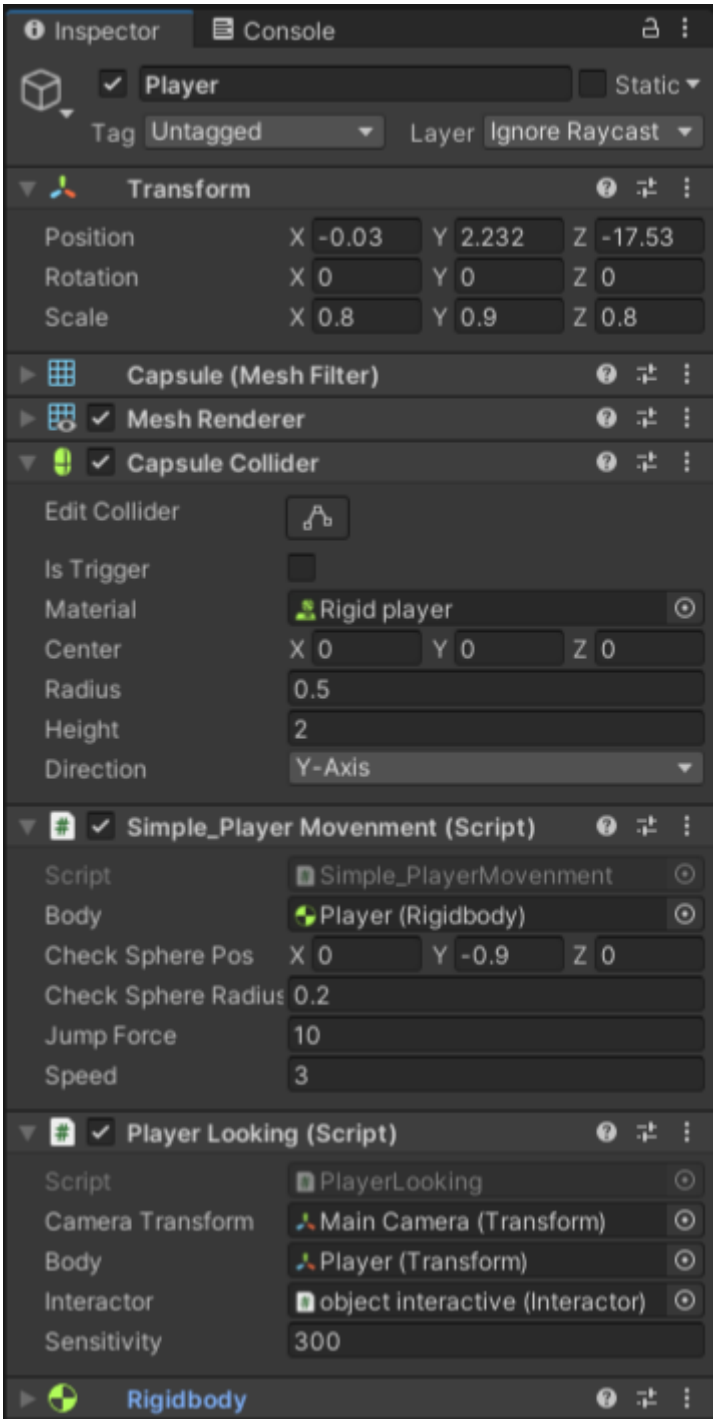
Max Distance – the distance of interaction with objects of the Interactable Object class.

Hand – a cursor that changes depending on the setting of the Hand parameter of the Interactable Object class.



3. Player Looking

Along with the Simple Player Movenment, Move allows you to control a character. The speed of rotation of the camera on the X axis and the root object of the character on the Y axis depends on the setting of the Looking Speed of the objects of interaction of the Interactable Object class.



Parameters

Camera Transform – link on camera (main camera), it will be rotated on X axis.

