

Noir Project

Simple Unity3D Lip-sync II **Component Documentation**

Noir Project

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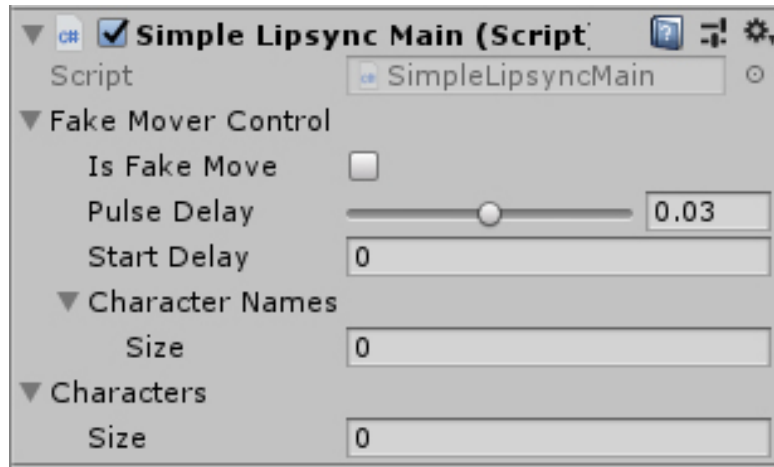
Before We Start

This is a simple component to simulate output tones from audio files to movement of your characters jaw in real-time, which can apply in straight or Inverse direction.

The demo scene contain all of the settings and pre requirements and you can check how the component works.

Component in the first look

First of all create an Empty Gameobject and then place the lip-sync component on it. The address from the scripts you can found the component is: **Noir Project > Simple Lipsync 2 > Lipsync Manager** , then you will see this component.

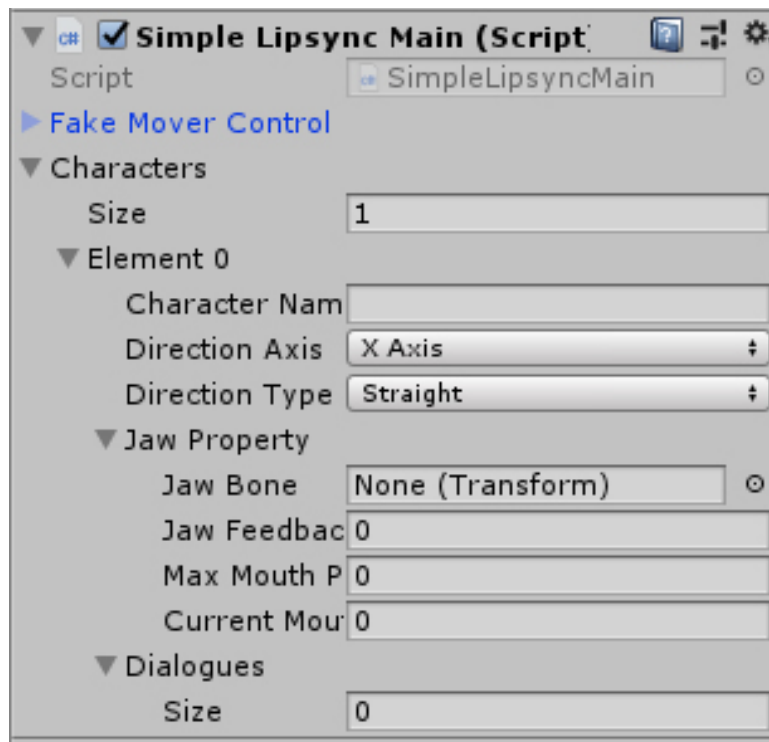


Here we have 2 main section the first one is **Fake Mover Control** and the second one is **Characters**. Before we can use this component we need a character has some Jaw Bone rigged to the jaw of the character head, if you already have this start to create a character and if you don't, for now use the head model from the package assets.

PS: for setting up the fake mover we need a character, so we talk about the fake mover later, you don't need to use fake mover function for the lip sync so make sure **Is Fake Move** check mark is unchecked and start to setup a character. The fake mover simulate fake jaw movement by generating noise without audio files.

