

TazMan-Audio

Fabric Reference

FABRIC

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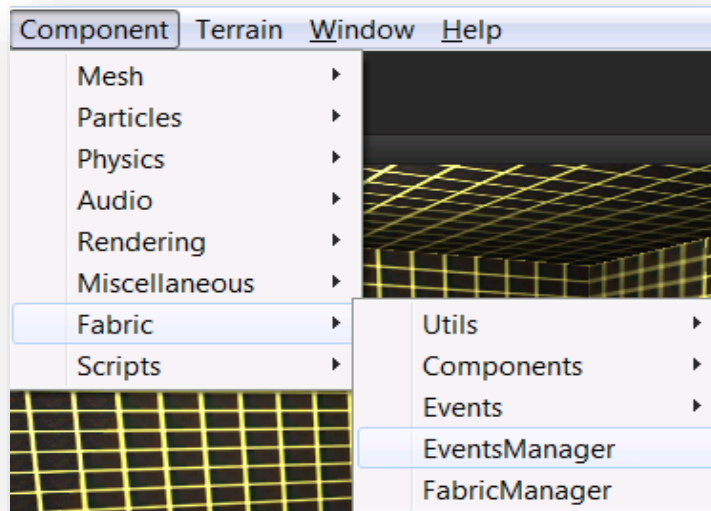
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Introduction

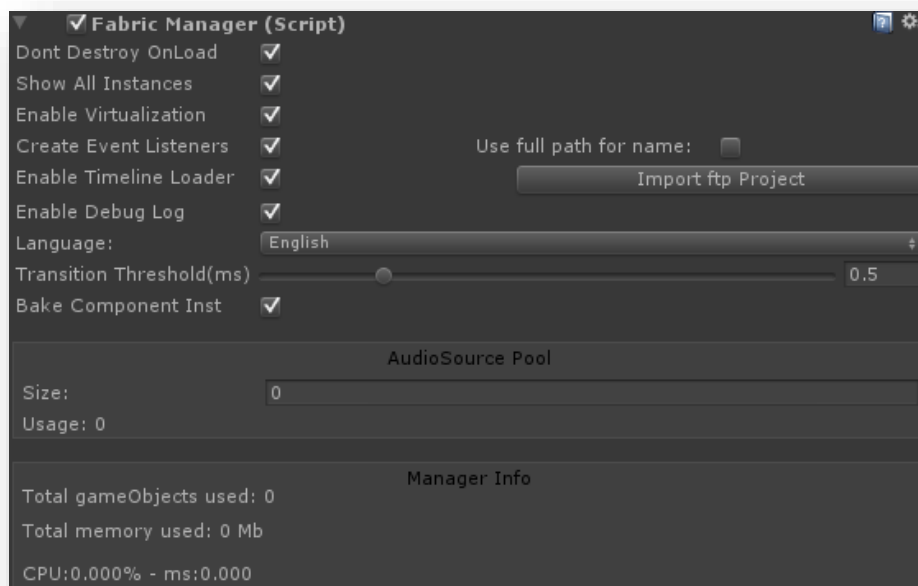
The Reference provides detailed information for all of the Fabric component properties.

Managers

The Fabric manager components can be accessed through the Component->Fabric menu selection.

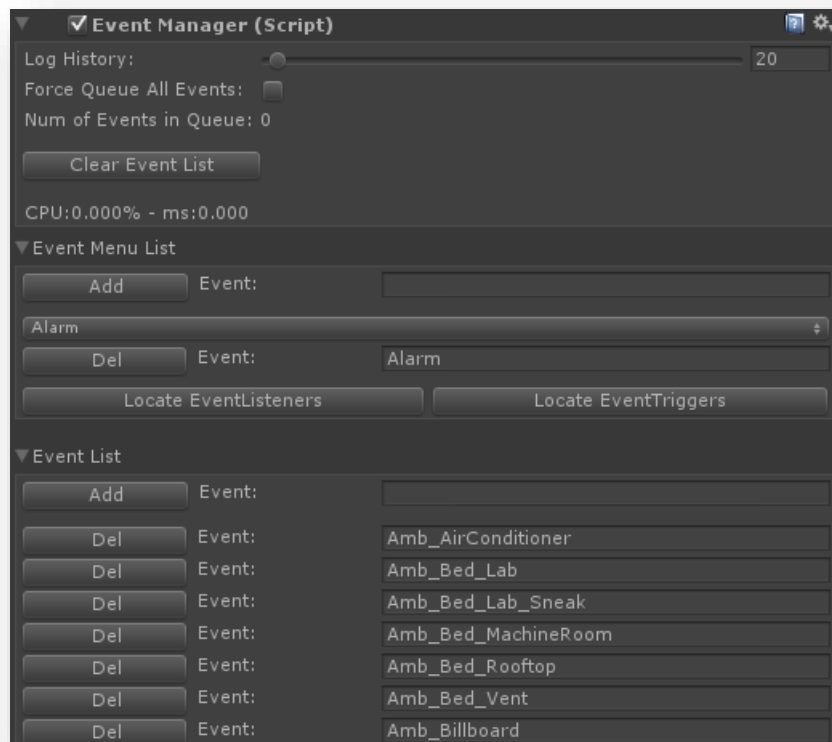


Fabric Manager



| Properties | Description |
|-------------------------|---|
| Don't Destroy On Load | Allows the manager to stay alive when loading scenes |
| Show All Instances | Shows all component instances in the hierarchy |
| Enable Virtualization | Enable audio component to turn virtual (i.e. not playing) when listener is outside its max distance. |
| Create Event Listeners | Automatically adds an event listener to all components either using the name or their full hierarchy path (if Use full path for name option is set) |
| Enable Timeline Loader | Enables the automatic importing of timeline (*.fdp) projects located in the resources folder. It is possible to manually import an ftp project. |
| Enable Debug Log | It will automatically add the DebugLog component for displaying Fabric error/warning/info messages |
| Language | Allows setting the active language used by the Dialog and Www AudioComponents. (Use the Language window to create/edit language properties) |
| Transition Threshold | Look ahead time (in ms) used by the sequence component to detect when to queue the next playlist entry in a sample accurate way |
| Bake Component Inst | This will create all the component instances in the editor according to their max instances value. It's aimed to reduce load times at runtime. NOTE: To make the instances visible you need to have the "Show All Instances" option enabled. |
| AudioSource Pool | |
| Size | Determines the size of the pool. When 0 the pool is disabled |
| Usage | Displays the number of sources currently in use |