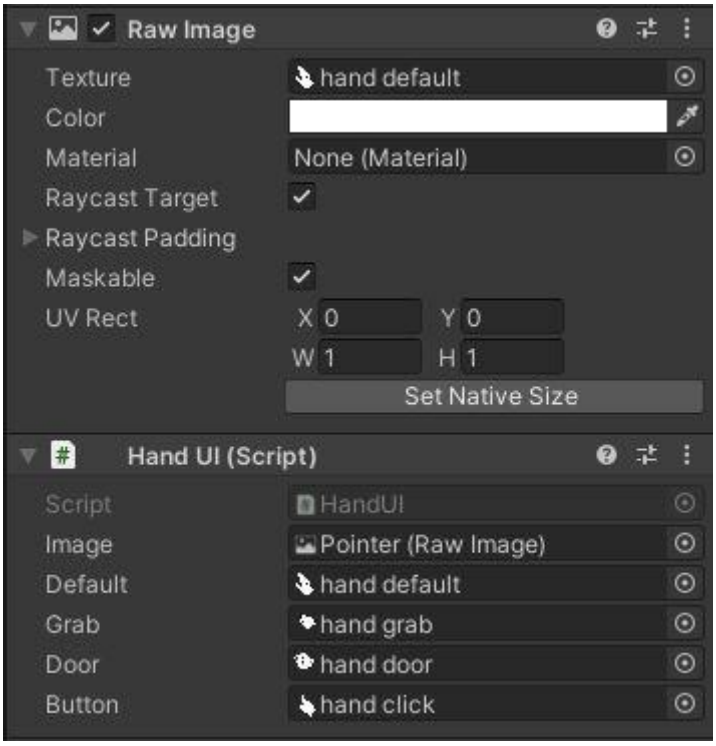
Body – link on body of player object, it will be rotated on Y axis.

Interactor – link on Interactor.

Sensitivity – mouse sensitivity.

4. Hand UI

Hand UI has several textures to visualize according by Cursor Mode value of interaction object. Requared React Transform component needed to displacement of pointer on a screen according by camera view. Raw Image component will enable during interaction.



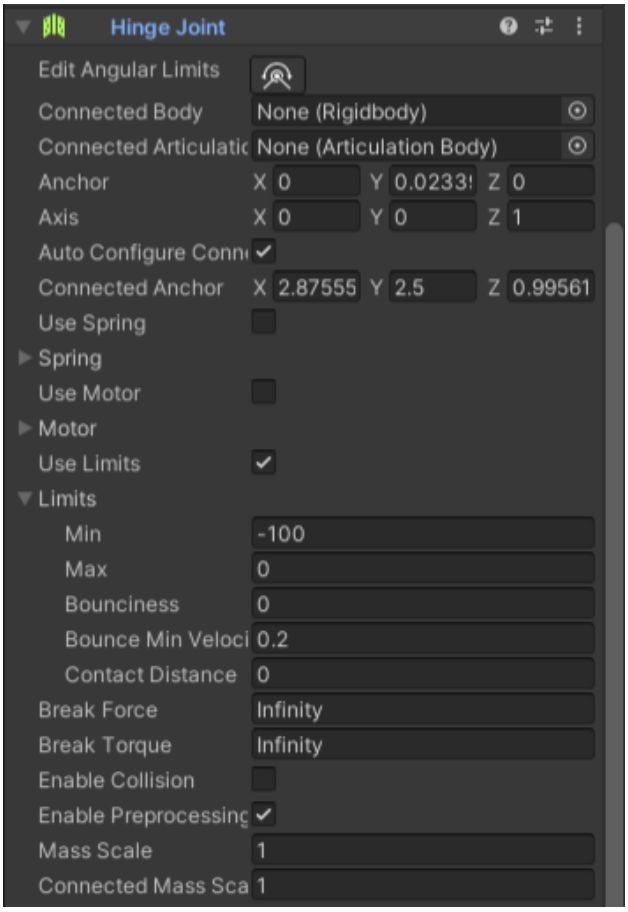
Parameters

Image –Raw Image component. Texture field of it will be changed according by object of interaction. It will be disable without interaction.

Default, **Grab**, **Door**, **Button** – textures that will be applied to the Raw Image depending on the settings of the interaction subject.

5. Door

Script for door physical working. Door can be rotating by mouse moving up and down or by collision. Also door can be closed (slammed) (it can't be opend without mouse interaction).



Parameters

Close Door Executor – the executor that is triggered when the door is slammed.

Force – physical force for door rotating. Default value is 9. For heavy door or horizontal hatch this value can be increased to 30, for example.

Closed When Min Limits – the angle of rotation of the door at which the door will be considered slammed. Pulls up values from the Limits parameters of the Hinge Joint component. If true, the Min Angle parameter will be perceived as the slammed state of the door.

Important!

