

EasyJoystick 2.0

Introduction

What is EasyJoystick

EasyJoystick allow you to quickly and easily add virtual joysticks in your game. You aren't limited, you can add as many as you want joystick.

Easy Joystick internally manages the resolution to remains the same position and the size regardless of the resolution of the final platform

EasyJoystick has many parameters to setup your joystick.

What's new in 2.0

News

- Add virtual screen to keep size position
- Add new joystick events : On_JoystickMoveStart, On_JoystickTouchStart, On_JoystickTap, On_JoystickDoubleTap, On_JoystickTouchUp
- Add new option to reset joystick position, when touch exit the joystick area
- Add the possibility to enable / disable joystick axis X or Y
- Add new member isActivated to desactivated the joystick, but it always show on the screen
- Add new member to clamp rotation in direct mode when you're in localrotation
- Add new member to do an auto stabilisation in direct mode when you're in localrotation
- Add show dynamic joystick in edit mode
- Some optimisations
- Add new method Axis2Angle to MovingJoystick class that allow to return the joystick angle direction between -170 to 170
- Add option to show real area use by the joystick texture
- Add UseGuiLayout option
- Add Gui depth parameter

Bugs fixed

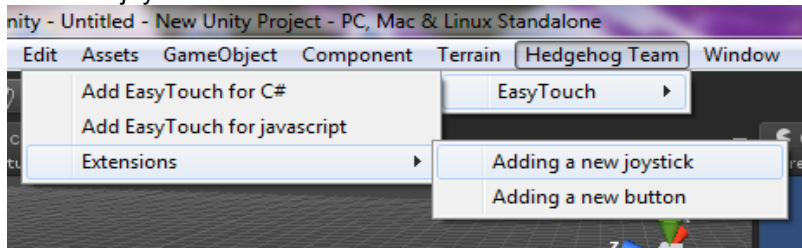
- Gravity is now always apply correctly
- Dead zone is correctly take into account
- The event JoystickMoveEnd don't send any more at startup

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:

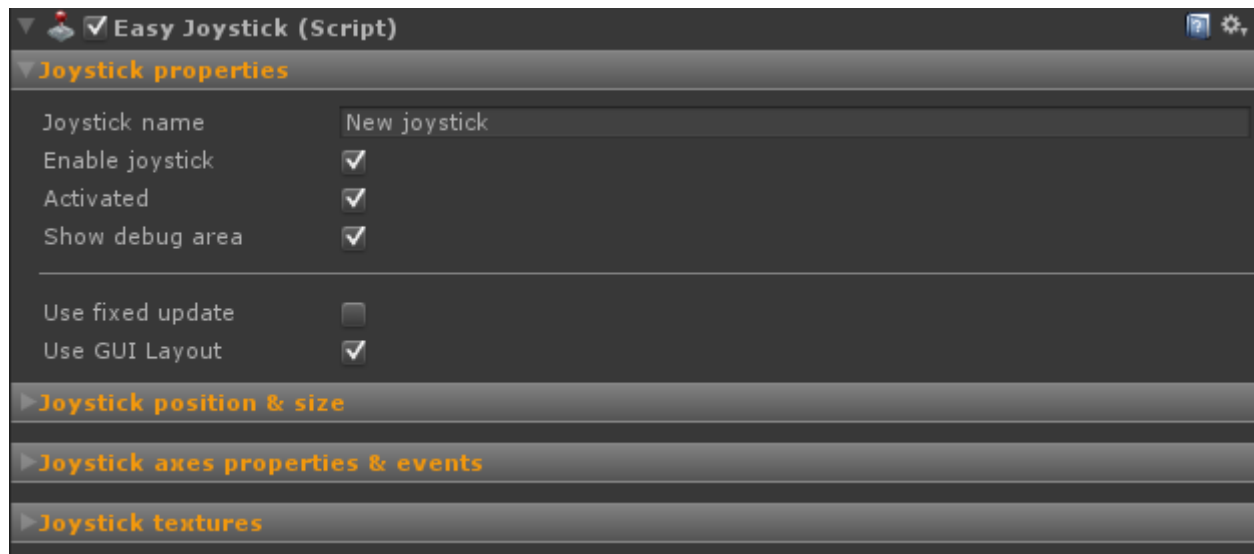
Combination of direct mode & event

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 processingSimplify implementation with respect to the event Delegate	<ul style="list-style-type: none">Faster than Unity built-in SendMessageNotify several objects at once
Disadvantage	<ul style="list-style-type: none">Slower than Event-DelegateOnly one objects can be notified at the same time.	<ul style="list-style-type: none">The event is sent to all objects that subscribe to itMore line of code is required (subscribe and unsubscribe event)not compatible with javascript