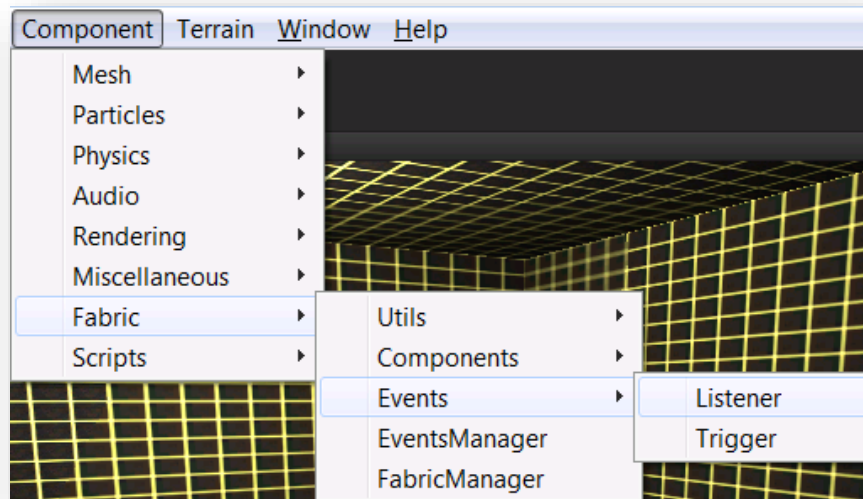
Event Manager



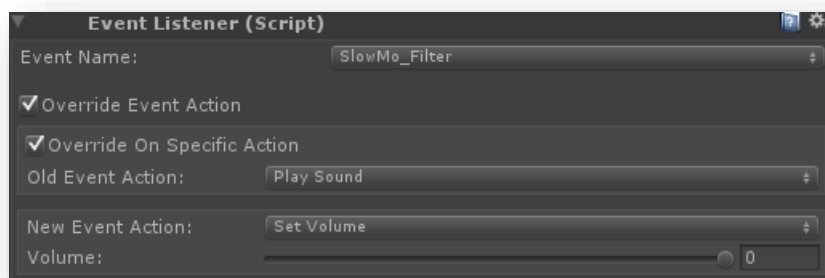
| Properties | Description |
|------------------------|---|
| Log History Size | The size of the event log history (default: 128) |
| Force Queue All Events | Force queuing all posted events |
| Num of Events in Queue | Shows the number of events in the queue list |
| Clear Event List | Clears the event list |
| Add Event | The event with the name entered is added into the list. |
| Del Event | The event is deleted from the list. |
| Locate EventListeners | Highlights in the project hierarchy all game objects that have event listeners with a specific event name |
| Locate EventTriggers | Highlights in the project hierarchy all game objects that have event triggers with a specific event name |

Events

The Event components can be accessed through the Component->Fabric->Events menu selection.



Event Listener



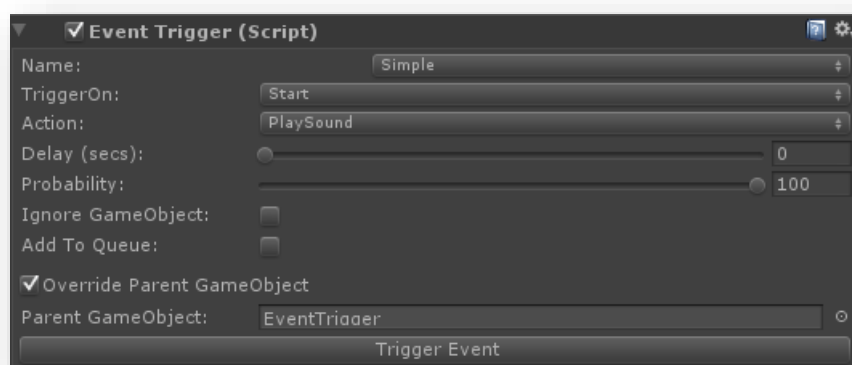
| Properties | Description |
|-----------------------|---|
| Event Name | Name of the event to listen for. |
| Override Event Action | Enables/Disables event action override |
| Action To Override | Allow to override incoming event action |

Fabric Reference

When the Action To Override is selected the following extra properties are added to the event listener

| Properties | Description |
|-----------------------------|---|
| Override on Specific Action | Enable event override on a specific event action |
| Old Event Action | Event action to override |
| New Event Action | Override with new event action. Most new event actions also allow to set new parameter values. |

