

TazMan-Audio

# Fabric Reference

# FABRIC

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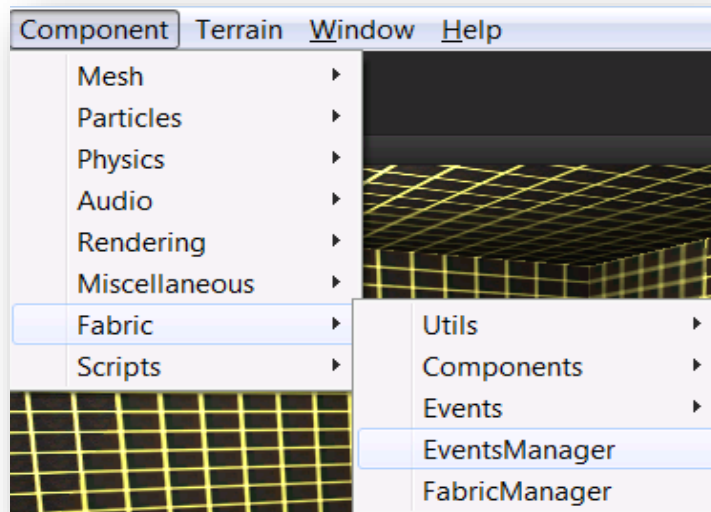
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## Introduction

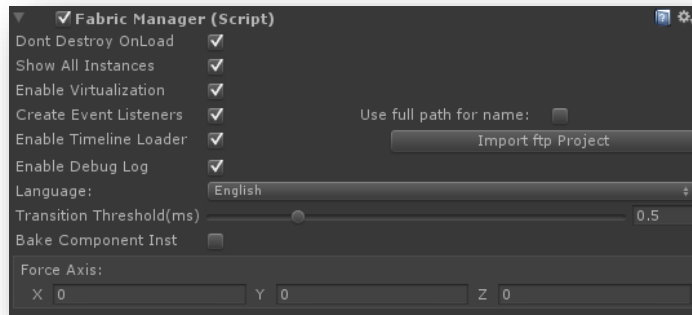
The Reference provides detailed information for all of the Fabric component properties.

## 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.
Force Axis (X,Y,Z)	Locks the position of an axis into the value set (0 will be ignored).

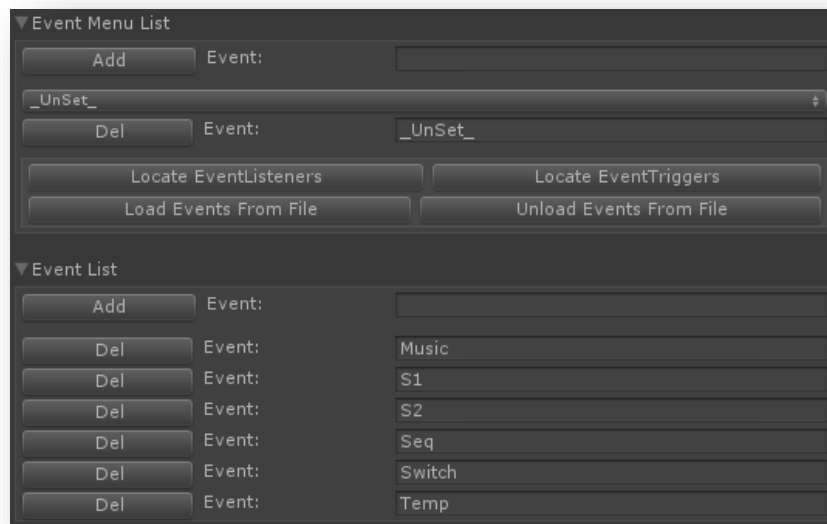
The screenshot shows a 'Music Time Settings' dialog box. It has a title bar 'Music Time Settings'. Below it, there are several fields: 'Name:' with an empty text box and an 'Add' button; 'Music Time Settings:' with a dropdown menu showing 'Master'; 'Name:' with a text box containing 'Master'; 'Tempo:' with a text box containing '140'; 'Sync Type:' with a dropdown menu showing 'On Beat'; and 'Time Signature:' with two spinners showing '4' and '4' separated by a slash. At the bottom, there is a 'Delete' button.

Music Time Settings	
Name	Name of the music
Tempo	The tempo of the music in BPM
Sync Type	Type of sync when transitioning: <ul style="list-style-type: none"> <li>- On Beat</li> <li>- On Bar</li> <li>- On Sync</li> </ul>
Time Signature	The time signature of the music

The screenshot shows an 'AudioSource Pool' dialog box. It has a title bar 'AudioSource Pool'. Below it, there are two labels: 'Size:' with a value of '0' and 'Usage:' with a value of '0'.

