

AUDIO MANAGER GUIDE

The Audio Manager is a simple tool designed to make playing audios as simple and set-up free as possible.

It works through an automatic singleton framework that creates an Audio Manager Instance the first time any audio is played. This instance creates and parametrizes Audio Sources to play the requested sounds, adding them to a pool for reuse.

Audio Manager

A class from which cues are played through the following static methods:

PlayCue (AudioCue cue)

Plays the cue from the first available Audio Source at world origin (0,0,0), which is mainly meant for 2D sounds and music.

PlayCue (AudioCue cue, Vector3 position)

Plays the cue from the first available Audio Source that gets relocated to the specified world coordinates, which is mainly meant for stationary 3D sounds.

PlayCue (AudioCue cue, Transform attachTo)

Plays the cue from the first available Audio Source that gets attached to the specified transform of the duration of the sound, which is mainly meant for moving 3D sounds.

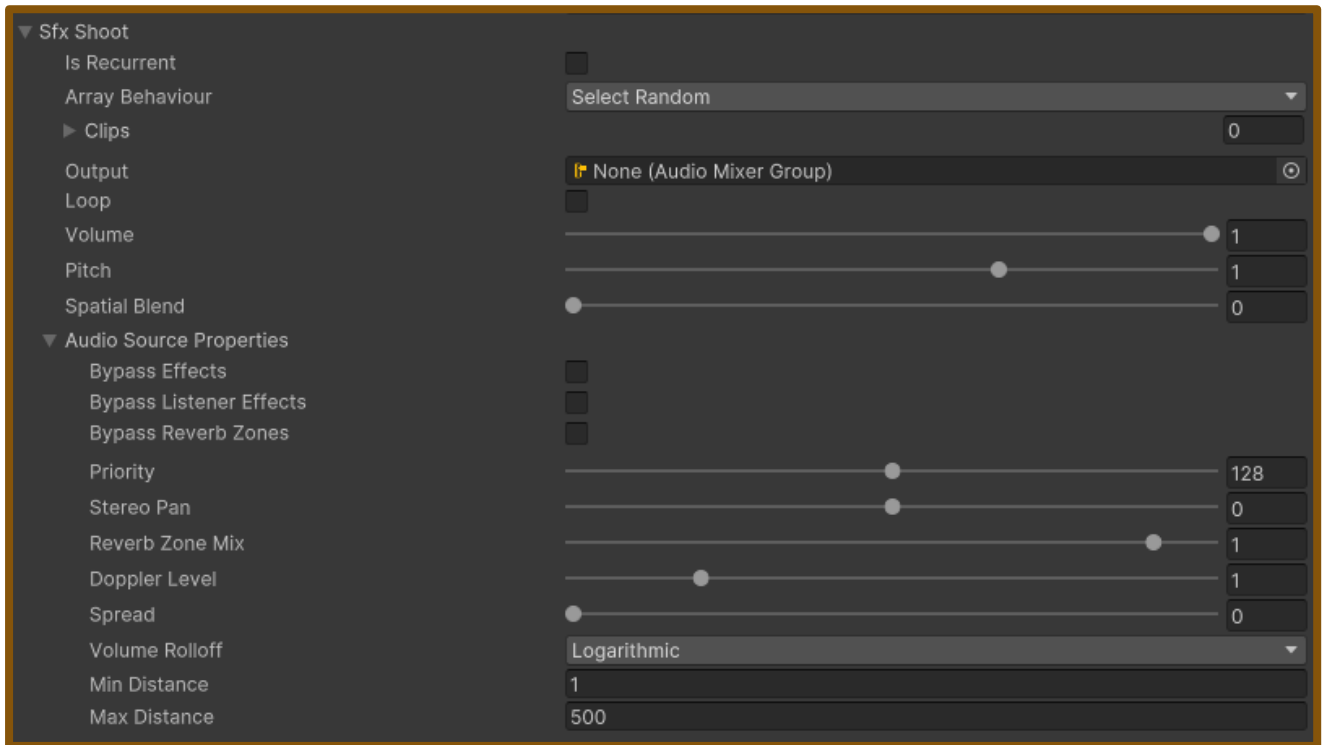
StopLoopingCue (AudioCue cue)

If the given cue is playing on a loop, this method stops it. If the cue is non-recurrent, it also frees up its assigned Audio Source to be usable by the Audio manager once again.

All the PlayCue() methods can be accompanied by optional Pitch and Volume multipliers to change said properties on individual playbacks.

Audio Cue

To play sounds, you need to define an **Audio Cue** variable. This class encapsulates most functionality from Unity's Audio Source component, plus some extra behaviour.



Variables

<p>Is Recurrent</p>	<p>Recurrent Audio Cues get permanently assigned their own Audio Source. This avoids having to constantly set-up existing audio sources with sounds that are played regularly, but prevents the Audio Manager from recycling that source for other audio cues.</p>
<p>Array Behaviour</p>	<p>If there are multiple audio clips assigned to this audio cue, defines how the Audio Manager uses them.</p>
<p>Select Random</p>	<p>Uniformly selects a random clip from the array and plays it. This selection can choose empty clips, in which case no audio will play.</p>
<p>Play In Order</p>	<p>Plays all the clips in the array one after the other.</p>

Clips	An array containing the clips assigned to this Audio Cue, in case multiple sounds should be associated with the same “effect”.
Output	By default, the output directly to the Audio Listener in the Scene. Use this property to output the clip to an Audio Mixer instead.
Loop	Will loop whatever clip was chosen to play. The assigned Audio Source will not be reusable by the Audio Manager unless called to stop.
Volume	How loud the sound is at one meter from the Audio Listener.
Pitch	Amount of change in pitch due to slowdown/speed up of the Audio Clip. A value of 1 is normal playback speed.
Spatial Blend	Sets how much the 3D engine influences the audio source. A value of 0 means completely 2D while 1 is fully 3D.
Audio Source Properties	The rest of the Audio Source relevant properties.
Bypass Effects	This is to quickly “by-pass” filter effects applied to the audio source. An easy way to turn all effects on/off.
Bypass Listener Effects	This is to quickly turn all Listener effects on/off.
Bypass Reverb Zones	This is to quickly turn all Reverb Zones on/off.
Priority	Determines the priority of this audio source among all the ones that coexist in the scene. (Priority 0 = most important; 256 = least important; Default = 128).
Stereo Pan	Sets the position in the stereo field of 2D sounds. A value of -1 means completely to the left, 0 is dead-center, and 1 means all the way to the right.

Reverb Zone Mix	Sets the amount of the output signal that gets routed to the reverb zones. The amount is linear in the (0 - 1) range but allows for a 10 dB amplification in the (1 - 1.1) range which can be useful to achieve the effect of near-field and distant sounds.	
Doppler Level	Determines how much doppler effect will be applied to this audio source (if is set to 0, then no effect is applied).	
Spread	Sets the spread angle to 3D stereo or multichannel sound in speaker space.	
Volume Rolloff	How fast the sound fades.	
	Logarithmic Rolloff	The sound is loud when you are close to the audio source, but when you get away from the object it decreases significantly fast.
	Linear Rolloff	The further away from the audio source you go, the less you can hear it.
Min Distance	When the distance to the Audio Listener is at or below this value, the sound plays at full volume.	
Max Distance	The distance where the sound stops attenuating at.	