Event Trigger



| Properties | Description |
|------------|--|
| TriggerOn | When will the trigger occur: <ul style="list-style-type: none">- Start- Destroy- Update- Enable- Disable- TriggerEnter- TriggerExit- CollisionEnter- CollisionExit- MouseUp- MouseDown- MouseOver- MouseExit |
| Action | The action to be taken when the event is received: <ul style="list-style-type: none">- PlaySound- StopSound- PauseSound |

| | |
|----------------------------|--|
| | <ul style="list-style-type: none"> - UnpauseSound - SetVolume - SetPitch - SetSwitch - SetParameter - SetFadeIn - SetFadeOut - SetPan - AddPreset - RemovePreset - SetDSPPParameter - RegisterGameObject - ResetDynamicMixer - AdvanceSequence - ResetSequence - SwitchPreset - SetTime - SetModularSynthParameter |
| Delay (secs) | Delays the event trigger by the time set in seconds |
| Probability (%) | Defines the percentage of the event trigger happening. |
| Ignore GameObject | Game Object is not used with the event (no 3D position update) |
| Add To Queue | Adds the event to a queue for processing when the event manager update is called |
| Override Parent GameObject | Allows to override the game object used by default (i.e. the game object that has the event trigger) |
| Trigger Event | Force a trigger of the event. |

When the Set DSPPParameter action is selected the following extra properties are added to the event trigger

| Properties | Description |
|------------|---|
| Value | The value of the DSP effect set according to its range |
| Time | Time it will take for the DSP parameter to reach this value |
| Curve | The interpolation curve (0.5=Linear, Log < 0.5 > Exp) |

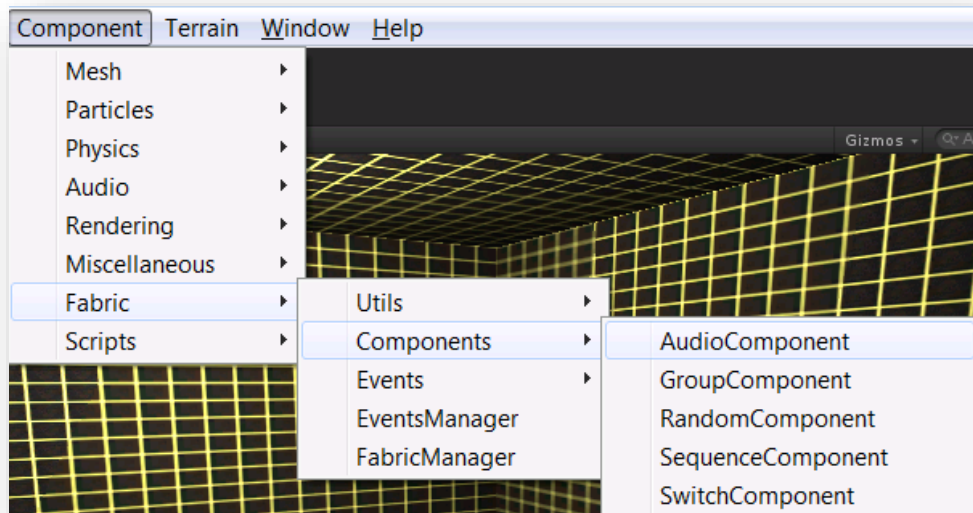
The “Set DSPPParameter” supports the following DSP effect parameters

| DSP | Parameter | Description |
|-----------|----------------------|---|
| Low Pass | | |
| | Cutoff Frequency | Lowpass cutoff frequency in hz. 10.0 to 22000.0. Default |
| | Lowpass Resonance Q | Lowpass resonance Q value. 1.0 to 10.0. Default = 1.0. |
| High Pass | | |
| | Cutoff Frequency | Highpass cutoff frequency in hz. 10.0 to 22000.0. Default |
| | Highpass Resonance Q | Highpass resonance Q value. 1.0 to 10.0. Default = 1.0. |

| | | |
|------------|-------------|---|
| Echo | | |
| | Delay | Echo delay in ms. 10 to 5000. Default = 500. |
| | Decay Ratio | Echo decay per delay. 0 to 1. 1.0 = No decay, 0.0 = total decay (ie simple 1 line delay). Default = 0.5.L |
| | Wet Mix | Volume of echo signal to pass to output. 0.0 to 1.0. Default = 1.0. |
| | Dry Mix | Volume of original signal to pass to output. 0.0 to 1.0. Default = 1.0. |
| Distortion | | |
| | Distortion | Distortion value. 0.0 to 1.0. Default = 0.5. |
| Chorus | | |
| | Dry Mix | Volume of original signal to pass to output. 0.0 to 1.0. Default = 0.5. |
| | Wet Mix 1 | Volume of 1st chorus tap. 0.0 to 1.0. Default = 0.5. |
| | Wet Mix 2 | Volume of 2nd chorus tap. This tap is 90 degrees out of phase of the first tap. 0.0 to 1.0. Default = 0.5. |
| | Wet Mix 3 | Volume of 3rd chorus tap. This tap is 90 degrees out of phase of the second tap. 0.0 to 1.0. Default = 0.5. |
| | Delay | The LFOs' delay in ms. 0.1 to 100.0. Default = 40.0 ms |
| | Rate | The LFOs' modulation rate in Hz. 0.0 to 20.0. Default = 0.8 Hz. |
| | Depth | Chorus modulation depth. 0.0 to 1.0. Default = 0.03. |
| | Feed Back | Chorus feedback. Controls how much of the wet signal gets fed back into the filter's buffer. 0.0 to 1.0. Default = 0.0. |

Components

Several components each with its own functionality can be added into a game object by selecting them from the Fabric->Components menu selection.