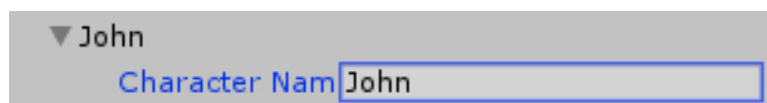
Setup a Character

Place your character on the scene, create an empty Game object and put the lip-sync on it as briefed earlier, Now we start to create our first character, set the Character size to 1 for creating one character and then you will have this values.



Character Name

This is name of your character when you want to call a voice from other classes. For now we call our character **John**, the name is case sensitive so make sure you call it as the same letter case later.



Direction Axis


Direction Axis defines what direction the Jaw should moves. (**X**, **Y**, **Z**), right now I have use **X Axis** for demo character. But when your character jaw moves in the wrong direction you should change this value before initiate the scene.

Direction Type

It will set the lip moves upward or downward, the values are **Straight** and **Inverse**. When the character jaw moves in opposite direction you want you should change the direction.

Jaw Property

The jaw property is everything you need to define about the jaw of your character.

▼ Jaw Property	
Jaw Bone	None (Transform) 
Jaw Feedback	0
Max Mouth Position	0
Current Mouth Value	0

Jaw Bone



This is the jaw bone of your character, you should assign the jaw bone of your character to this slot.

Jaw Feedback

The force speed of closing the mouth, when the audio played the jaw opens and when audio gone the jaw should smoothly back to the default position, this is the speed of closing mouth. I will set the value to **4.2** for my demo character.

Max Mouth Position

This value defines how much the mouth should opens, the value directly connected to the simulated tone value comes from audio. I will set this to **0.03** for my character.

▼ Jaw Property	
Jaw Bone	 Jaw (Transform) 
Jaw Feedback	4.2
Max Mouth Position	0.03
Current Mouth Value	0

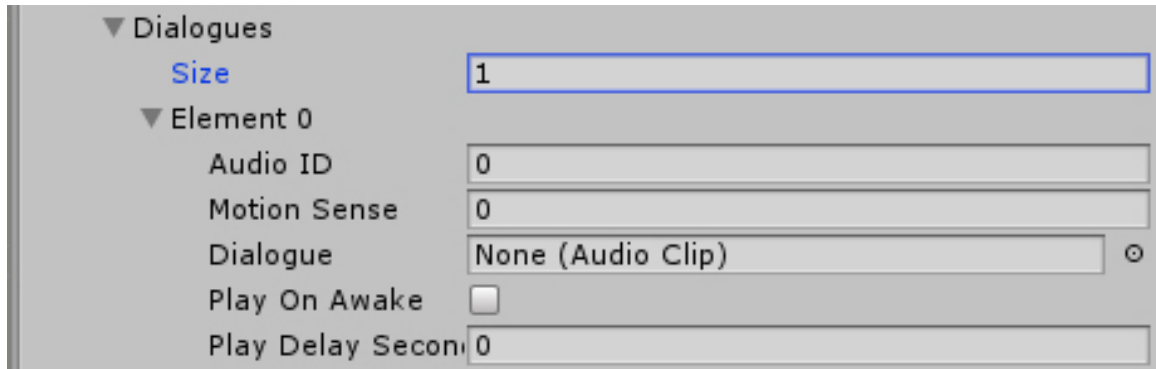
Current Mouth Value [Read only Value]

This value is read from the simulated tone and filtered to Max Mouth Value. This is a read-only value and just for showing the audio frequency value.

Dialogues

It's array of sounds the lip-sync can play on individual character, you should import the sounds into your project and then assign them through this array Dialogue input box.

Now we try to add the audio clip for dialogues, you can set as much as the audios you have but right now I will set it to 1 for showing how it works.



Audio ID

This value is used for another component called Simple Sequencer, via this ID you can call the audio from anywhere or from the Simple Sequencer, we talk about the Simple Sequencer later, just if you would like to use Simple Sequencer make sure the Audio IDs you will use be unique. For now leave it 0.

Motion Sense

This is sensitivity of the input sound and distance jaw can move, when the value goes higher the jaw moves farther. I will use **0.5** for sample audios.

Dialogue

The audio clip you want to play as a lip sync audio. Just set the audio clip here.

Play On Awake

When this value is checked the audio will played on the scene starts, just check the value for now.