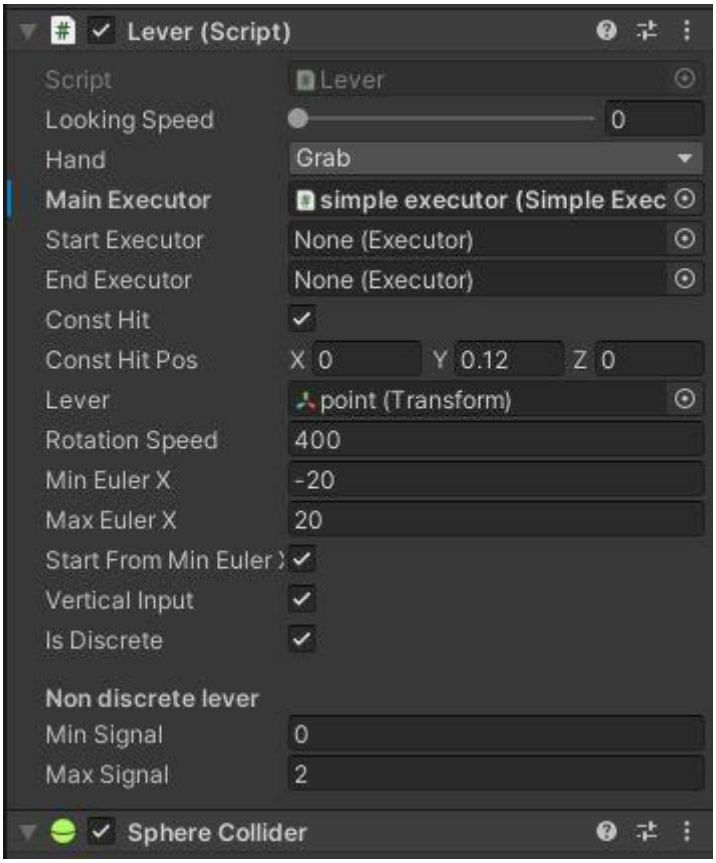
For the Closed Is Min Limits parameter to work, it is necessary to mark Use Limits in the Hinge Joint..

6. Lever

Lever rotates relative to its local axis right. Depending on the setting, it can take 2 positions without hanging in the middle state, or occupy any of the states within the limits.

Important!

To rotate relative to the required point, use an Empty Object with visual part inside or get in attention position of pivot point during modeling your own lever.



Parameters

Lever – visual part (or Empty Object with visual part inside), which will rotate depending on the mouse movement.

Rotation Speed – lever rotation speed relative mouse moving.

Min Euler X & **Max Euler X** – boundaries of lever rotation. Default values are -20 and 20.

Start From Min Euler – start lever state is min position.

Vertical Input – lever will be rotated during mouse moving on Y axis.

Is Discrete – lever can be have one of 2 states without middle position freezing.

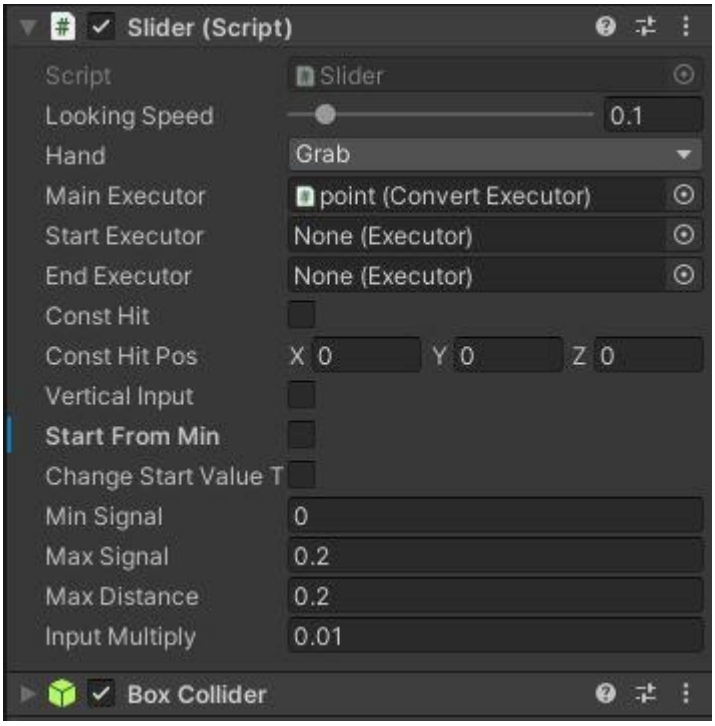
Min & **Max Signal** – signal value range for non-discrete lever.