Component common properties



| Properties | Description |
|------------------------|--|
| Max Instances | Number of maximum instances that can be played. Note: Only used when the component has an Event Listener attached to it and therefore can be triggered. |
| Priority | Determines how important this component is. |
| Stealing | Stealing behaviour when max instances is reached: <ul style="list-style-type: none"> - Oldest - Newest - Farthest - None |
| FadeInTime | Sets the fade in time of this node |
| FadeInCurve | Sets the fade in curve type (0.5 = linear, log < 0.5 > Exp |
| FadeOutTime | Sets the fade out time of this node |
| FadeOutCurve | Sets the fade out curve type (0.5 = linear, log < 0.5 > Exp |
| Override Parent Volume | Overrides the parent volume. |
| Volume | Volume of the component multiplied with its parent volume. |
| Volume Randomization | Amount of volume randomization to be added. |
| Override Parent Pitch | Overrides the parent pitch. (If not top node) |
| Pitch | Pitch value of the component multiplied with its parent pitch. |
| Pitch Randomization | Amount of pitch randomization to be added. |
| Override 2D Properties | Override parent 2D properties. (If not top node) |
| Pan2D | Sets a channel pan position linearly. Only works on 2D clips. |
| Override 3D Properties | Override parent 3D properties. (If not top node) |
| Pan Level | Sets how much the 3D engine has an effect on the component. |
| Spread Level | Sets the spread angle a 3D stereo or multichannel sound. |
| Doppler Level | Sets the Doppler level of the component. |
| Min Distance | Min audible distance. |
| Max Distance | Max audible distance. |
| Rolloff Mode | Determines how fast the sounds fades over distance: <ul style="list-style-type: none"> - Logarithmic - Linear - Custom |
| Component is | Shows the status of the component <ul style="list-style-type: none"> - Active - Inactive |

Runtime Parameter (RTP)

Property: Pitch Parameter: Energy

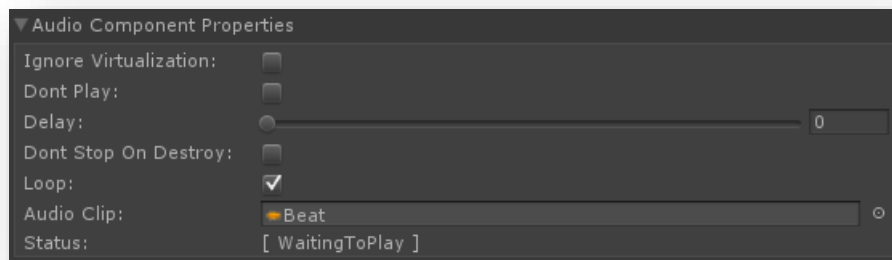
Seek: 0 Speed: 0 Loop: One Shot

Min: 0 Max: 1 Value: 0

Enter 'Distance' in the parameter name to control a property by distance

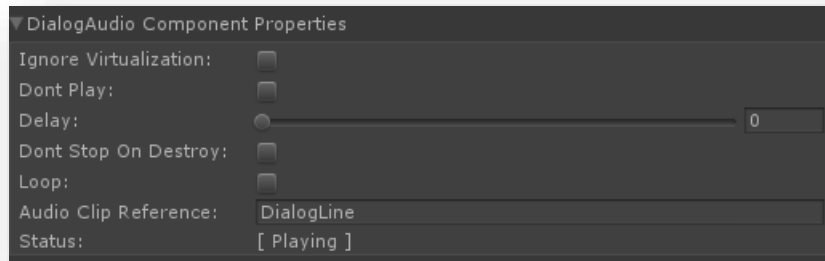
| Properties | Description |
|------------|--|
| Property | Component property that parameter will control <ul style="list-style-type: none"> - Volume - Pitch - Pan 2D - Pan Level - Spread Level - Doppler Level - Priority |
| Parameter | The parameter name that will listen for a value from the game through the API or as an event listener component. |
| Loop | If the Speed properties is set then the parameter will loop according to the behaviour selected. <ul style="list-style-type: none"> - One Shoot - Loop - Ping Pong |
| Min | The min value of the parameter |
| Max | The maximum value of the parameter |
| Seek | The parameter will seek to the target at the specified rate |
| Speed | The parameter will advance at a specified rate |

Audio Component



| Properties | Description |
|-----------------------|---|
| Ignore Virtualization | Audio component won't be virtualized (stopped) according to distance from listener. |
| Don't Play | Audio component won't play. |
| Delay | How much to delay (is seconds) the component from playing |
| Don't Stop On Destroy | Keeps playing when it's parent game object is destroyed. The last know position of the game object is used. |
| Loop | Pitch value of the component multiplied with/by its parent pitch. |
| Audio Clip | Audio clip to play. |
| Status | Displays the current status of the audio component <ul style="list-style-type: none"> - WaitingToPlay - Playing - WaitingToStop - Stopped - Paused - Virtual - LostFocus |

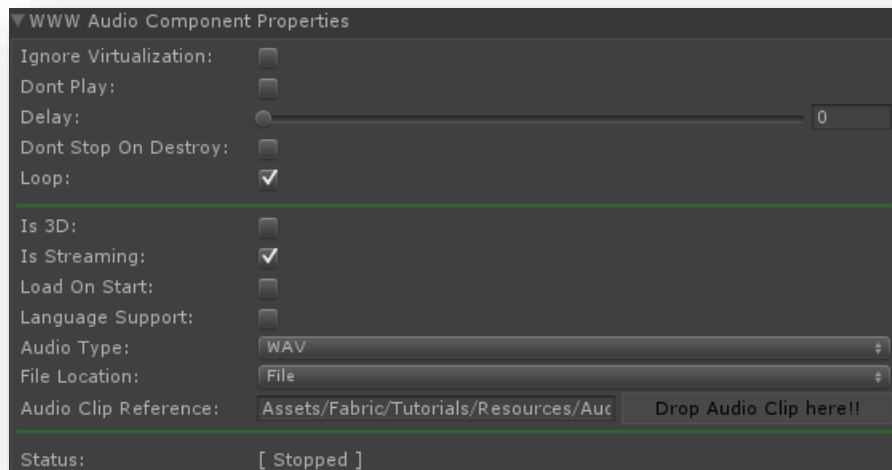
Dialog Audio Component



| Properties | Description |
|----------------------|--------------------------------|
| Audio Clip Reference | Name of the audio clip to play |