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

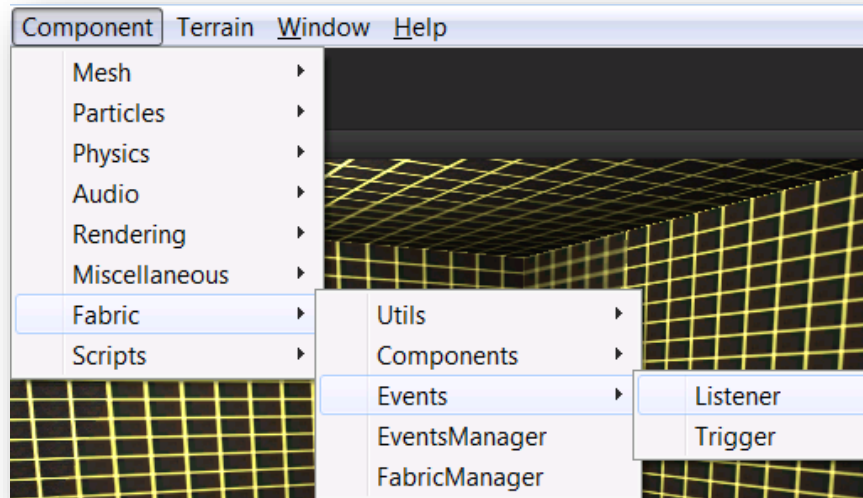


Properties	Description
Log History Size	The size of the event log history (default: 128)
Force Queue All Events	Force queuing all posted events
Num of Events in Queue	Shows the number of events in the queue list
Clear Event List	Clears the event list
Add Event	The event with the name entered is added 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
Load Events From File	Opens a dialog box to load a list of events from a text file
Unload Events From File	Opens a dialog box to unload existing events from a text file

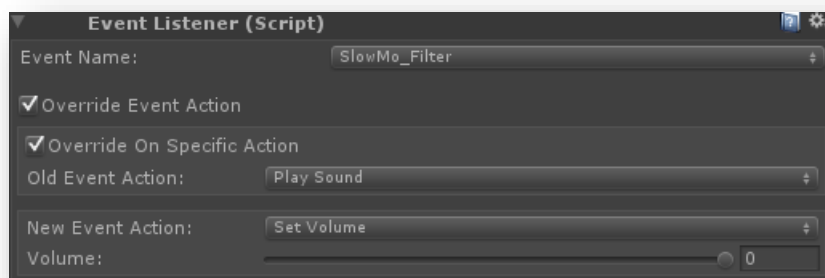


## Events

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



## Event Listener



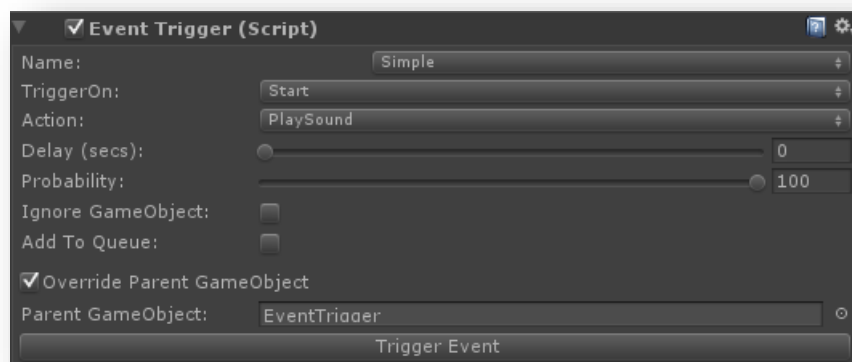
Properties	Description
Event Name	Name of the event to listen for.
Override Event Action	Enables/Disables event action override
Action To Override	Allow to override incoming event action

## 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"><li>- Start</li><li>- Destroy</li><li>- Update</li><li>- Enable</li><li>- Disable</li><li>- TriggerEnter</li><li>- TriggerExit</li><li>- CollisionEnter</li><li>- CollisionExit</li><li>- MouseUp</li><li>- MouseDown</li><li>- MouseOver</li><li>- MouseExit</li></ul>
Action	The action to be taken when the event is received: <ul style="list-style-type: none"><li>- PlaySound</li><li>- StopSound</li><li>- PauseSound</li></ul>

	<ul style="list-style-type: none"> <li>- UnpauseSound</li> <li>- SetVolume</li> <li>- SetPitch</li> <li>- SetSwitch</li> <li>- SetParameter</li> <li>- SetFadeIn</li> <li>- SetFadeOut</li> <li>- SetPan</li> <li>- AddPreset</li> <li>- RemovePreset</li> <li>- SetDSPPParameter</li> <li>- RegisterGameObject</li> <li>- ResetDynamicMixer</li> <li>- AdvanceSequence</li> <li>- ResetSequence</li> <li>- SwitchPreset</li> <li>- SetTime</li> <li>- SetModularSynthParameter</li> </ul>
	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 DSPParameter action is selected the following extra properties are added to the event trigger

