

EasyJoystick 1.0

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Introduction

What is EasyJoystick

EasyJoystick allow you to quickly and easily add some virtual joysticks in your game. You are not limited, you can add as many as you want joystick

Look at video:

[Youtube video 1](#)

[Youtube video 2](#)

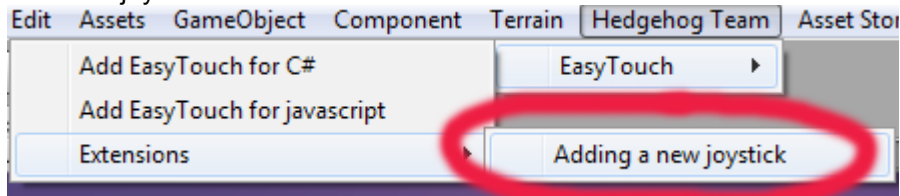
EasyJoystick has many parameters to setup your joystick

Quick Start

Quick Start

1- Import EasyTouch Package.

3 - Add a joystick with the menu



If EasyTouch is not present in your scene, it will automatically add

4 - Setup your new joystick with the inspector, look at [Inspector properties](#)

5- That all

Concept

Interaction mode

EasyJoystick allows you to interact with objects with four different methods:

Direct:

EasyJoystick is going to controlling the object with parameters

Event:

EasyJoystick sends a message to notify that the joystick is moving with a class parameter.

Include:

You integrate an EasyJoystick object as a parameter in a script to directly access the values of the joystick

Direct Event:

Combination of direct mode & event

Event

When you use a virtual joystick, and you setup to event or Direct & event mode, EasyJoystick raise an event : **On_JoystickMove(MovingJoystick move)**

Events can be raised in two different ways

- Event / Delegate system.
- Unity built-in - Sending message system.

To help you make your choice :

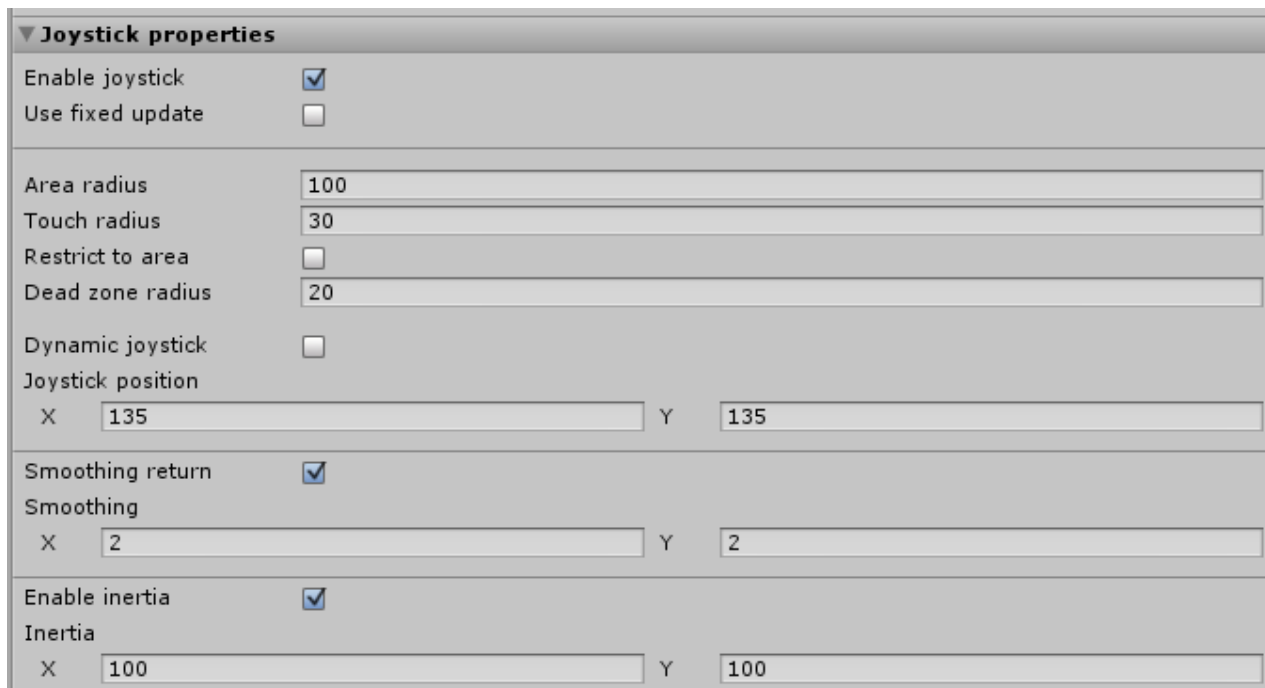
	Unity built-in SendMessage	Event / Delegate system
Advantage	<ul style="list-style-type: none">* Events are sent to the object selected, simply add a script with a method corresponding to the event processing* Simplify implementation with respect to the system-event Delegate	<ul style="list-style-type: none">* Faster than Unity built-in SendMessage* Notify several objects at once
Disadvantage	<ul style="list-style-type: none">* <u>Slower than Event-Delegate</u>* <u>Only two objects can be notified at the same time.</u><ul style="list-style-type: none">- The holder of EasyTouch script if no object is selected, or the selected object.- Another gameObject at the discretion of the developer via method SetOtherReceiverObject	<ul style="list-style-type: none">* <u>The event is sent to all objects that subscribe to it</u>* <u>More code is required (subscribe and unsubscribe event)</u> => <u>A test condition on the member PickedObject</u> (Gesture class) must be carried out in the beginning of each treatment in the event* not compatible with javascript