7. Slider

You need to displace Slider to increase output signal. Turn on Gizmos for more understanding.

Important!

The slider moves only along the local forward axis. It is necessary to take this into account when modeling objects in third-party programs. Or just use an Empty Object with any Collider component, inside which there will be a visual component of the slider rotated by the required angle.



Parameters

Vertical Input – slider be moved according by mouse displacement on Y axis.

Start From Min – current state used as min state of slider.

Change Start Value To Difference – if Start From Min toggled then Max/Min Signal will be displaced on difference between Max and Min.

Min & **Max Signal** – boundaries of output signal.

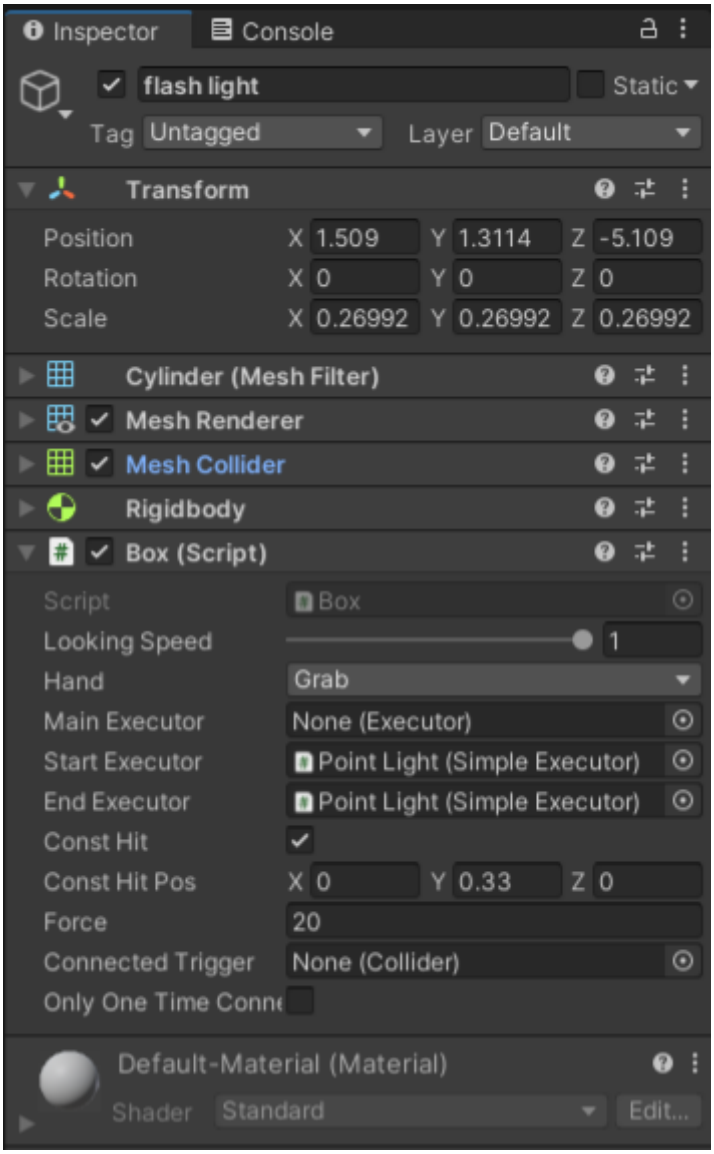
Max Distance – distance for displacement of slider from current (start) state in scene.

Input Multiply – multiplier of mouse movement. A parameter that determines how smoothly and slowly the slider moves depending on the mouse movement.

8. Box

A box is an object of interaction that can be freely moved and rotated. At the same time, the point of contact makes its own adjustments to the interaction (depending on the settings), which will allow you to put the object on the floor in exactly the position in which it is necessary.

Depending on the settings, the box can be a key object in the game being created. Occupying a certain position in the scene (contact with the trigger), it gives a signal to the executors associated with it.



Parameters

Force – force to magnetic object to target point. Default is 30.