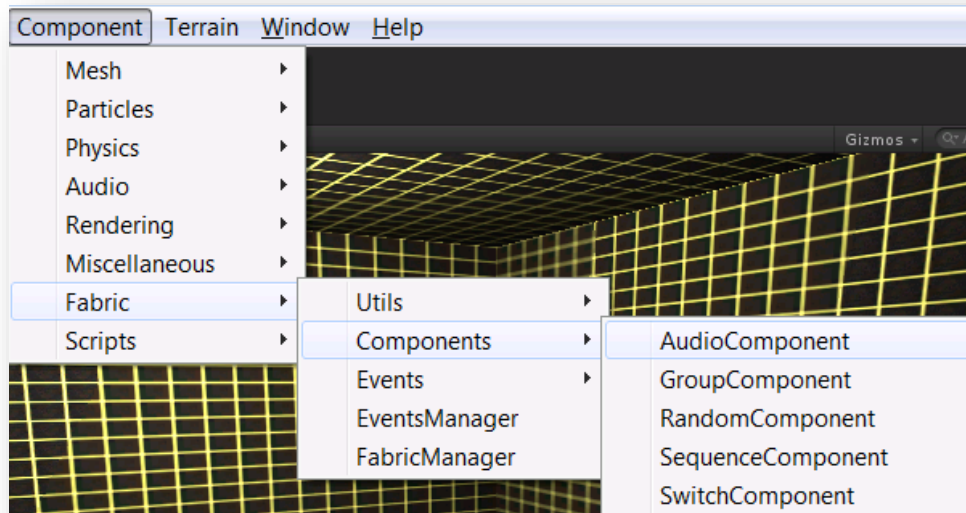
Properties	Description
Value	The value of the DSP effect set according to its range
Time	Time it will take for the DSP parameter to reach this value
Curve	The interpolation curve (0.5=Linear, Log < 0.5 > Exp)

The “Set DSPParameter” 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.

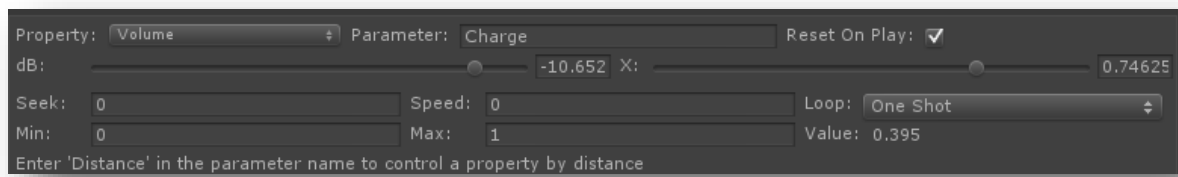


## Common properties



Properties	Description
Enable Virtualization	When enabled the component will keep track all events with an EventAction.Play and start/stop them according to their distance from the listener and the max distance property
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"> <li>- Oldest</li> <li>- Newest</li> <li>- Farthest</li> <li>- None</li> </ul>
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"> <li>- Logarithmic</li> <li>- Linear</li> <li>- Custom</li> </ul>
Bypass Effects	Bypasses effects on the audio source
Music Time Settings	Can be set to a global music timing or a custom one
Component is	Shows the status of the component <ul style="list-style-type: none"> <li>- Active</li> <li>- Inactive</li> </ul>

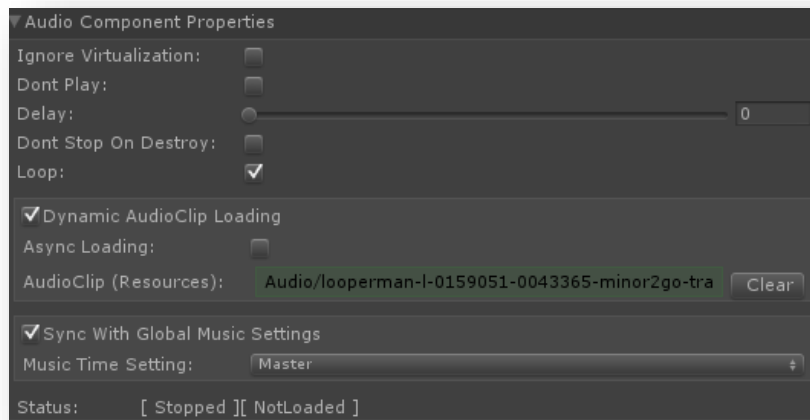
## Runtime Parameter (RTP)



Properties	Description
Property	Component property that parameter will control <ul style="list-style-type: none"> <li>- Volume</li> <li>- Pitch</li> <li>- Pan 2D</li> <li>- Pan Level</li> <li>- Spread Level</li> <li>- Doppler Level</li> <li>- Priority</li> </ul>
Parameter	The parameter name that will listen for a value from the game through the API or as an event listener component.
Reset On Play	Parameter will be reset back to its initial value every time is played
Y	Slider with float field displaying the Y value of the currently selected point
X	Slider with float field displaying the X value of the currently selected point
Loop	If the Speed properties is set then the parameter will loop according to the behaviour selected. <ul style="list-style-type: none"> <li>- One Shoot</li> <li>- Loop</li> <li>- Ping Pong</li> </ul>
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