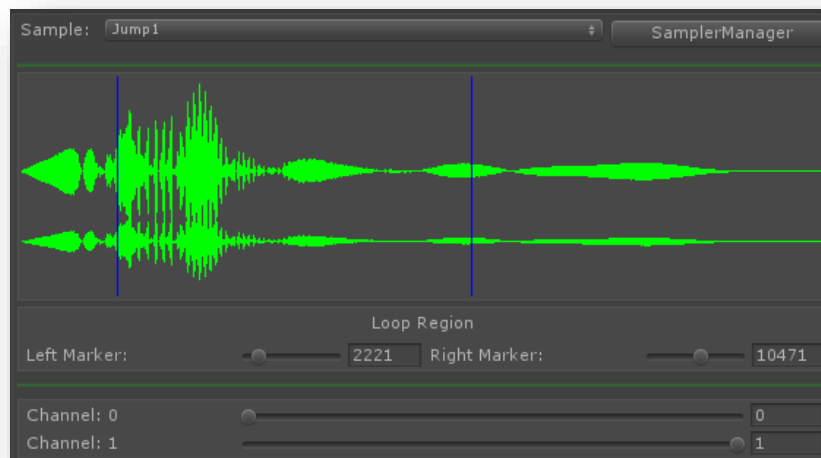
Note: Dialog Audio component provides the same properties as the standard Audio Component.

Www Audio Component

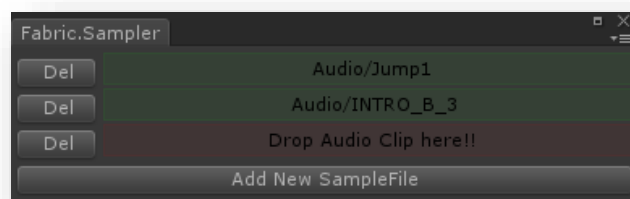


| Properties | Description |
|-----------------------|---|
| Ignore Virtualization | Audio component won't be virtualized (stopped) according to distance from listener. |
| Don't Play | Audio component won't play. |
| Delay | How much to delay (is seconds) the component from playing |
| Don't Stop On Destroy | Keeps playing when it's parent game object is destroyed. The last know position of the game object is used. |
| Loop | Pitch value of the component multiplied with/by its parent pitch. |
| Is 3D | Audio clip to play. |
| Is Streaming | Audio will be streamed and not loaded into memory |
| Load On Start | Loads audio component start is called, if not it will load when is requested to play |
| Language Support | Enable language support. If set then typing "LANGUAGE" anywhere in the audio clip reference will be replaced with the name of the language currently selected (i.e. Dialog/LANGUAGE/Greetings.wav will be replaced to Dialog/English/Greetings.wav) |
| Audio Type | You must set the type of audio file that will be played (ACC, AIFF, GCADPCM, IT, MOD, MPEG, OGGVORBIS, S3M, WAV, XM, XMA, AUDIOQUEUE) |
| File Location | Indicates if the file to be loaded is on a file location or Http |
| Audio Clip Reference | Full filename and path of the audio file to play |
| Status | Displays the current status of the audio component <ul style="list-style-type: none"> - WaitingToPlay - Playing - WaitingToStop - Stopped - Paused - Virtual - LostFocus |

Sample Player Component

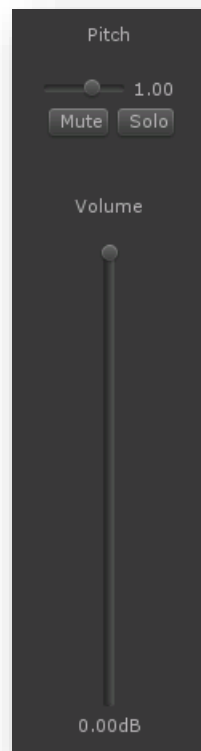


| Properties | Description |
|-----------------|---|
| Loop Region | Allows to set left and right markers to define a loop region. The region will be automatically set if the audio clip is a wavfile that contains markers in its meta data. |
| Channel (0...8) | Controls the gain (0-1) of a channel. Note: Currently Unity supports up to 8 channels. |



| Properties | Description |
|--------------------|---|
| Add New SampleFile | Creates a new empty slot that allows to drag and drop an audio clip |
| Del | Deletes the sample file slot |

Group Component



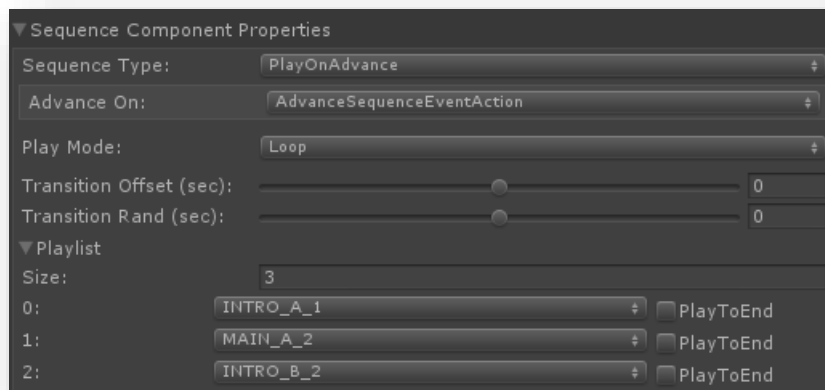
| Properties | Description |
|------------|---|
| Volume | Set volume for all children components. |
| Pitch | Set pitch for all children components. |
| Mute | Mutes all children components. |
| Solo | Mutes all other group components except this one. |

Random Component



| Properties | Description |
|------------|--|
| Play Mode | The type of playing mode: <ul style="list-style-type: none">- Random: Elements are picked in random.- RandomNoRepeat: Elements picked at random but are not repeated. |
| Weight | In random mode allows to set the weight of an entry making it play more often. |