Connected Trigger –Collider component with isTrigger toggled. Box get rotate and positon of trigger object and Main Executor get signal when trigger entered. It will be used, for example, for key of door, accumulator for engine etc.

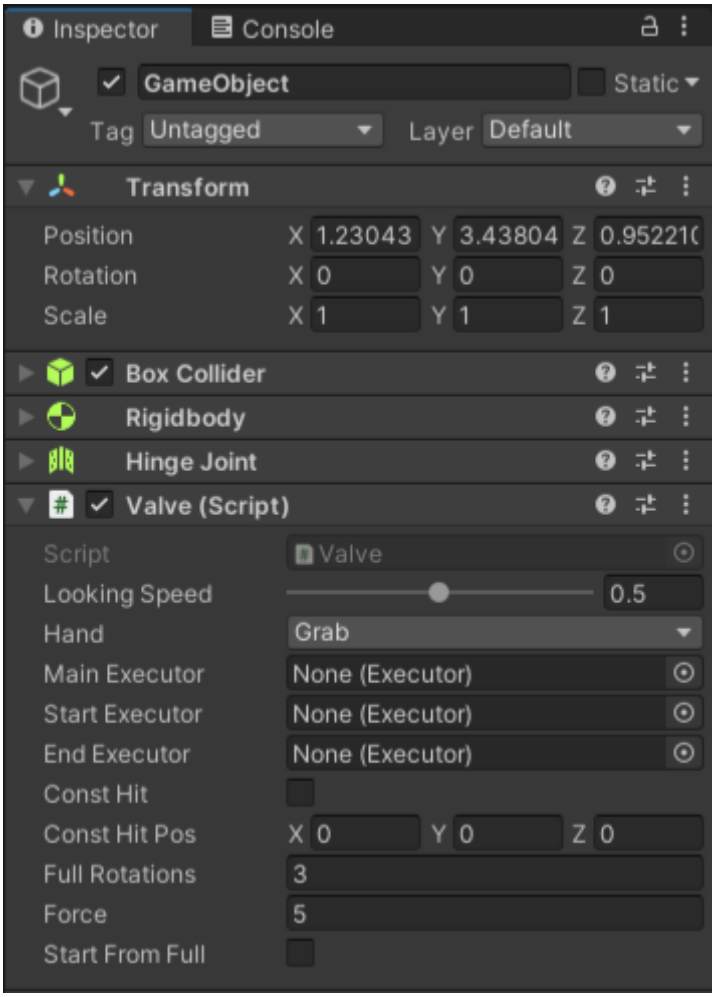
Only One Time Connect – one time using of trigger collision. Box will be can't displaced.

Important!

Box class uses the isKinematic parameter of the Rigidbody component to "nail the object". If you initially set the isKinematic parmeter in the scene to true, then when interacting, the parameter will switch, the Main Executor will be executed with a signal of 0. When working with the trigger, the same thing happens – when in contact with the trigger, the Main Executor executes signal 1, when disconnected from the trigger - 0.

9. Valve

Valve rotates around a given axis using the Hinge Joint component.



Parameters

Full Rotations – number of revolutions that valve can make.

Force – force of valve rotation from contact point to target point.

Start From Full – start state is maximum.

Important!

Fact number of revolutions higher then installed values. -0.25 from min value and +0.25 from max value.

10.Button

Button gives a signal to the bound executors when the button is released. The click animation is implemented using code, not the Animator component. The button is pressed (lowered along the axis) only along the local forward axis.

Parameters

Visual Button – visual part of button is mesh or Empty Object with mesh inside, it will be moved when button click.

Click Distance – distance from start position to button down position.

Only One Switch On – one time using of button.

Start From On – start state of button is switch on.