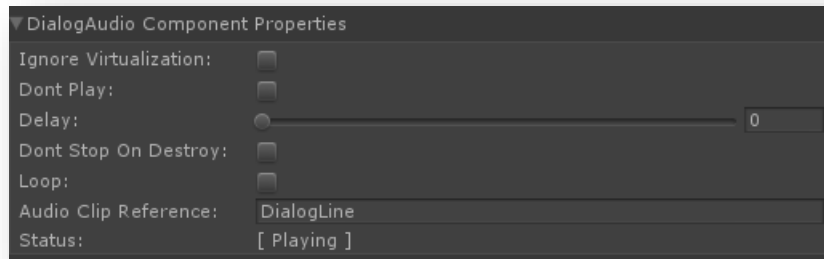


## Audio Component



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.
Dynamic AudioClip Loading	Audio clip is loaded into memory when its played for the first time. It will stay in memory until all instances have stopped playing.
Async Loading	<p>Loads the audio clip asynchronously without blocking the Unity thread.</p> <p>NOTE: This option uses the WWW class which <b>duplicates</b> the audio memory for each instance playing.</p>
Sync With Global Music	<p>Audio component will start playing in sync with the music time settings selected.</p> <p>Note: This option is not available if the component is already in a hierarchy with the music sync option enabled.</p>
Status	<p>Displays the current status of the audio component</p> <ul style="list-style-type: none"> <li>- WaitingToPlay</li> <li>- Playing</li> <li>- WaitingToStop</li> <li>- Stopped</li> <li>- Paused</li> <li>- Virtual</li> <li>- LostFocus</li> </ul>

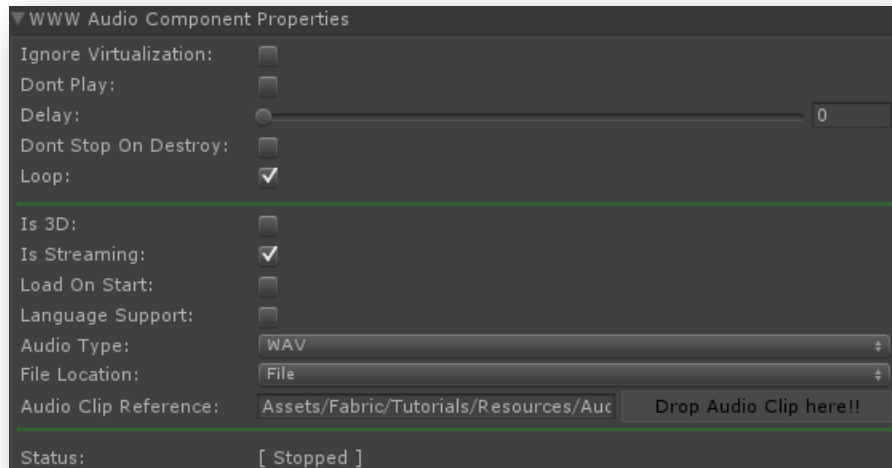
## Dialog Audio Component



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

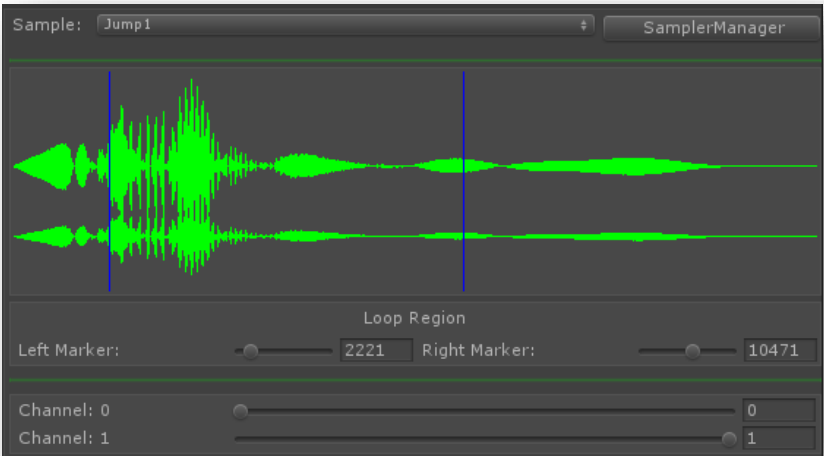
Note: Dialog Audio component provides the same properties as the standard Audio Component.

