

## How to Use the Playmaker Kinect Actions

To install the Kinect actions for Playmaker unzip the PlaymakerKinectActions.zip in the same folder - Assets/PlaymakerKinectActions. After that, the new actions can be found be under “Kinect Actions” category. In order Kinect actions to work correctly, you need to have KinectScripts/KinectManager.cs attached as a component of MainCamera or other game object.

Here are short descriptions of the available Kinect Playmaker actions and their parameters:

### Detect Gesture

Detects a gesture from the Kinect and can send an appropriate event. You can use this event to change the FSM state. Here are the action parameters:

- Kinect Gesture – the gesture to be detected.
- Gesture Progress (optional) – Playmaker float variable to store the current progress of the gesture (0-1).
- Gesture Detected Event – Playmaker event to be sent, if the gesture is detected.

### Detect Click

Detects the Click-gesture from the Kinect. You can use this event to change the FSM state or to process the selected game object. Here are the action parameters:

- Progress (optional) – Playmaker float variable to store the current Click progress (0-1).
- Normalized Pos (optional) – Playmaker Vector3 variable to store the current normalized cursor position. X and Y components of the variable contain the X and Y position of the cursor in normalized coordinates (0-1).
- Screen Pos (optional) – Playmaker Vector3 variable to store the current cursor position on the screen. X and Y components of the variable contain the X and Y position of the cursor in screen coordinates.
- Selected Game Obj (optional) – Playmaker GameObject variable to store the game object under the cursor at the time of the Click.
- Selected Point (optional) – Playmaker Vector3 variable to store the hit-point position, if there is a selected object – a game object under the cursor at the time of the Click.
- Click Detected Event – Playmaker event to be sent, if the gesture is detected.

### Get Color Map

Gets the color-map texture, as returned by the Kinect. Make sure that ‘Compute Color Map’-parameter of KinectManager-component is enabled. Here are the action parameters:

- Color Texture – Playmaker Texture variable to store the color map texture.

### Get Depth Map

Gets the depth-map texture, as returned by the Kinect. Make sure that ‘Compute User Map’-parameter of KinectManager-component is enabled. Here are the action parameters:

- Depth Texture – Playmaker Texture variable to store the depth map texture.

## Get Joint Position

Get a joint position from the 1<sup>st</sup> player, as seen by Kinect, in Kinect's coordinate system. Here are the action parameters:

- Kinect Joint – select the joint you want to track from the list.
- Joint Position – Playmaker Vector3 variable to store the selected joint position in meters, as returned by the Kinect.

## Track Hand Cursor

Allows you to use either the left- or right hand-tracking by Kinect to control a cursor on the screen. Here are the action parameters:

- Cursor Texture Right Hand – GUITexture game object to be used as cursor image for the right hand.
- Cursor Texture Left Hand – GUITexture game object to be used as cursor image for the left hand.
- Cursor Controlled By - select the hand that you want to control the cursor.
- Normalized Pos (optional) – Playmaker Vector3 variable to store the current normalized cursor position. X and Y components of the variable contain the X and Y position of the cursor in normalized coordinates (0-1).
- Screen Pos (optional) – Playmaker Vector3 variable to store the current cursor position on the screen. X and Y components of the variable contain the X and Y position of the cursor in screen coordinates.

## Track Wheel

Track the Wheel gesture from the Kinect. Here are the action parameters:

- Gesture Progress (optional) – Playmaker float variable to store the current progress of the gesture (0-1).
- Wheel Angle - Playmaker float variable to store the current wheel angle, in degrees.
- Wheel Detected Event – Playmaker event to be sent when the wheel angle changes.

## Track Zoom-In

Track the Zoom-in gesture from the Kinect. Here are the action parameters:

- Gesture Progress (optional) – Playmaker float variable to store the current progress of the gesture (0-1).
- Zoom Factor - Playmaker float variable to store the current zoom factor. 1 means 100%.
- Zoom Detected Event – Playmaker event to be sent when the zoom factor changes.

## Track Zoom-Out

Track the Zoom-out gesture from the Kinect. Here are the action parameters:

- Gesture Progress (optional) – Playmaker float variable to store the current progress of the gesture (0-1).
- Zoom Factor - Playmaker float variable to store the current zoom factor. 1 means 100%.
- Zoom Detected Event – Playmaker event to be sent when the zoom factor changes.

## **Credits and Special Thanks**

The most of Kinect Playmaker actions presented in this manual are based on code, created by Jonathan O'Duffy and Andrew Jones from HIT-Lab Australia (<http://www.hitlab.utas.edu.au>). My very special thanks to them! More information about these guys and their project 'Fantasy to Reality' can be found here: <http://www.fantasytoreality.com.au/>

## **Support and Feedback**

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