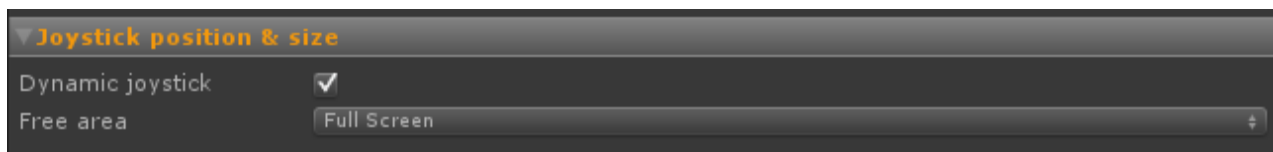
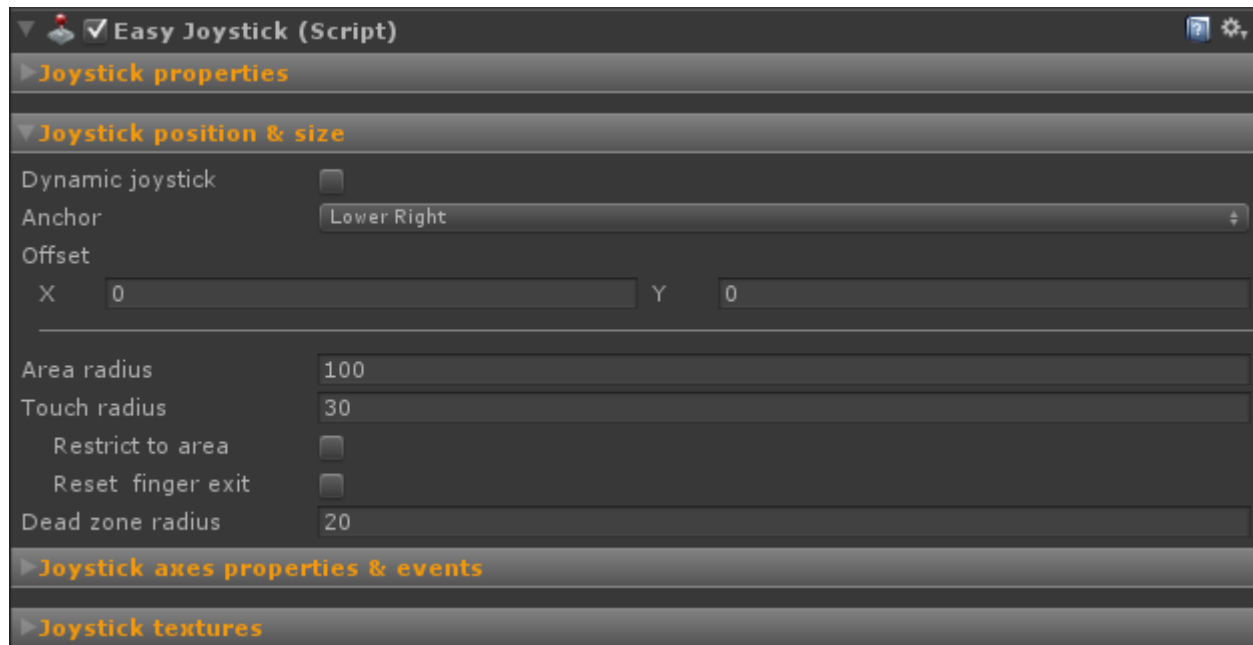
Inspector properties

Joystick properties



Joystick name	: GameObject name
Enable joystick	: Enables or disables the joystick True = Show False = not show
Activated	: Activate or deactivate the joystick true = show normaly & active false = show with alpha and not activate
Use fixed update	: It will be used FixedUpdate method instead of Update
Use GUI Layout	: Disable this lets you skip the GUI layout phase. (Look at Unity documentation)