## Www Audio Component

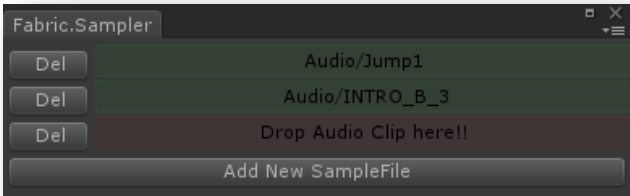


Properties	Description
Ignore Virtualization	Audio component won't be virtualized (stopped) according to distance from listener.
Don't Play	Audio component won't play.
Delay	How much to delay (is seconds) the component from playing
Don't Stop On Destroy	Keeps playing when it's parent game object is destroyed. 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"> <li>- WaitingToPlay</li> <li>- Playing</li> <li>- WaitingToStop</li> <li>- Stopped</li> <li>- Paused</li> <li>- Virtual</li> <li>- LostFocus</li> </ul>

Sample Player Component

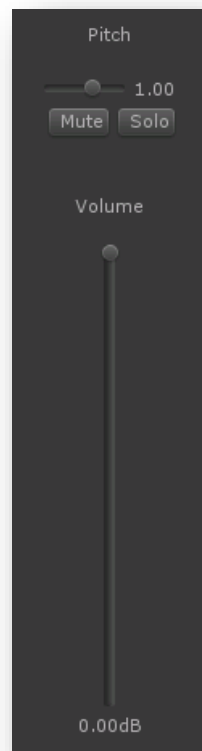


Properties	Description
Loop Region	Allows to set left and right markers to define a loop region. The region will be automatically set if the audio clip is a wavfile that contains markers in its meta data.
Channel (0...8)	Controls the gain (0-1) of a channel.  Note: Currently Unity supports up to 8 channels.



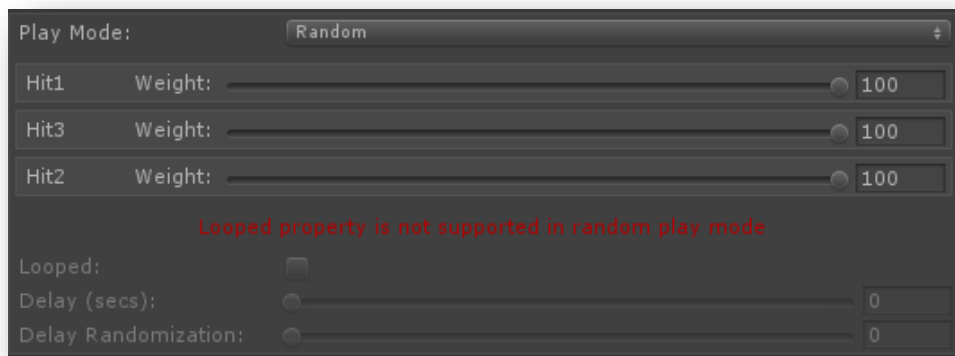
Properties	Description
Add New SampleFile	Creates a new empty slot that allows to drag and drop an audio clip
Del	Deletes the sample file slot

## Group Component

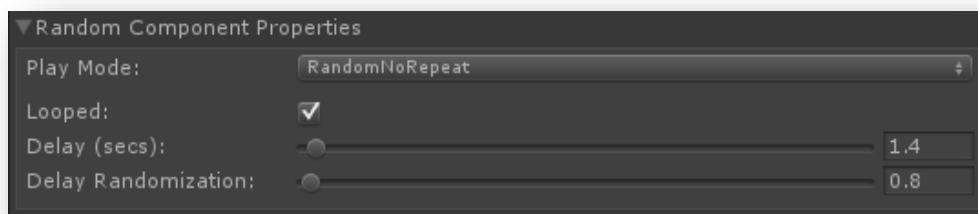


Properties	Description
Volume	Set volume for all children components.
Pitch	Set pitch for all children components.
Mute	Mutes all children components.
Solo	Mutes all other group components except this one.

## Random Component



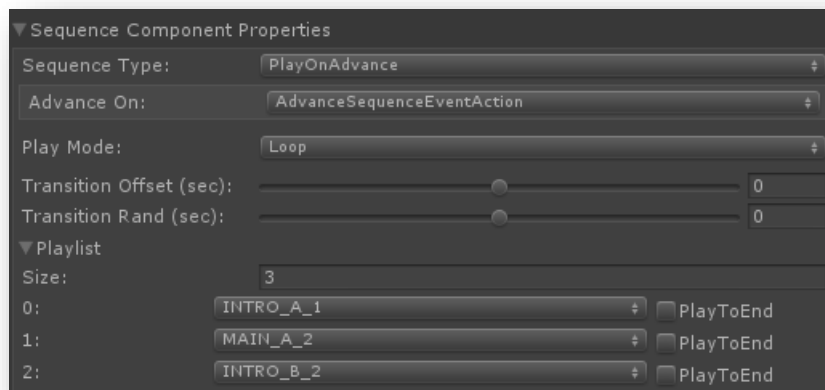
Random Mode



Random No Repeat Mode

Properties	Description
Play Mode	The type of playing mode: <ul style="list-style-type: none"> <li>- Random: Elements are picked in random.</li> <li>- RandomNoRepeat: Elements picked at random but are not repeated.</li> </ul>
Weight	In random mode allows to set the weight of an entry making it play more often.
Looped	In random no repeat mode you can set the component to continuously play with random elements
Delay	Introduce a delay in seconds every time a child element is played
Delay Randomization	Randomizes delay