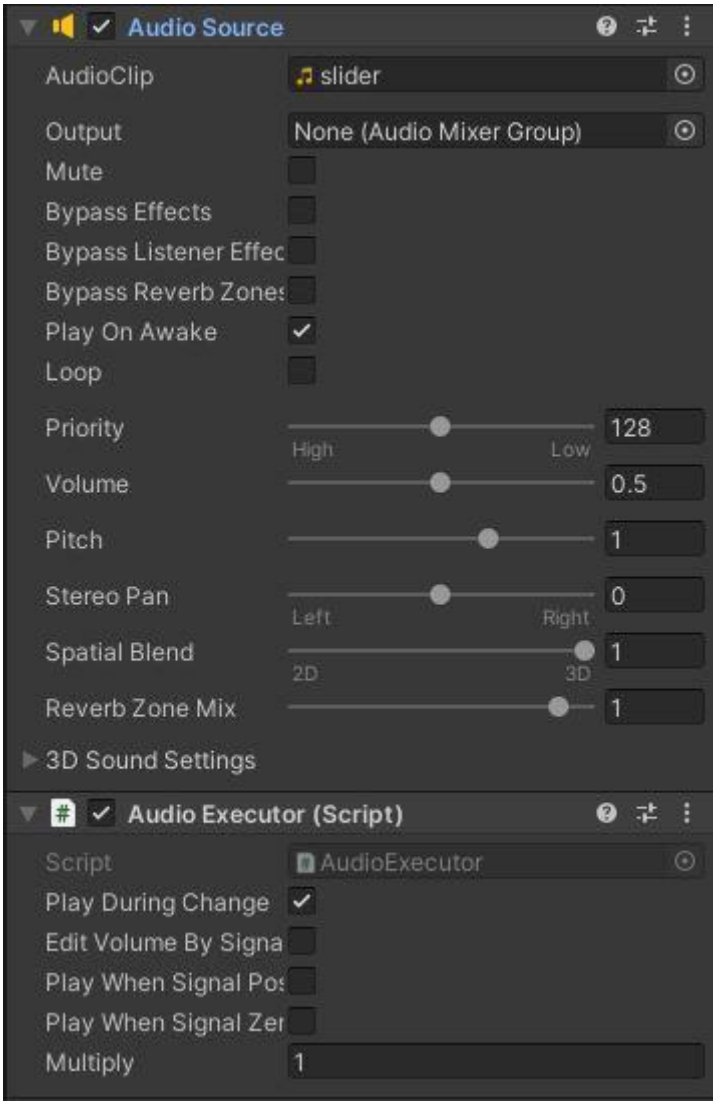
Only Switching On – work only with 1 output signal.

11.Executors

Executors between interaction object and object on scene that will be changed, such as light, mesh, audio source etc.

Audio Executor

Turn on Play() and turn off Stop() Audio Source playing.



Play During Change – play audio clip if input signal is changed. For example, rotating of valve, opening of door.

Edit Volume By Signal edit volume of audio source by signal > 0.

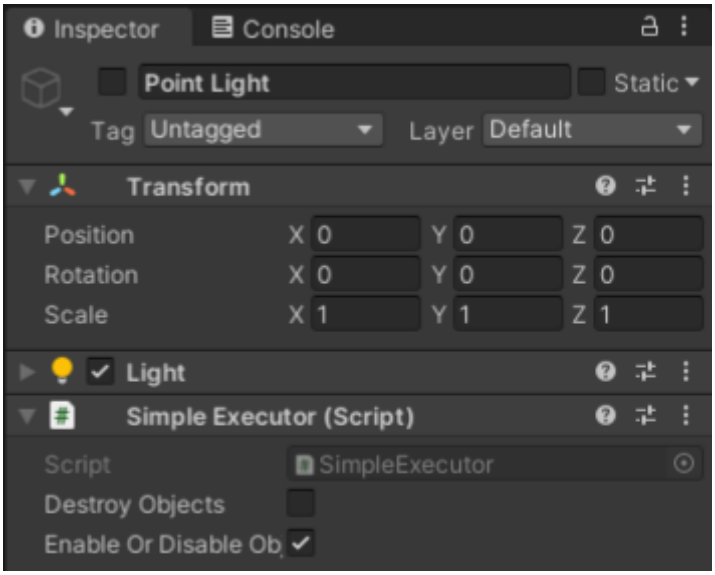
Play When Signal Positive – play audio clip if signal >= 1.

Play When Signal Zero – play audio clip if signal < 1.

Multiply changes input signal.