Joystick position & size



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

Anchor : Anchor the joystick on a given part of the screen

Offset : The position relative to the anchor

Area radius : The radius of the joystick area texture

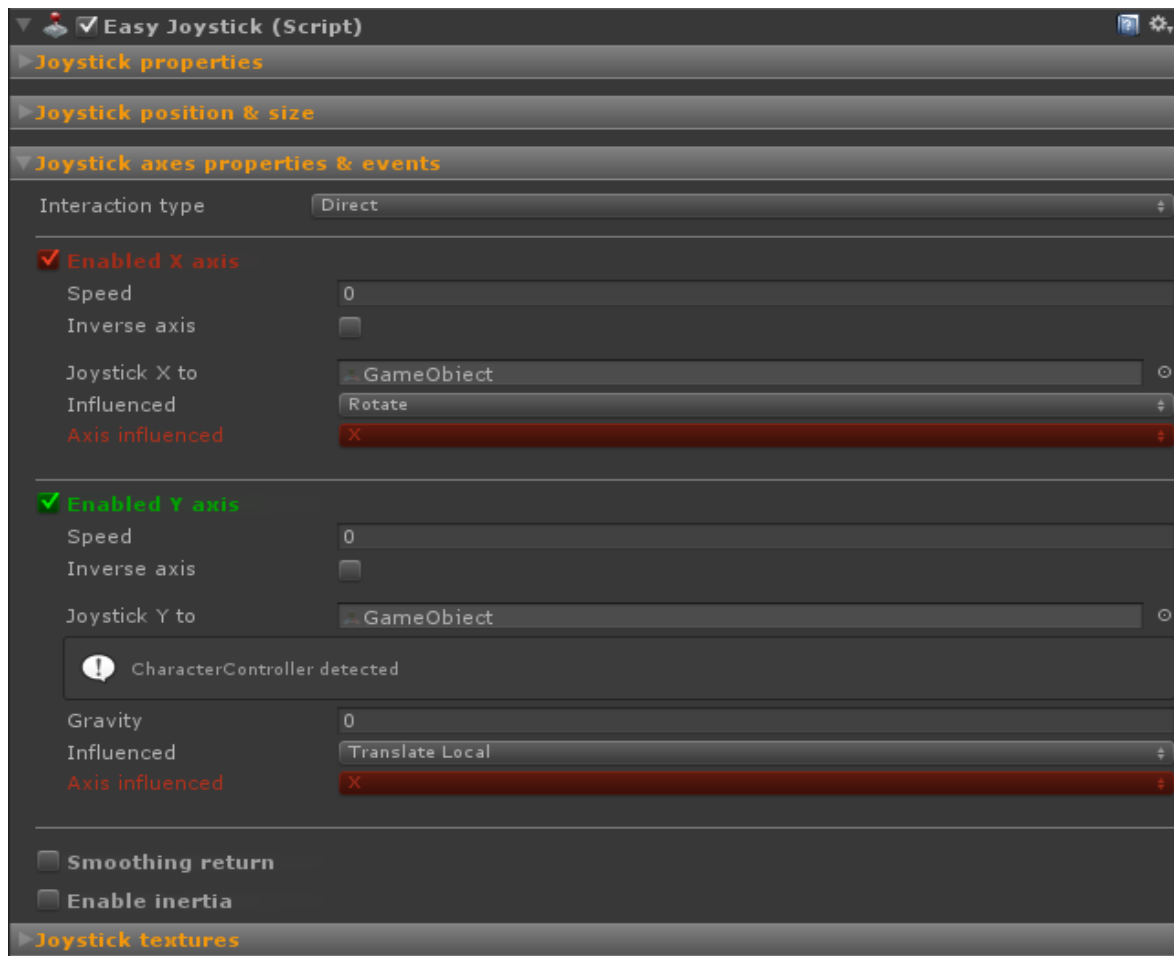
Touch radius : The radius in pixel of the touch texture

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

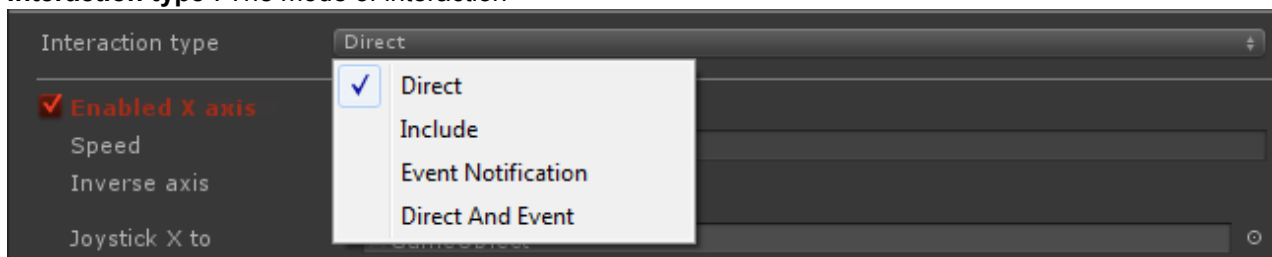
Reset finger exit : Reset the touch to the center when the touch is outside the radius