Play Delay Seconds

When you would like to start audio clip on awake with some pre delay you can use this value, zero means no delay, and the value is calculated by seconds, and also can be used as float value such as 0.5 second.

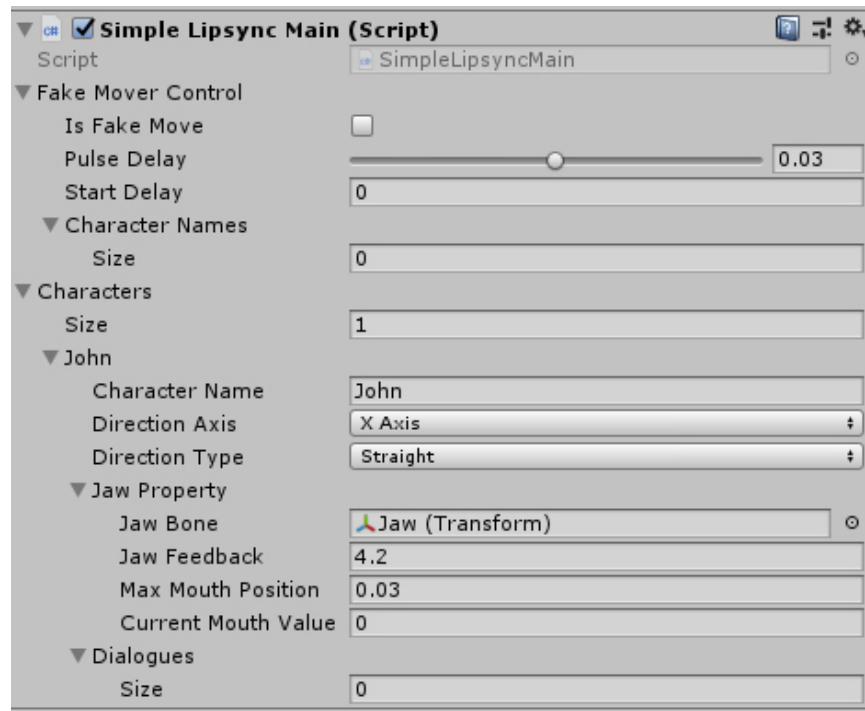
Everything is setup now, place the character somewhere your camera can show that and then play the scene, your character lips should move now.

This demo scene is available on folder: Scenes > Tutorial-01

Now we try to create two different characters and control them via Simple Sequencer and before this, will show you how fake mover works.

Fake Mover Control

Fake mover is some functionality requested by one my clients that need to move the lips without the audio clip and with some random generated pulse values. Like the above training create your character and you do not need to set up the sound or even motion sense, just defined the **character name** and then the **jaw bone**, and **jaw feedback** and **max mouth position**, and **no need to setup dialogues**. So you have something similar to this.



Now we can start to setup fake mover and let see how fake mover can works.

Is Fake Move

This checkmark will enable and disable the fake mover at the scene start, so for using fake mover turn on (check) the Is Fake Move value.

Pulse Delay

This is a time between each random value pulses sent to the jaw. Higher value cause slower movement or may lag the movement.

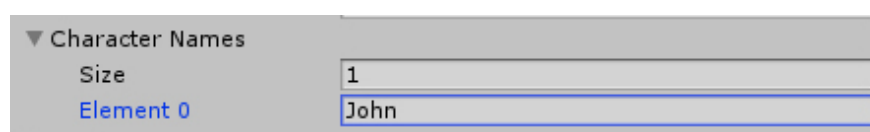
Start Delay

The delay before start fake mover, after desired seconds the fake movement will started. Use zero for no delay.

Character names

This is list of characters you would like to use fake move instead of voice lines. Set the character names size to 1 and then set the name to John, then play the scene, the john character fake talks. The scene is available on **Scenes >**

Tutorial-02-FakeMover



How to setup multi character with multi dialogues

For using multiple characters on the scene I will prefer to use Simple sequencer but before that I will show you how to setup multiple characters and dialogues, it's same as a single character and audio with a bit difference.

For adding another character , place your another character to the scene and then just set the Character size to 2 and then define the values like the other you learn earlier, you now have something like this.

The screenshot displays the 'Characters' panel in the software interface, showing two character configurations: John and James.