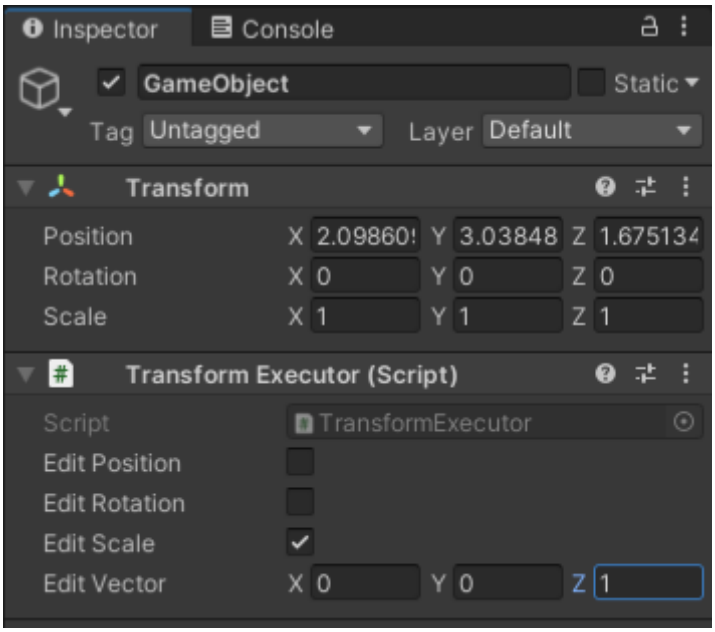
Simple Executor

Enable (else disable) or destroy object with Executor component if signal >= 1.



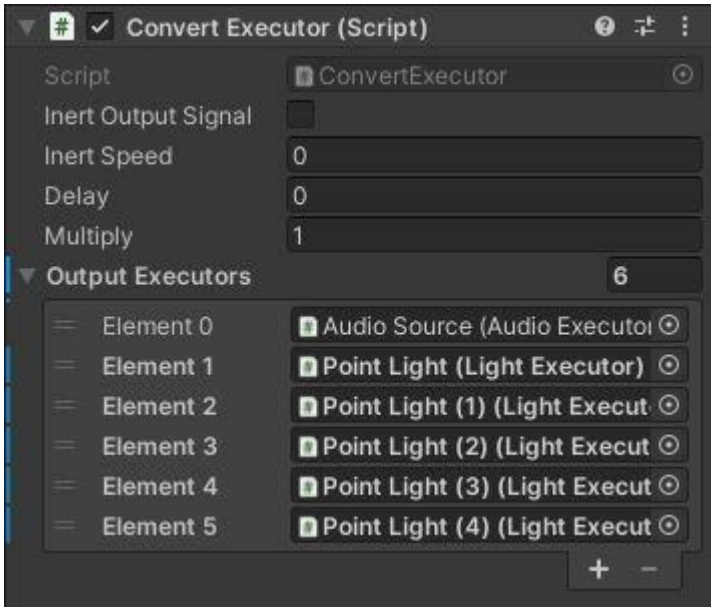
Transform Executor

Change Transform component according by input signal. **Edit Vector** determines how Transform will be changed from start state on 3 axis.



Convert Executor

Executor changes input signal before next executors. It allow you to make inerted output signal and delay of signal.



Inert Speed determines speed of increasing of output signal to target signal.

Delay – delay from input to output signal, in seconds.

Multiply changes input signal.

Output Executors are finished executors.

Light Executor

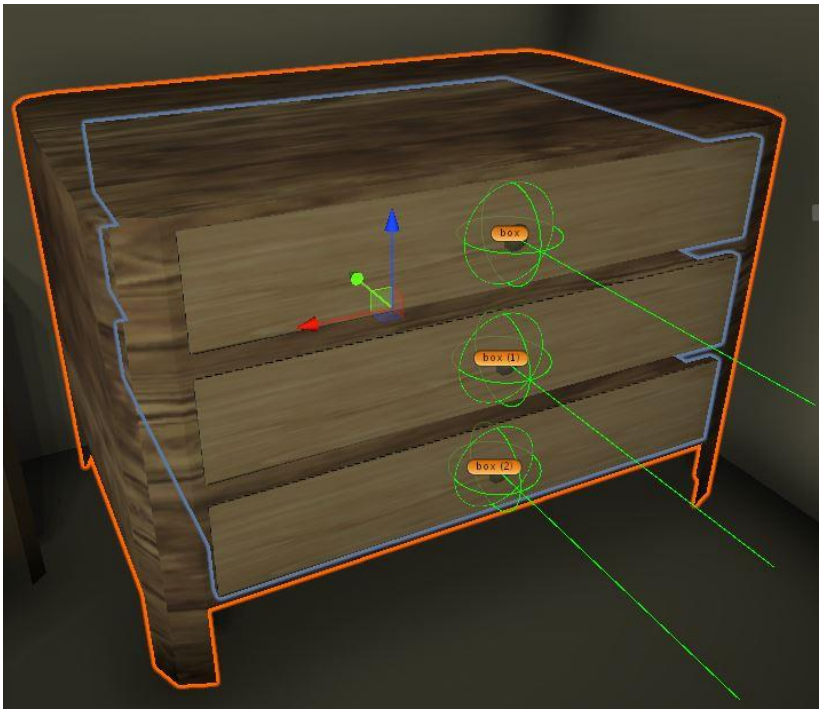
Manipulate intensity of Light component.