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

Joystick axes properties & events



Interaction type : The mode of interaction

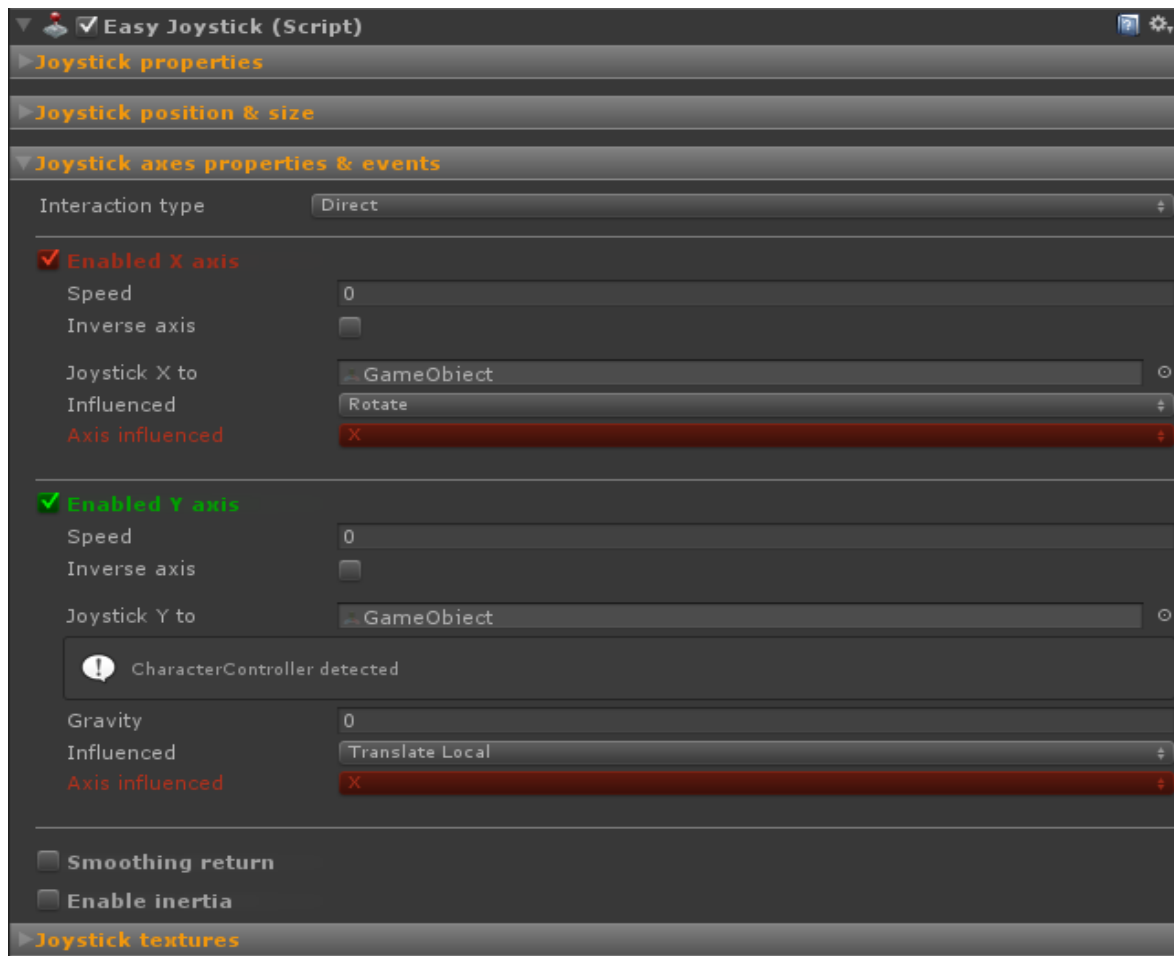


Smoothing return & Smoothing : If you enable this option, the return to the initial position of the joystick is gradual, the corresponding values are too. You can adjust this rate of return on the two axes