On_JoystickMove(MovingJoystick move) detail

```
public class MovingJoystick{  
  
    /// The name of the joystick.  
    public string joystickName;  
  
    /// The joystick axis value between -1 & 1 on each axis  
    public Vector2 joystickAxis;  
  
    /// The joystick value joystickAxis * speed * Time.deltaTime more inertia etc ....  
    public Vector2 joystickValue;  
}
```

Inspector properties

Joystick properties



The screenshot shows the 'Joystick properties' inspector panel. It contains several sections with checkboxes and input fields. The first section has 'Enable joystick' checked and 'Use fixed update' unchecked. The second section has 'Area radius' at 100, 'Touch radius' at 30, 'Restrict to area' unchecked, and 'Dead zone radius' at 20. The third section has 'Dynamic joystick' unchecked and 'Joystick position' with X and Y values of 135. The fourth section has 'Smoothing return' checked and 'Smoothing' with X and Y values of 2. The fifth section has 'Enable inertia' checked and 'Inertia' with X and Y values of 100.

▼ Joystick properties	
Enable joystick	<input checked="" type="checkbox"/>
Use fixed update	<input type="checkbox"/>
Area radius	100
Touch radius	30
Restrict to area	<input type="checkbox"/>
Dead zone radius	20
Dynamic joystick	<input type="checkbox"/>
Joystick position	
X	135
Y	135
Smoothing return	<input checked="" type="checkbox"/>
Smoothing	
X	2
Y	2
Enable inertia	<input checked="" type="checkbox"/>
Inertia	
X	100
Y	100

All these parameters are accessible through script, see the documentation class [EasyJoystick](#)

Enable joystick : Enables or disables the joystick

Use fixed update : It will be used FixedUpdate method instead of Update

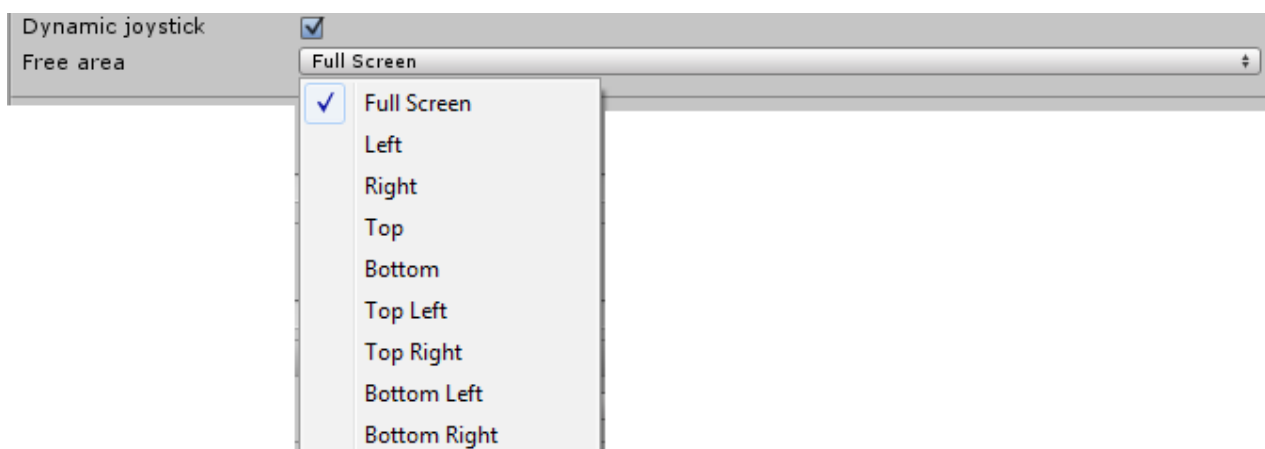
Area radius : The radius in pixel of the joystick area texture