12.Non-obvious using

Blend asset components for more functionality!

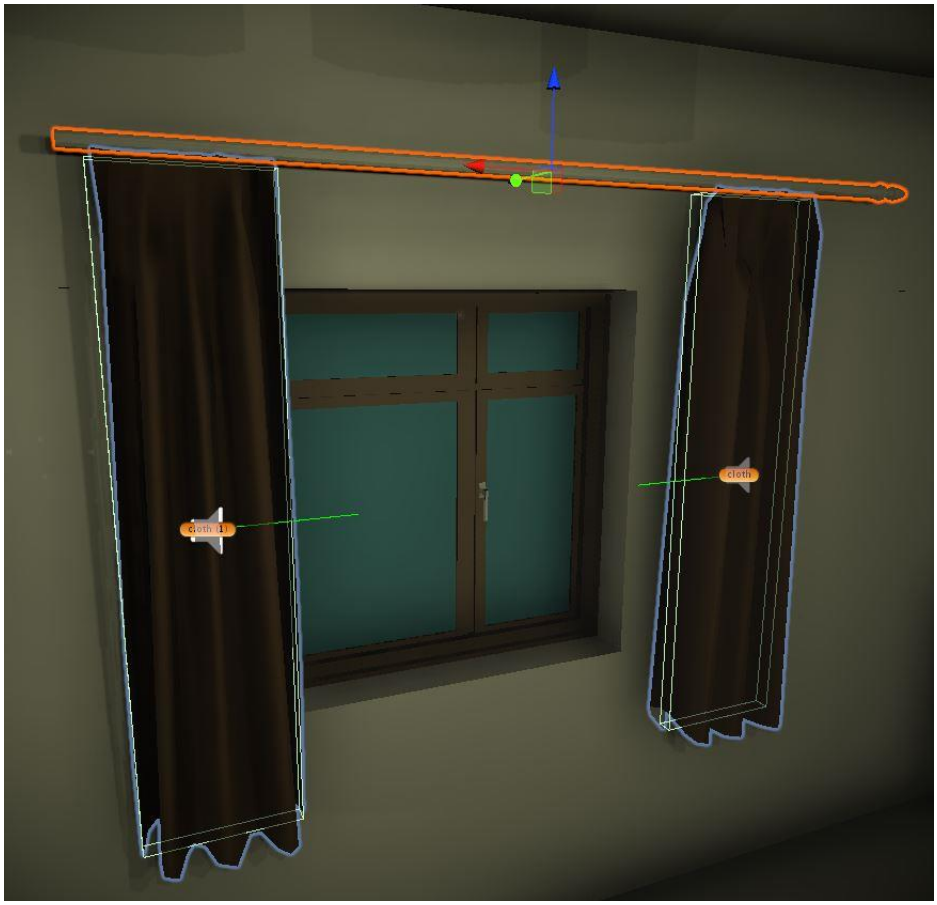
Slider

The component can be used to implement a drawer in a desk or cabinet, as well as for a sliding door or hatch.



Curtains, blinds

The combination of Slider and Transform Executor (toggle Edit Scale) components can be used as curtains or blinds that can shift while decreasing in length.



Flashlight

When picking up a flashlight with a Box component, it can light up with a Simple Executor on the light source as part of the flashlight and turn off when released.

13.Links

If you need help, we are always to welcome you to the Discord channel, where we will try to provide maximum technical support!

Discord https://discord.gg/R4JfuVS

Остальные ссылки для связи с нами.

Asset store https://assetstore.unity.com/publishers/46819

YouTube https://www.youtube.com/channel/UCwarNiEVDupG3ape9buKB9Q

Special thanks to the people who left comments under the description of previous assets. Your support and feedback pushes us to engage in new work.