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 Easy Joystick acts directly on the gameobject. No script is required,



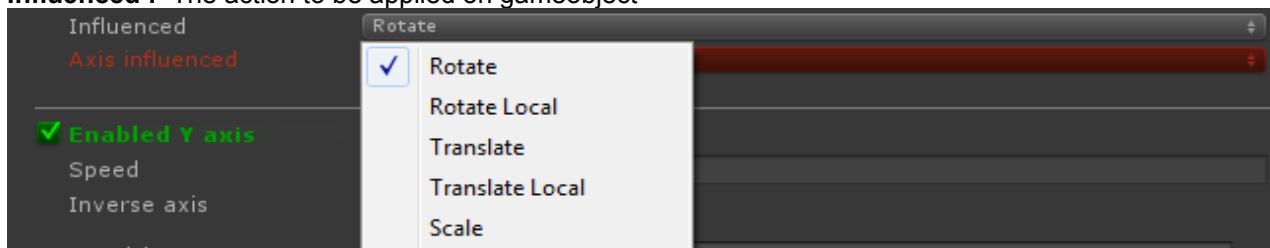
Enable X and Y axis : Enable or disable the joystick axis

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

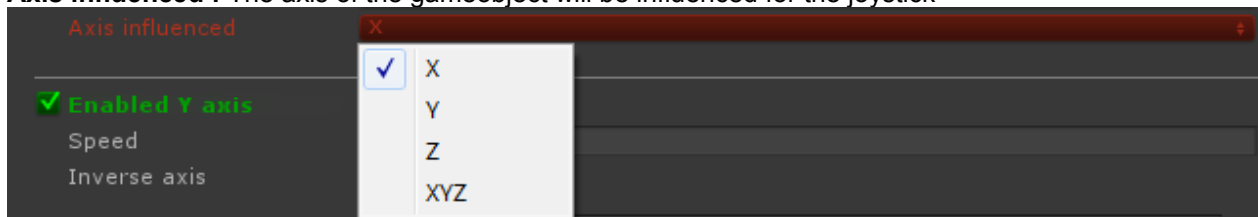
Inverse axis : Reverses the direction of calculation of the values for one axis of the joystick