Touch radius : The radius in pixel of the touch texture

Restrict to area : If you enable this option, the touch will not come out of the area of the joystick.

Dead zone radius : The radius in pixel of the dead zone. While the touch is in this area, the joystick is considered stalled

Joystick position : The center position of the center on the screen



The screenshot shows the 'Dynamic joystick' section of the inspector panel. The 'Free area' dropdown menu is open, showing a list of options: 'Full Screen' (selected with a checkmark), 'Left', 'Right', 'Top', 'Bottom', 'Top Left', 'Top Right', 'Bottom Left', and 'Bottom Right'.

Dynamic joystick	
Free area	Full Screen
	Full Screen
	Left
	Right
	Top
	Bottom
	Top Left
	Top Right
	Bottom Left
	Bottom Right

Dynamic joystick : The joystick position is not fixed on the screen. The joystick is dynamically created at the touch position.

Free area : In dynamic mode you can choose which part of the screen joystick can create. By properly combining zones, you can have multiple dynamic joystick to the screen

Smoothing return & Smoothing : If you enable this option, the return to the initial position of the joystick is gradual, the corresponding values are too. You can adjust this rate of return on the two axes

Enable inertia & inertia : Inertia simulates sliding movements (like a hovercraft, for example). You can adjust this rate of inertia on the two axes of the joystick

Interaction : Direct

In this mode EasyJoystick is going to controlling the object with parameters

The screenshot shows the 'Interaction' settings panel for 'Direct' mode. It includes fields for 'Interaction type' (set to Direct), 'X axis speed' (100), 'Y axis speed' (2), 'Joystick X to' (3rd Person Controller), 'Influenced' (Rotate), 'Axis influenced' (Y), 'Joystick Y to' (3rd Person Controller), 'Gravity' (2), and 'Influenced' (Translate Local). A warning message 'CharacterController detected' is displayed. The 'Axis influenced' field is set to 'Y'.

All these parameters are accessible through script, see the documentation class [EasyJoystick](#)

Interaction type : Mode using EasyJoystick

The screenshot shows the 'Interaction type' dropdown menu with the following options: Direct (selected), Include, Event Notification, and Direct And Event.

X and Y axis speed : The speed that will be applied to the object based on the transform, and the axis, taking into account the time elapsed

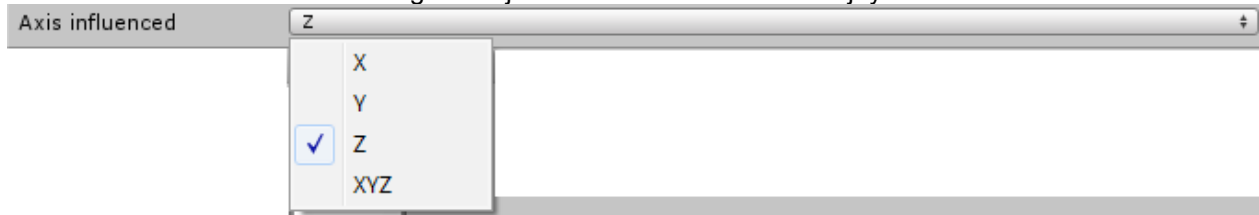
inverse : Reverses the direction of calculation of the values for one axis of the joystick

Joystick X & Y to : The Transform of the gameobject will be able to reacted to the X or Y axis of the joystick

Influenced : The action to be applied on gameobject

The screenshot shows the 'Influenced' dropdown menu with the following options: Rotate (selected), Rotate Local, Translate, Translate Local, and Scale.