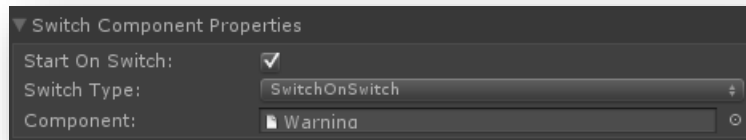
## Sequencer Component



Properties	Description
Sequence Type	The type of the sequence: <ul style="list-style-type: none"> <li>- PlayContinuous: Plays all elements in sequence.</li> <li>- PlayOnAdvance: Advances on the next element when is triggered again.</li> </ul>
Advance On	If PlayOnAdvance type is selected the following advance options become available: <ul style="list-style-type: none"> <li>- AdvanceSequenceEventAction: Will advance to the next entry when the EventAction.AdvanceSequence is received.</li> <li>- PlayEventAction: Will advance to the next entry when an EventAction.PlaySound is received.</li> <li>- Music Sync: It will advance when the EventAction.AdvanceSequence is received according to the music sync type set in the settings</li> </ul>
Play Mode	The playing mode determines if a sequence is repeated or not. <ul style="list-style-type: none"> <li>- Single: Plays sequence one and then stops.</li> <li>- Loop: Plays sequence continuously.</li> </ul>
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.

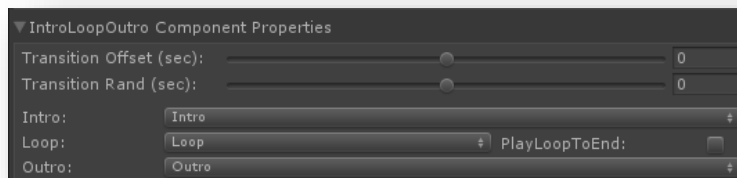
An arrow (←) indicates which component is currently playing.

## 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"> <li>- SwitchOnPlay</li> <li>- SwitchOnEnd</li> <li>- SwitchOnSwitch</li> <li>- SwitchOnMusicSync</li> </ul>
Component	Currently selected component. Use this to select the default component.

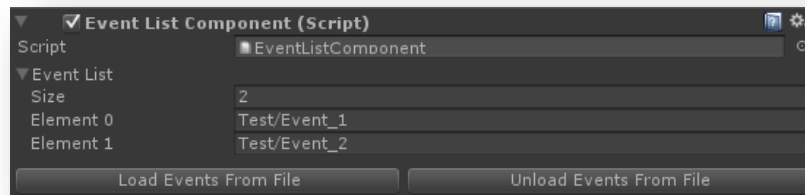
## IntroLoopOutro Component



Properties	Description
Transition Offset (sec)	Offset that allows overlapping by trigger the next entry in the sequence earlier (-) or later (+).
Transition Rand (sec)	Applies a random value within this range on top of the transition offset
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

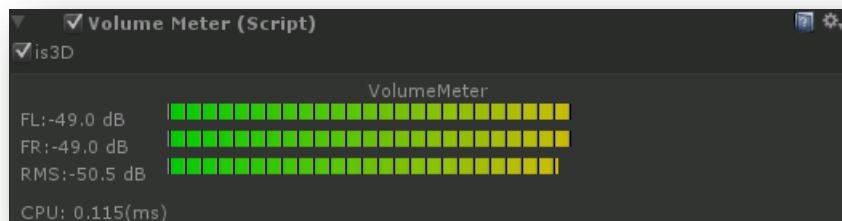


## Event List Component



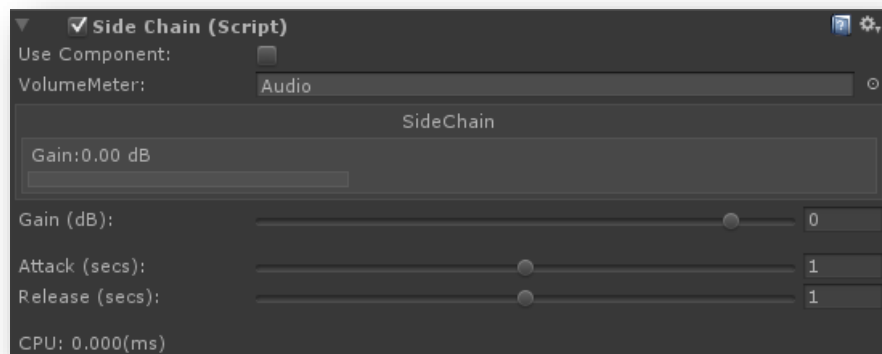
Properties	Description
Event List	List of events to load
Load Events From File	Populates the event list from a text file
Unload Events From File	Removes all events that are present in a text file from the event list

## 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



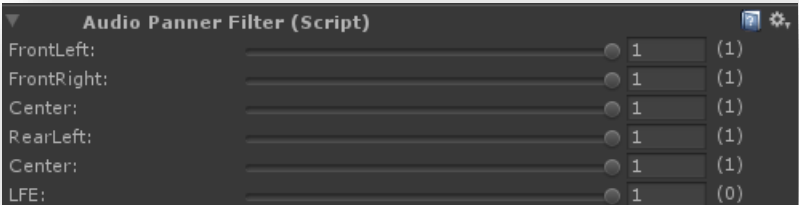
Properties	Description
Use Component	When set it allows to use a component to activate/deactivate the side chain according to its playing status. By default its off so a volume meter component is expected
Gain (dB)	Controls the input gain coming from the volume meter
Attack (secs)	Defines how fast the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