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

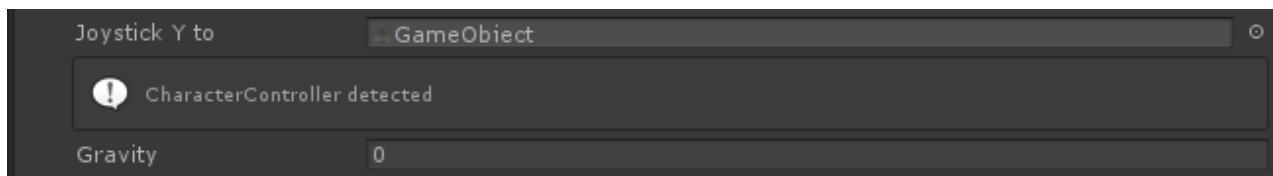


Axis influenced : The axis of the gameobject will be influenced for the joystick



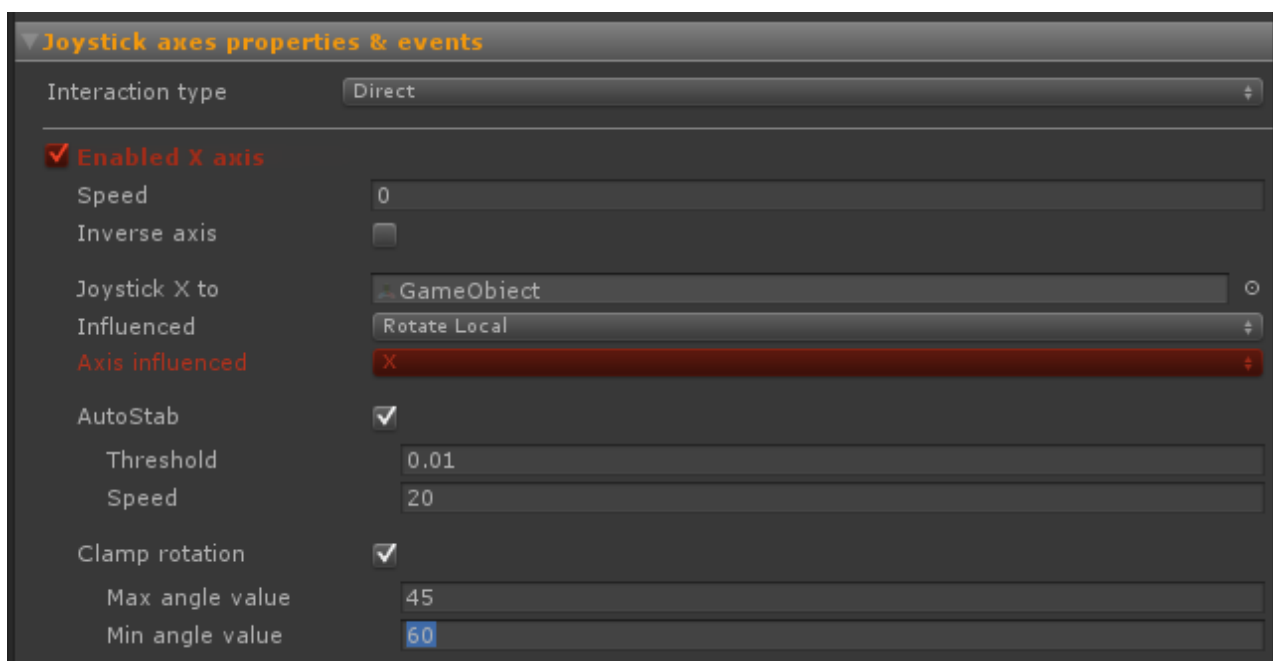
Remark N°1

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 use the move method of the class CharacterController.



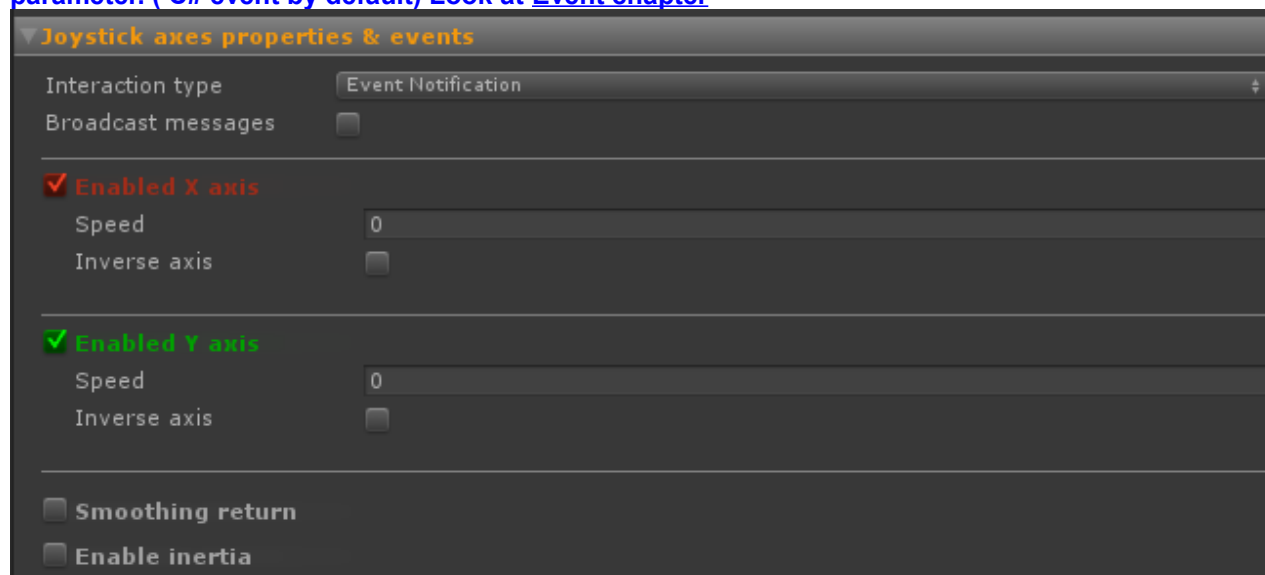
Remark N°1

If the action is "Rotate Local", you will have 2 new parameters AutoStab & Clamp rotation