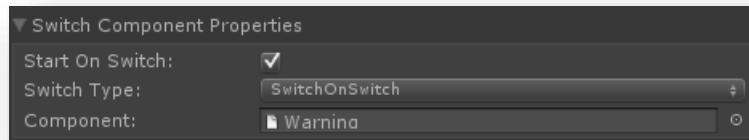
Sequencer Component



| Properties | Description |
|------------------------------|--|
| Sequence Type | The type of the sequence: <ul style="list-style-type: none"> - PlayContinuous: Plays all elements in sequence. - PlayOnAdvance: Advances on the next element when is triggered again. |
| Advance On | If PlayOnAdvance type is selected the following advance options become available: <ul style="list-style-type: none"> - AdvanceSequenceEventAction: Will advance to the next entry when the EventAction.AdvanceSequence is received. - PlayEventAction: Will advance to the next entry when an EventAction.PlaySound is received. |
| Play Mode | The playing mode determines if a sequence is repeated or not. <ul style="list-style-type: none"> - Single: Plays sequence one and then stops. - Loop: Plays sequence continuously. |
| Transition Offset (sec) | Offset that allows overlapping by trigger the next entry in the sequence earlier (-) or later (+). |
| Transition Offset Rand (sec) | Applies a random value within this range on top of the transition offset |
| Playlist | The order in which the sequence will play its sub-components. Note: In AdvanceSequenceEventAction mode the option "PlayToEnd" is available on each entry and when set the sequence will wait until the end of the current entry has been reached before advancing into the next. |

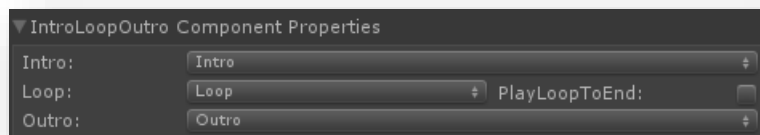
An arrow (↵) indicates which component is currently playing.

Switch Component



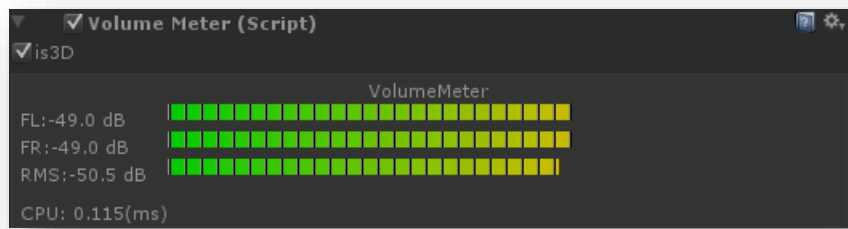
| Properties | Description |
|-----------------|---|
| Start On Switch | Starts the component playing when a switch occurs. |
| Switch Type | The switch types available: <ul style="list-style-type: none"> - SwitchOnPlay - SwitchOnEnd - SwitchOnSwitch |
| Component | Currently selected component. Use this to select the default component. |

IntroLoopOutro Component



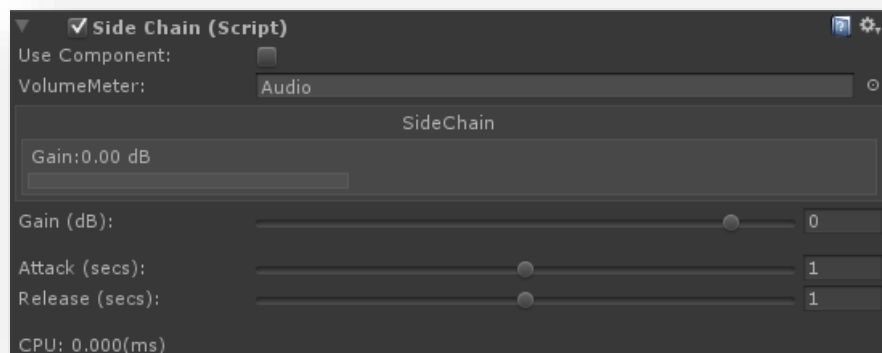
| Properties | Description |
|---------------|---|
| Intro | Intro entry will play first |
| Loop | Loop plays immediately after intro |
| PlayLoopToEnd | If enabled it will wait to reach the end of the loop before it moves to the outro stage |
| Outro | Outro will play only when the component is stopped |

Volume meter component



| Properties | Description |
|------------|---|
| Is3D | Sets if the audio sources in the hierarchy are 3D. NOTE: This will be removed in future versions |

Side chain Component



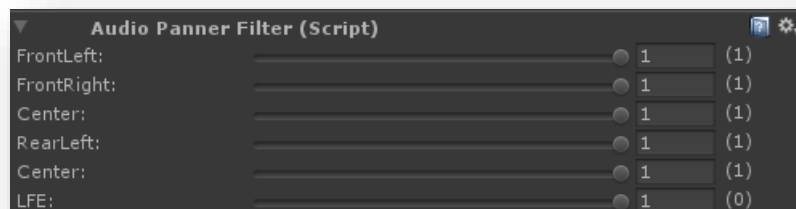
| Properties | Description |
|----------------|--|
| Use Component | When set it allows to use a component to activate/deactivate the side chain according to its playing status. By default its off so a volume meter component is expected |
| Gain (dB) | Controls the input gain coming from the volume meter |
| Attack (secs) | Defines how fast the side chain will respond to a positive input value |
| Release (secs) | Defines how fast the side chain will respond to a negative input value |