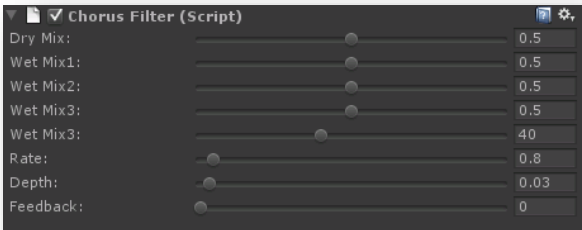


DSP Components

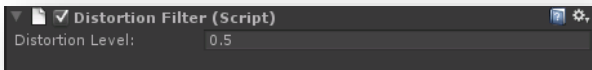
Audio Panner



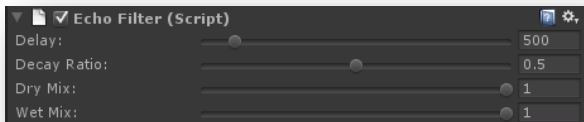
Chorus Filter



Distortion Filter

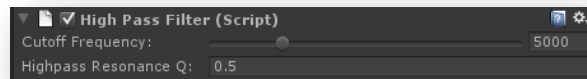


Echo Filter

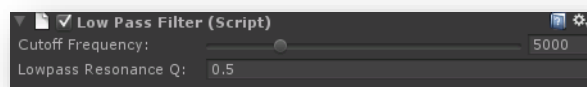


## Fabric Reference

### High Pass Filter

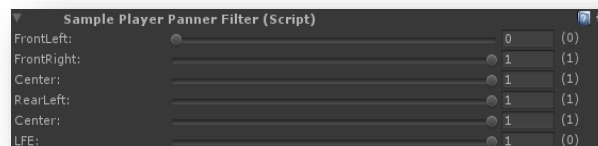


### Low Pass Filter



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

### Sample Player Panner Filter



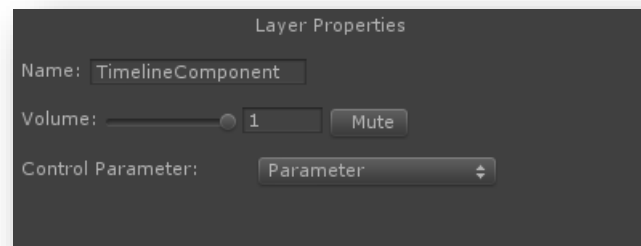
## Timeline Component

### Parameter properties



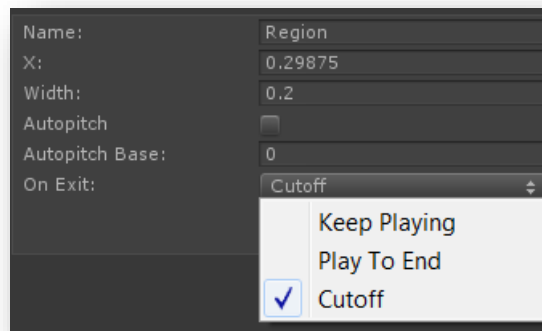
Properties	Description
Name	The name of the parameter
Loop	If the Speed properties is set then the parameter will loop according to the behaviour selected. <ul style="list-style-type: none"> <li>- One Shoot</li> <li>- Loop</li> <li>- Ping Pong</li> </ul>
Min	The min value of the parameter
Max	The maximum 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



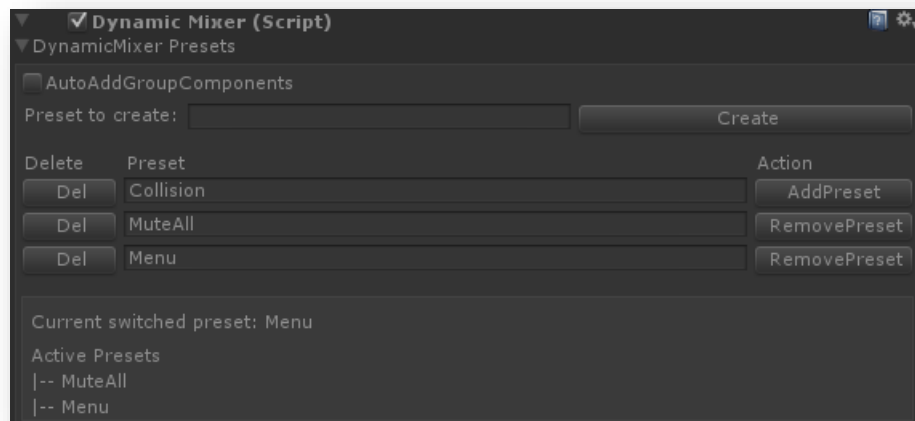
Properties	Description
Name	The name of the layer
Volume	Sets the layer volume
Mute	Mutes the layer
Control Parameter	The parameter that controls the layer