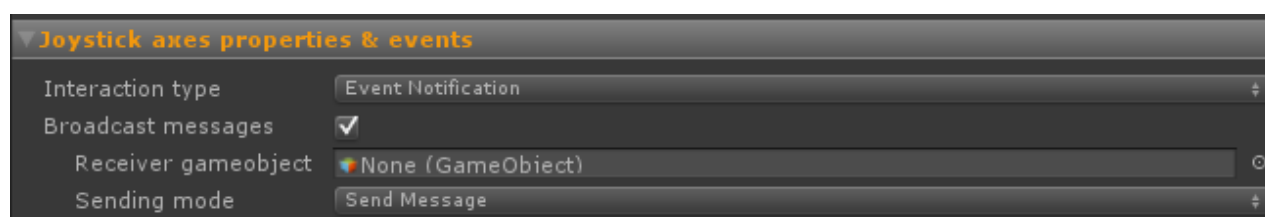


Interaction : Event

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



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



Receiver gameobject : The gameobject that will receive the messages

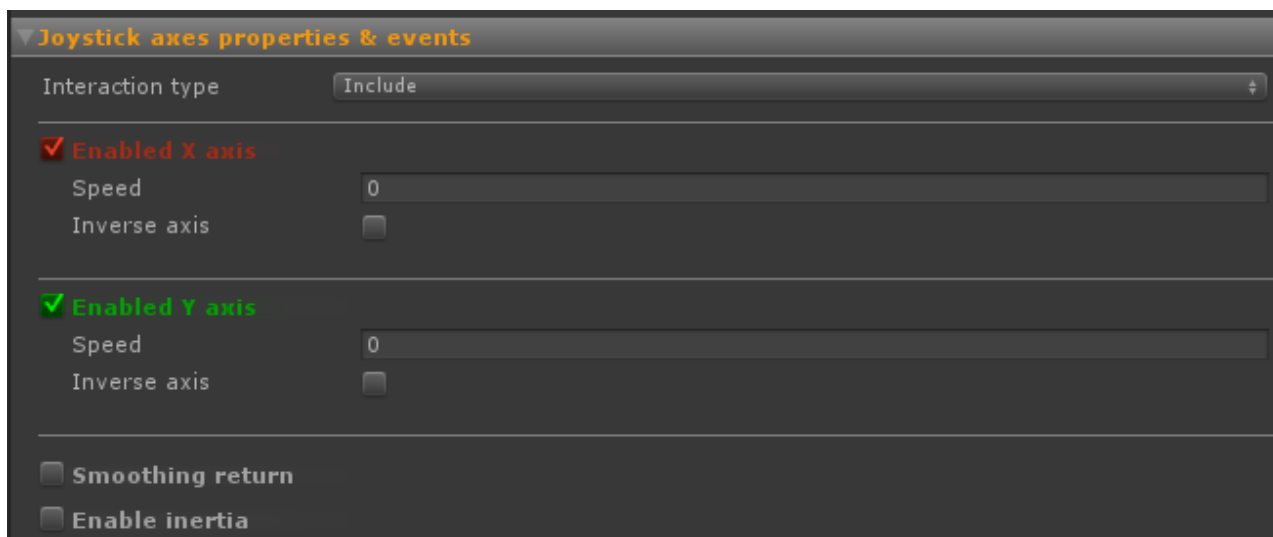
Sending mode : Different mode of sending messages offered by Unity

Interaction : Direct & Event

It is the combination of the direct mode & message

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...