▼ Characters	
Size	2
▼ John	
Character Name	John
Direction Axis	X Axis
Direction Type	Straight
▼ Jaw Property	
Jaw Bone	Jaw (Transform)
Jaw Feedback	4.2
Max Mouth Position	0.03
Current Mouth Value	0
▼ Dialogues	
Size	0
▼ James	
Character Name	James
Direction Axis	X Axis
Direction Type	Straight
▼ Jaw Property	
Jaw Bone	Jaw (Transform)
Jaw Feedback	4.2
Max Mouth Position	0.03
Current Mouth Value	0
▼ Dialogues	
Size	0

I have called the second character James with the same values. And set the new jaw of my another character I have placed on the scene to the James jaw bone.

Now set the dialogues audio clip same as before, make sure each audio has a unique Audio ID such as image below. I will add 1 audio to John and 2 other to James, and call Audio IDs in order to 1, 2, 3. Same as image below. And all play on awakes are disabled.

Character Name	John
Direction Axis	X Axis
Direction Type	Straight
▶ Jaw Property	
▼ Dialogues	
Size	1
▼ Element 0	
Audio ID	1
Motion Sense	0.5
Dialogue	☀️ 01-shadow-hello
Play On Awake	<input type="checkbox"/>
Play Delay Second	0
▼ James	
Character Name	James
Direction Axis	X Axis
Direction Type	Straight
▶ Jaw Property	
▼ Dialogues	
Size	2
▼ Element 0	
Audio ID	2
Motion Sense	0.5
Dialogue	☀️ 02-lucid-assist
Play On Awake	<input type="checkbox"/>
Play Delay Second	0
▼ Element 1	
Audio ID	3
Motion Sense	0.5
Dialogue	☀️ 04-lucid-desc
Play On Awake	<input type="checkbox"/>
Play Delay Second	0

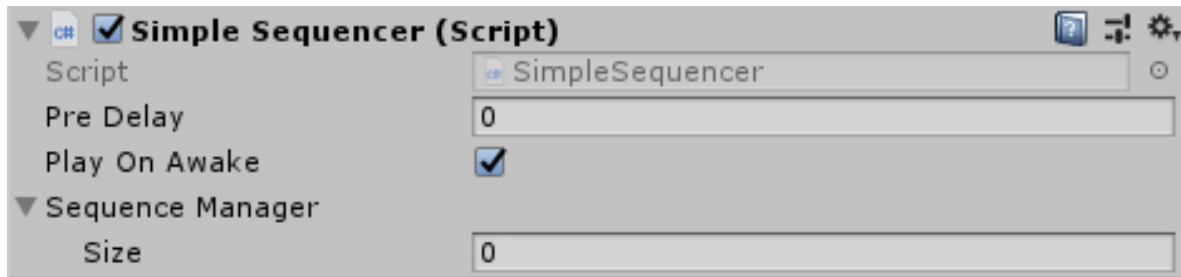
There audio on 2 character is setup, now we going to play them with the sequencer.

Check out the next page to setup the simple sequencer and play the audios remotely.

Simple Sequencer

Create a new empty Gameobject and then assign simple sequencer to this Gameobject. The script location is: **Noir Project > Simple lipsync 2 > Lip sync Simple Sequencer**

When you add the sequencer you have something like this:



Pre Delay

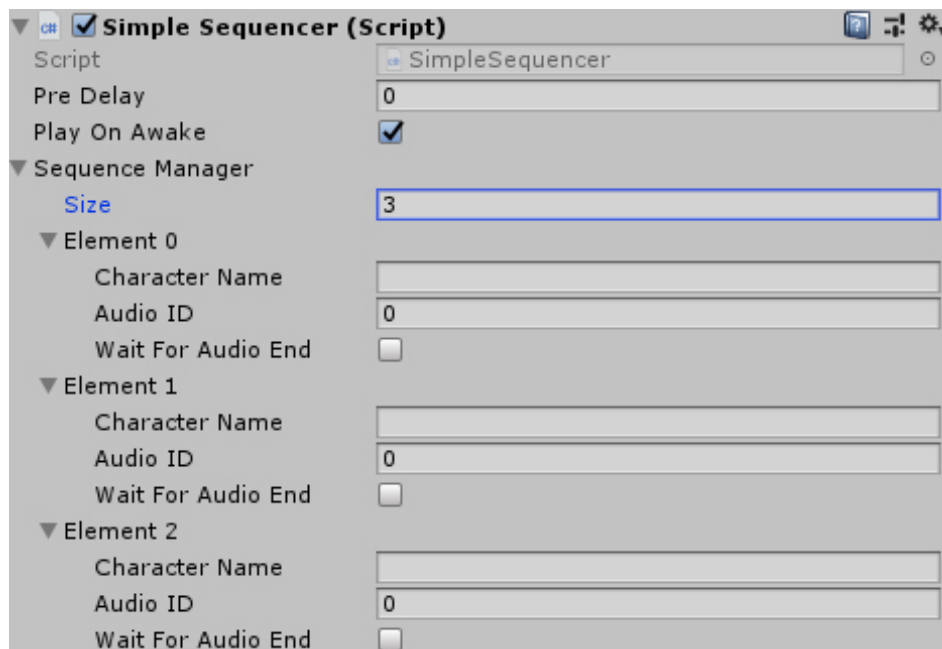
The delay before start playing the sequencer function. Zero is for no delay.

Play On Awake

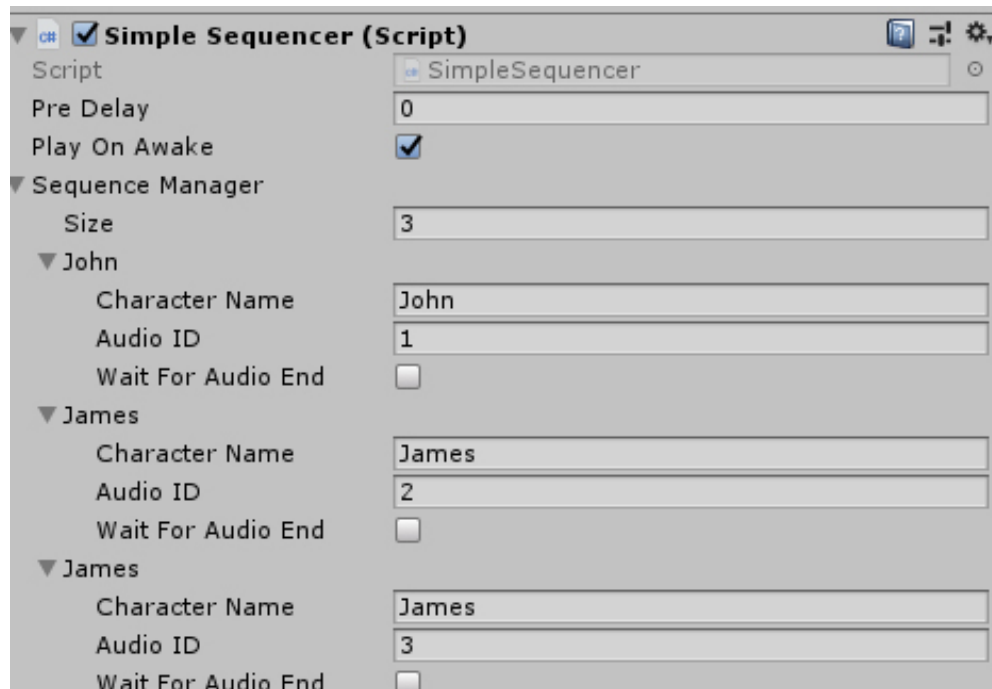
When this value is checked the sequencer start working when the scene begin.

Sequence Manager

The list of sequence we need to play. As we add 3 audio in the prev page now set the sequence manager size to 3 then we have something like this.



The play mode is ordered play so the first one played first, we want to play audio Id 1 from John then 2 and 3 from James. So the first character name is John and two others will be James. Then the first audio id should be 1 and the other 2 and then 3. So it will be something like this.



Wait for Audio End

When this check mark is checked the first audio should play till the end and then the sequencer play the next one automatically, when it is not checked all of the audios will plays at the same time, at this time the last audio from each character will be played. So we check all of them. For this tutorial.

The scene is available on **Scenes > Tutorial-03- SimpleSequencer**