### Region properties



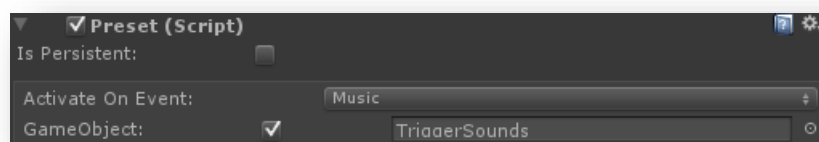
Properties	Description
Name	The name of the region
X	The start position of the region in the timeline
Width	The length of the region in the timeline
Autopitch	The region pitch is linearly scaled up or down relative to the centre of the region
Autopitch Base	Used for fine tuning the auto pitch value
On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

## 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

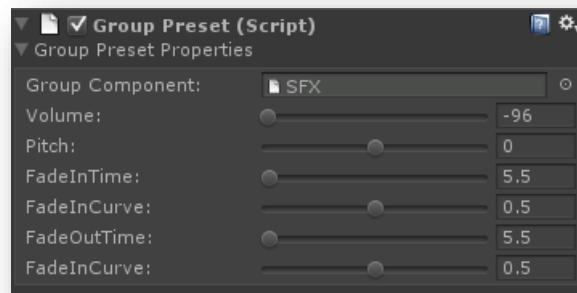
## Preset properties



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



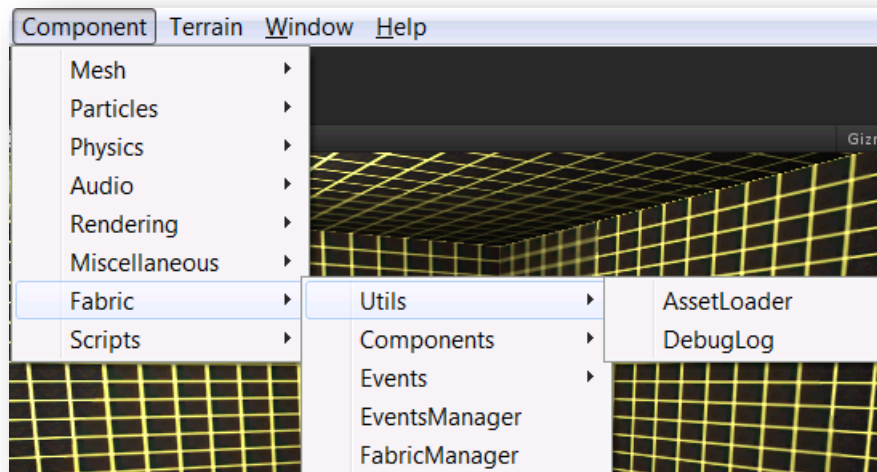
## GroupPreset



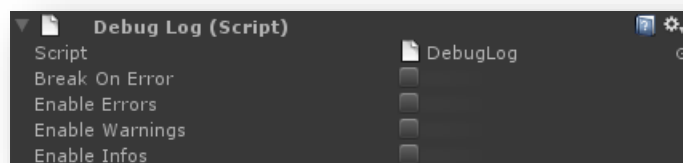
Properties	Description
Group Component	The group component to be modified
Volume	Volume to set in dB
Pitch	Pitch to set
FadeInTime	The time it will take to reach the volume/pitch values, in seconds
FadeInCurve	The type of transition curve (0.5 = linear, log < 0.5 > exp
FadeInTime	The time it will take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

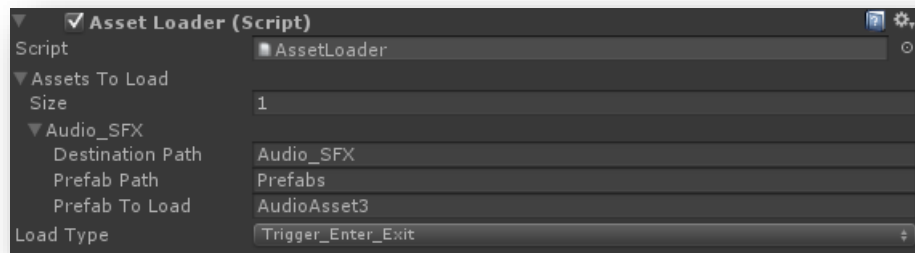


## DebugLog



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.

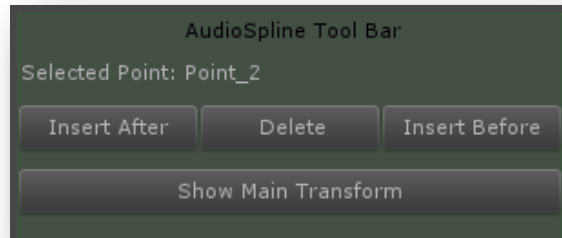
## Asset Loader



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