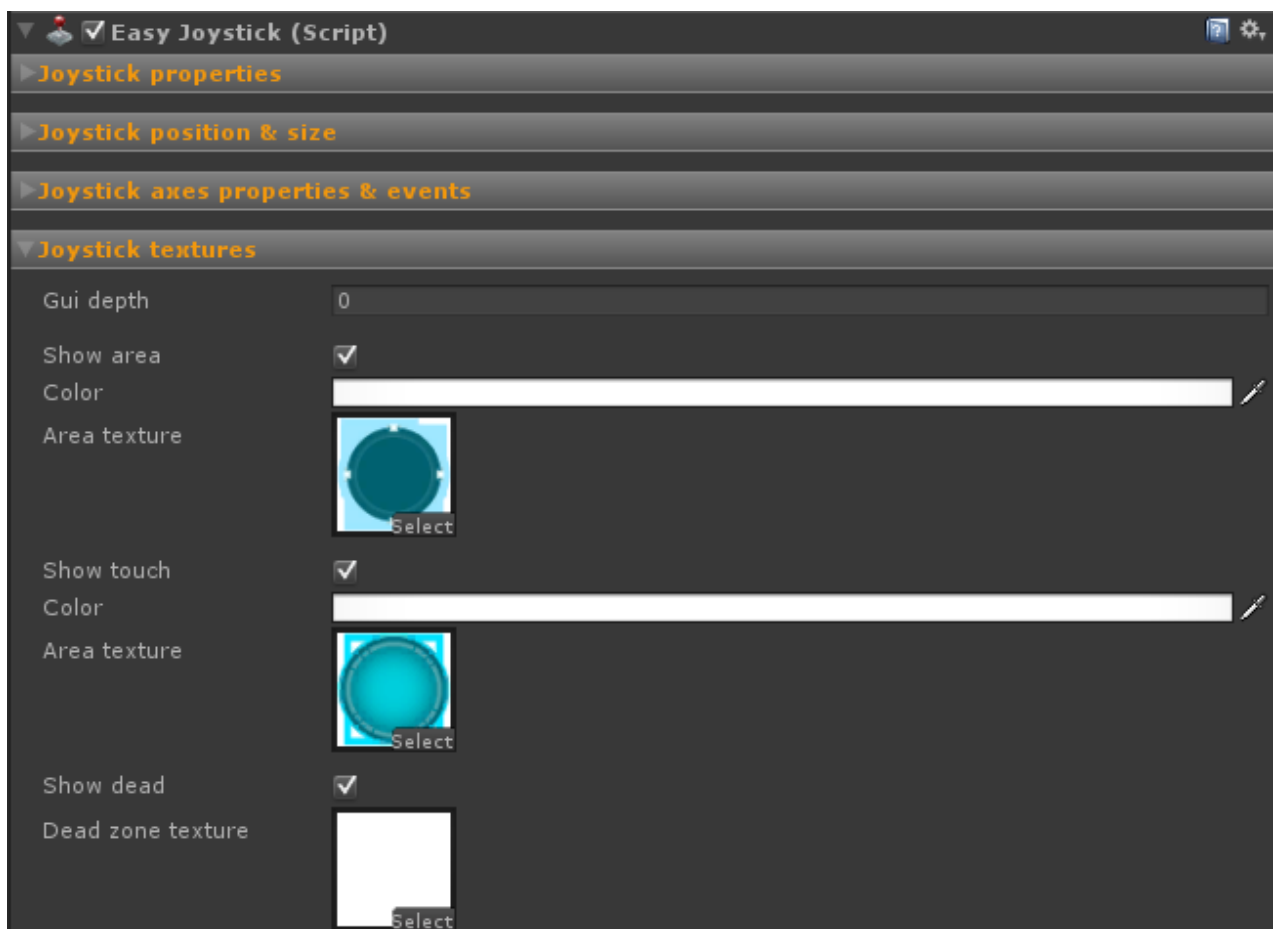
```
public Vector2 JoystickAxis {  
    get {  
        return this.joystickAxis;  
    }  
}
```

/// Gets the joystick value = joystick axis value * joystick speed * Time.deltaTime...

```
public Vector2 JoystickValue {  
    get {  
        return this.joystickValue;  
    }  
}
```

Joystick textures

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



Classes

Events

Below is a list of all the events raised by EasyJoystick when you're in Event or Direct & event mode for the interaction. Look at _C#-Event-Template or _Java—Event-Template folder on Plugins folder

For complete class description go to <http://www.blitz3dfr.com/Doc/ET3>

On_JoystickTouchStart(MovingJoystick move)

Occurs when a finger touch the screen hover the joystick

On_JoystickMoveStart(MovingJoystick move)

Occurs when joystick is starting to move.

On_JoystickMove(MovingJoystick move)

Occurs when joystick is moving.

On_JoystickMoveEnd(MovingJoystick move)

Occurs when joystick is ending to move,

On_JoystickTap(MovingJoystick move)

Occurs when a finger was lifted from the joystick , and the time elapsed since the beginning of the touch is less than the time required for the detection of a long tap

On_JoystickDoubleTap(MovingJoystick move)

Occurs when the number of taps is equal to 2 in a short time hover the joystick

On_JoystickTouchUp(MovingJoystick move)

Occurs when a finger hover the joystick was lifted from the screen.