Loudness Meter Component

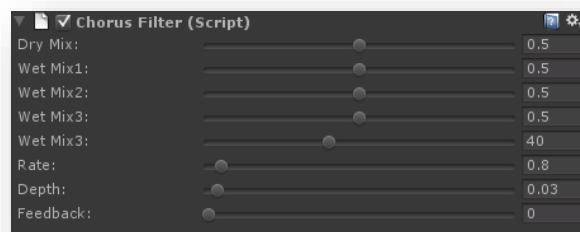


DSP Components

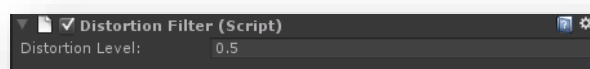
Audio Panner



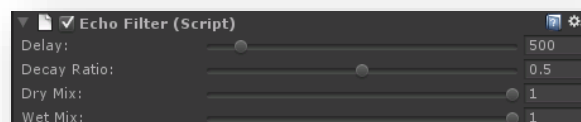
Chorus Filter



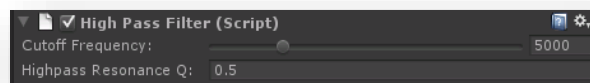
Distortion Filter



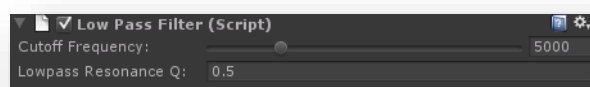
Echo Filter



High Pass Filter

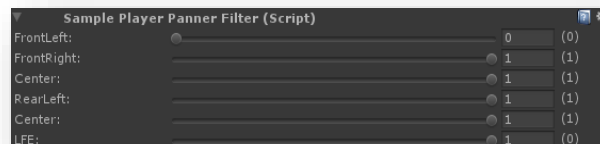


Low Pass Filter



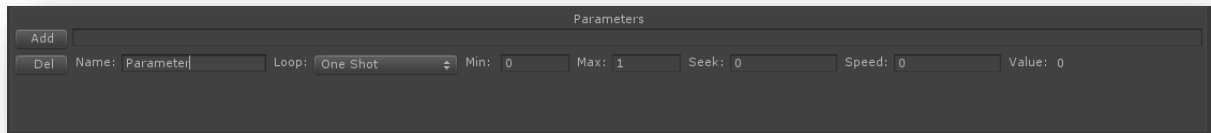
Note: Refer to the event trigger section for DSP properties and value ranges.

Sample Player Panner Filter



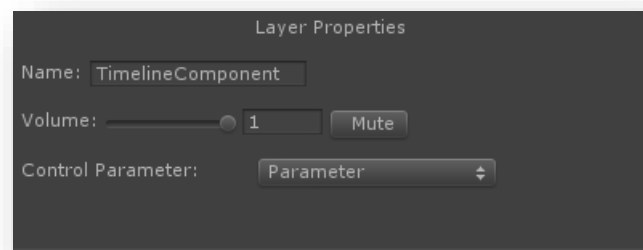
Timeline Component

Parameter properties



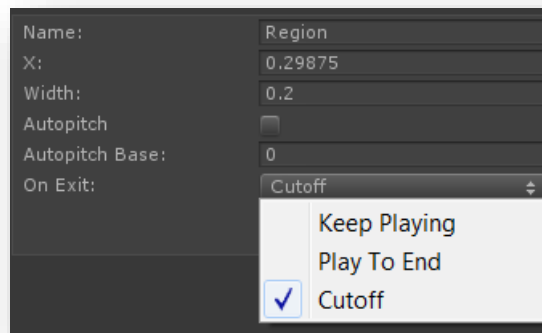
| Properties | Description |
|------------|---|
| Name | The name of the parameter |
| Loop | If the Speed properties is set then the parameter will loop according to the behaviour selected. <ul style="list-style-type: none"> - One Shoot - Loop - Ping Pong |
| Min | The min value of the parameter |
| Max | The maximum value of the parameter |
| Seek | The parameter will seek to the target at the specified rate |
| Speed | The parameter will advance at a specified rate |

Layer properties



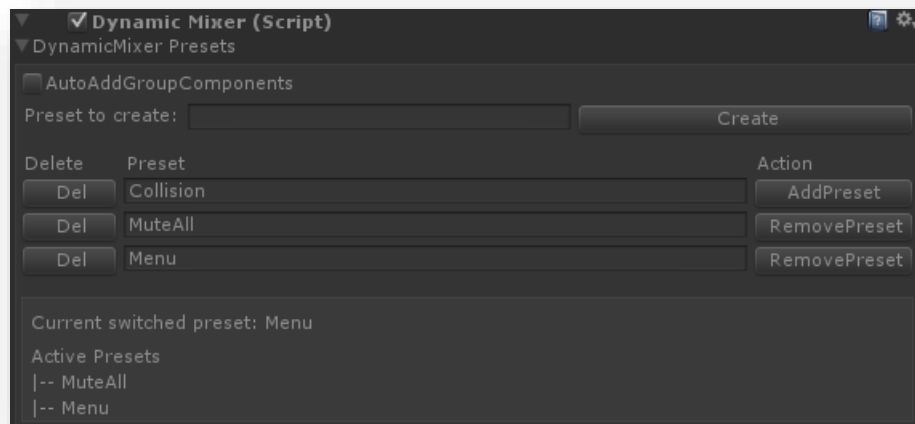
| Properties | Description |
|-------------------|---------------------------------------|
| Name | The name of the layer |
| Volume | Sets the layer volume |
| Mute | Mutes the layer |
| Control Parameter | The parameter that controls the layer |