Axis influenced : The axis of the gameobject will be influenced for the joystick

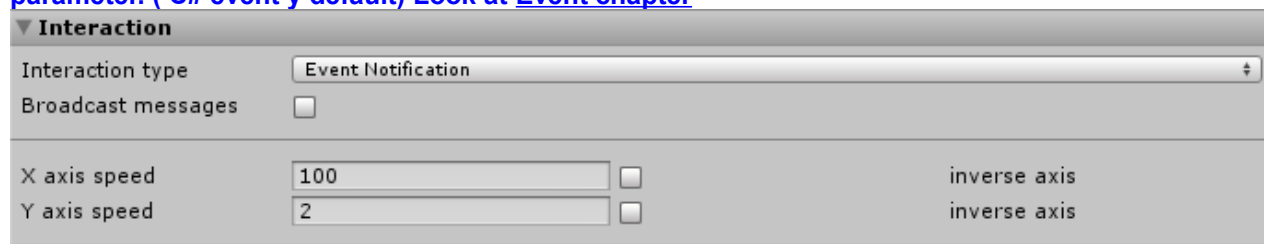


Remark

If the action is a "Translate" or "Translate Local" EasyJoystick will search for the object carries a CharacterCollider. In this case, it will be notified in the inspector, and you'll be able to add a gravity value. EasyJoystick then use the move method of the class CharacterController.

Interaction : Event

In this mode EasyJoystick sends a message to notify that the joystick is moving with a class parameter. (C# event y default) Look at [Event chapter](#)

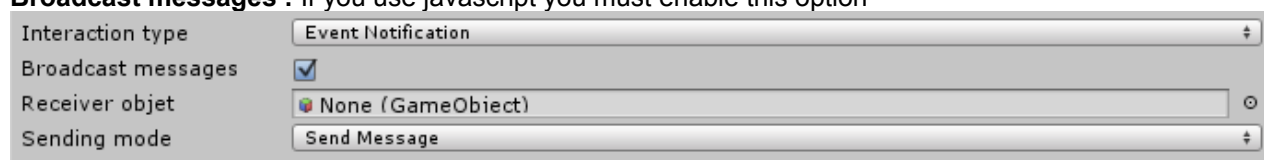


The screenshot shows the 'Interaction' settings panel for EasyJoystick. It features a dropdown menu for 'Interaction type' set to 'Event Notification'. Below it is a checkbox for 'Broadcast messages' which is currently unchecked. At the bottom, there are two rows of settings: 'X axis speed' with a value of 100 and an unchecked 'inverse axis' checkbox, and 'Y axis speed' with a value of 2 and an unchecked 'inverse axis' checkbox.

All these parameters are accessible through script, see the documentation class [EasyJoystick](#)

for X & Y axis look at [here](#)

Broadcast messages : If you use javascript you must enable this option




The screenshot shows the 'Broadcast messages' settings panel. It includes a dropdown for 'Interaction type' set to 'Event Notification'. The 'Broadcast messages' checkbox is checked. Below it, the 'Receiver objet' dropdown is set to 'None (GameObject)'. At the bottom, the 'Sending mode' dropdown is set to 'Send Message'.

Receiver object : The gameobject that will receive the message **On_JoystickMove(MovingJoystick move)**

Sending mode : Different mode of sending messages offered by Unity

Interaction : Direct & Event

It is the combination of the direct mode & message

▼ Interaction		
Interaction type	Direct And Event	
Broadcast messages	<input type="checkbox"/>	
X axis speed	100	<input type="checkbox"/> inverse axis
Y axis speed	2	<input type="checkbox"/> inverse axis
Joystick X to	3rd Person Controller	
Influenced	Rotate	
Axis influenced	Y	
Joystick Y to	3rd Person Controller	
 CharacterController detected		
Gravity	2	
Influenced	Translate Local	
Axis influenced	Z	

Interaction : Include

In this mode, any message or live interaction is possible. You must enter yourself in our script to read the values of the following variables:

```
/// Gets the joystick axis value between -1 & 1...
public Vector2 JoystickAxis {
    get {
        return this.joystickAxis;
    }
}

/// Gets the joystick value = joystic axis value * jostick speed * Time.deltaTime...
public Vector2 JoystickValue {
    get {
        return this.joystickValue;
    }
}
```

▼ Interaction			
Interaction type	Include		
X axis speed	100	<input type="checkbox"/>	inverse axis
Y axis speed	2	<input type="checkbox"/>	inverse axis

Joystick Apperance


This section allows you to assign different textures that make up your joystick, with the choice to display or not

▼ Joystick Appearance

Show area

☒

Area texture




Select

Show touch

☒

Area texture




Select

Show touch

☒

Dead zone texture



Select