Region properties



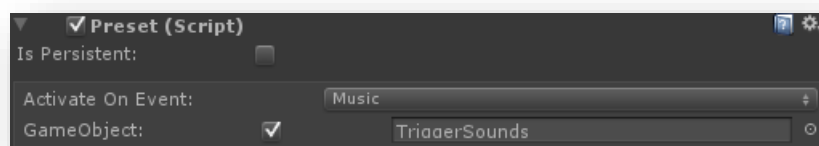
| Properties | Description |
|----------------|---|
| Name | The name of the region |
| X | The start position of the region in the timeline |
| Width | The length of the region in the timeline |
| Autopitch | The region pitch is linearly scaled up or down relative to the centre of the region |
| Autopitch Base | Used for fine tuning the auto pitch value |
| On Exit | This option determines how the region will behave when a parameter exists <ul style="list-style-type: none">- Keep Playing- Play To End- Cutoff |

Dynamic Mixer component



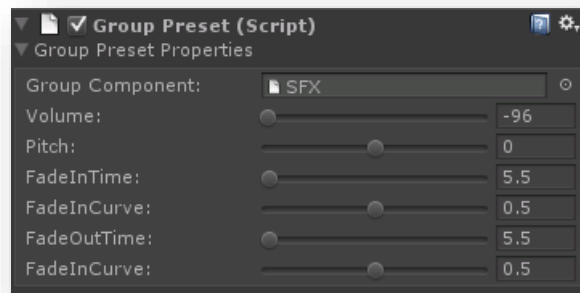
| Properties | Description |
|------------------------|---|
| AutoAddGroupComponents | Flag that automatically adds/removes group components (NOTE: Disabled for the first v2.0 release) |
| Create | Creates a preset with a given name |
| Del | Deletes the preset |
| AddPreset | Adds preset to the active list |
| RemovePreset | Removes preset from the active list |

Preset properties



| Properties | Description |
|-------------------|---|
| Is Persistent | If its ticked the preset won't be removed when the dynamic mixer reset function is called through the event system or API |
| Activate on Event | Preset will automatically get activated when the event is posted and will remain active for the duration of the event. |
| GameObject | GameObject used when checking if an event is active |

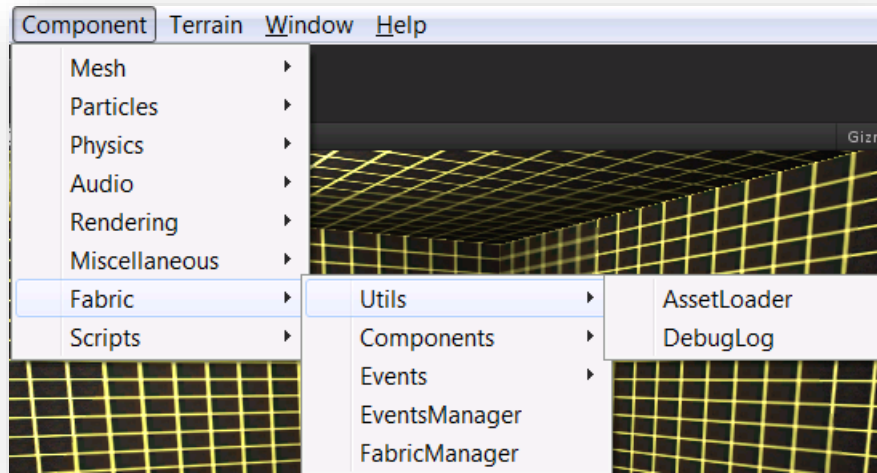
GroupPreset



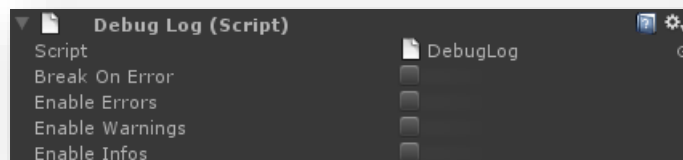
| Properties | Description |
|-----------------|---|
| Group Component | The group component to be modified |
| Volume | Volume to set in dB |
| Pitch | Pitch to set |
| FadeInTime | The time it will take to reach the volume/pitch values, in seconds |
| FadeInCurve | The type of transition curve (0.5 = linear, log < 0.5 > exp) |
| FadeInTime | The time it will take to remove the volume/pitch values, in seconds |
| FadeInCurve | The type of transition curve (0.5 = linear, log < 0.5 > exp) |

Utils

Fabric comes with helper components which can be found in the Fabric->Utils menu selection.

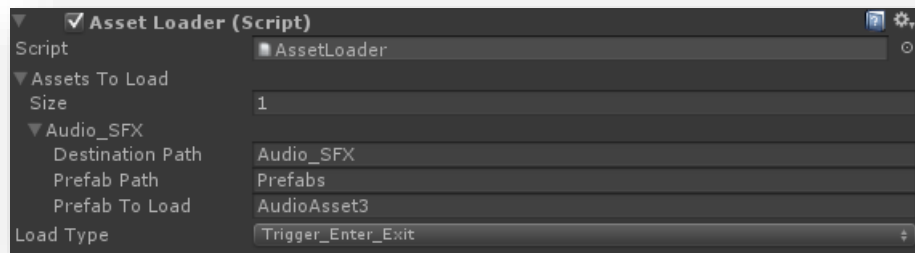


DebugLog



| Properties | Description |
|-----------------|---|
| Break On Error | Stops execute of code if an error occurs. |
| Enable Errors | Enables errors to be handled. |
| Enable Warnings | Enables warnings to be handled. |
| Enable Infos | Enables infos to be handled. |

Asset Loader



| Properties | Description |
|---------------|--|
| Prefab Assets | List of prefab assets to be loaded/unloaded. |

Extensions

Audio Spline Extension



| Properties | Description |
|--------------------------|---|
| Insert After | Inserts a new point AFTER the selected point (if possible) |
| Insert Before | Inserts a new point BEFORE the selected point (if possible) |
| Delete | Deletes selected point |
| Show/Hide Main Transform | Shows or hides the main transform of the audio spline |

Modular Synth Extension

