



ZONE KIT – AUDIO MODDING QUICK START GUIDE

OVERVIEW

Zone Kit provides its users with full access to audio modding using the powerful Audiokinetic's Wwise audio middleware. S.T.A.L.K.E.R. 2 Wwise project, as well as original content (SFX, voiceover, and music), is open for modders to explore, extend, and rearrange to their liking.

This short guide will lead you through the process of creating a simple audio modification while utilizing the Wwise Authoring application, as well as parts of Wwise/Unreal integration.

Let's get things going

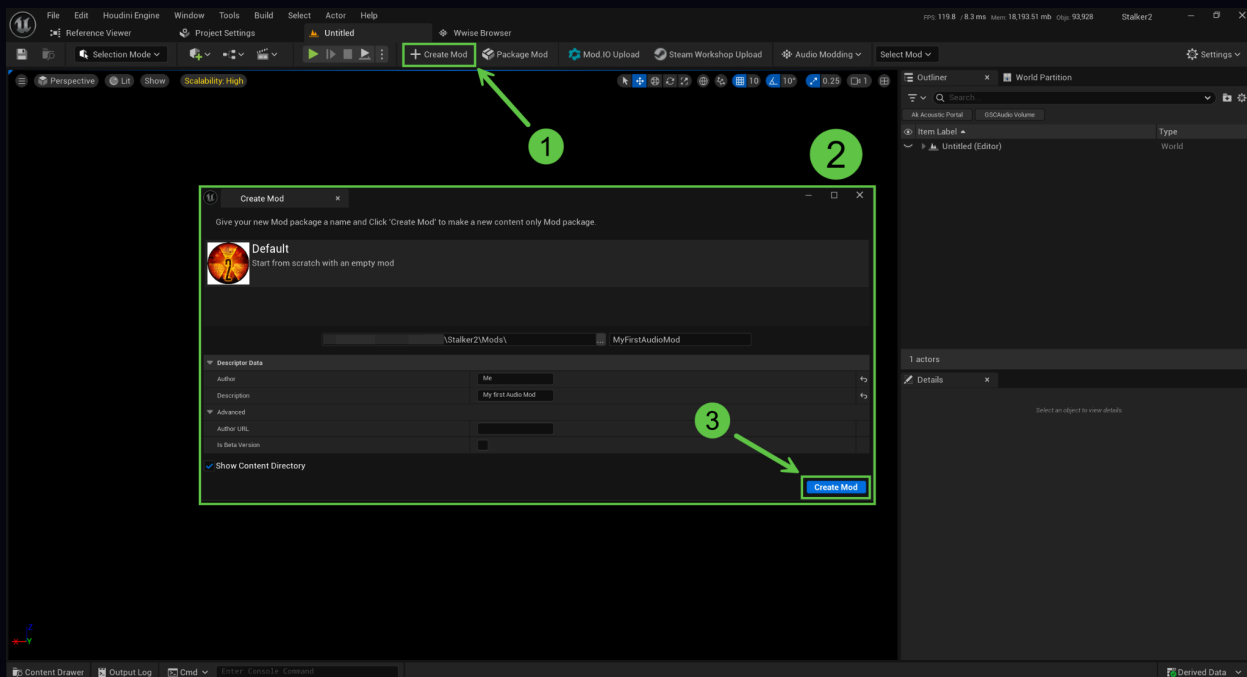
Preconditions:

- Downloaded Zone Kit and the Originals pack
- Installed Wwise 2024.110.8979

Step 1 – Creating a new mod

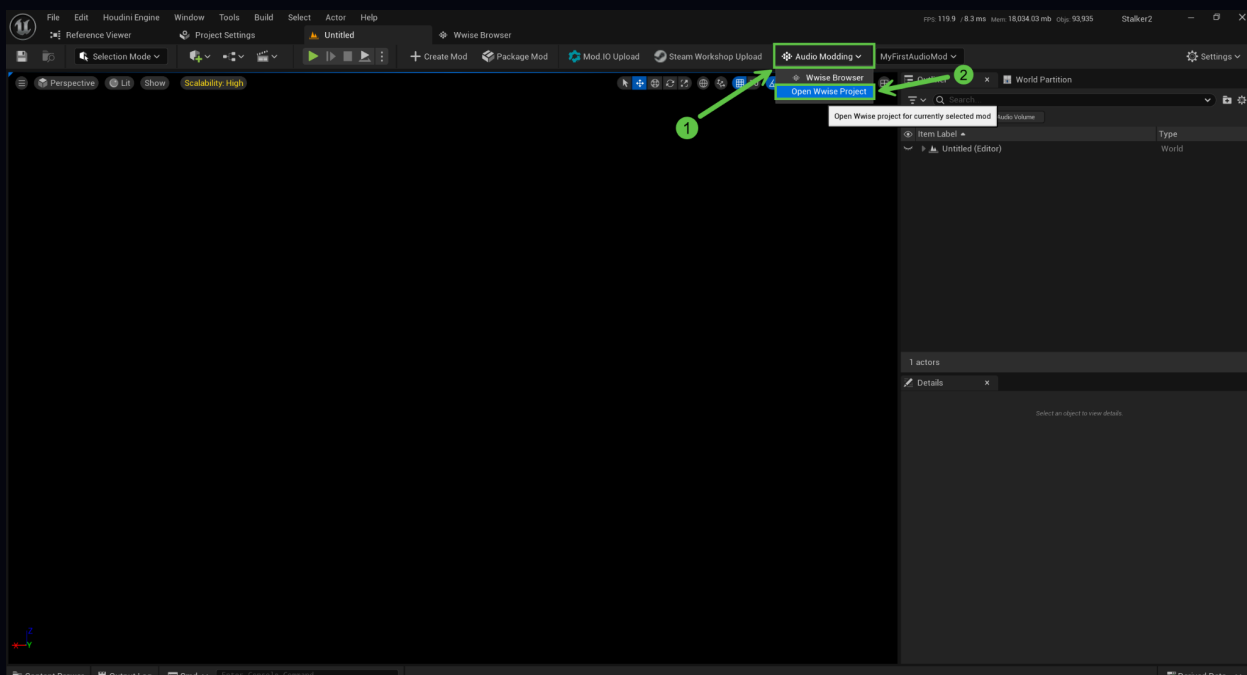
1. Boot Zone Kit.

2. Select the **Create Mod** button.
3. Fill in the **Mod Name** and **Description** fields.
4. Select the **Create Mod** button.

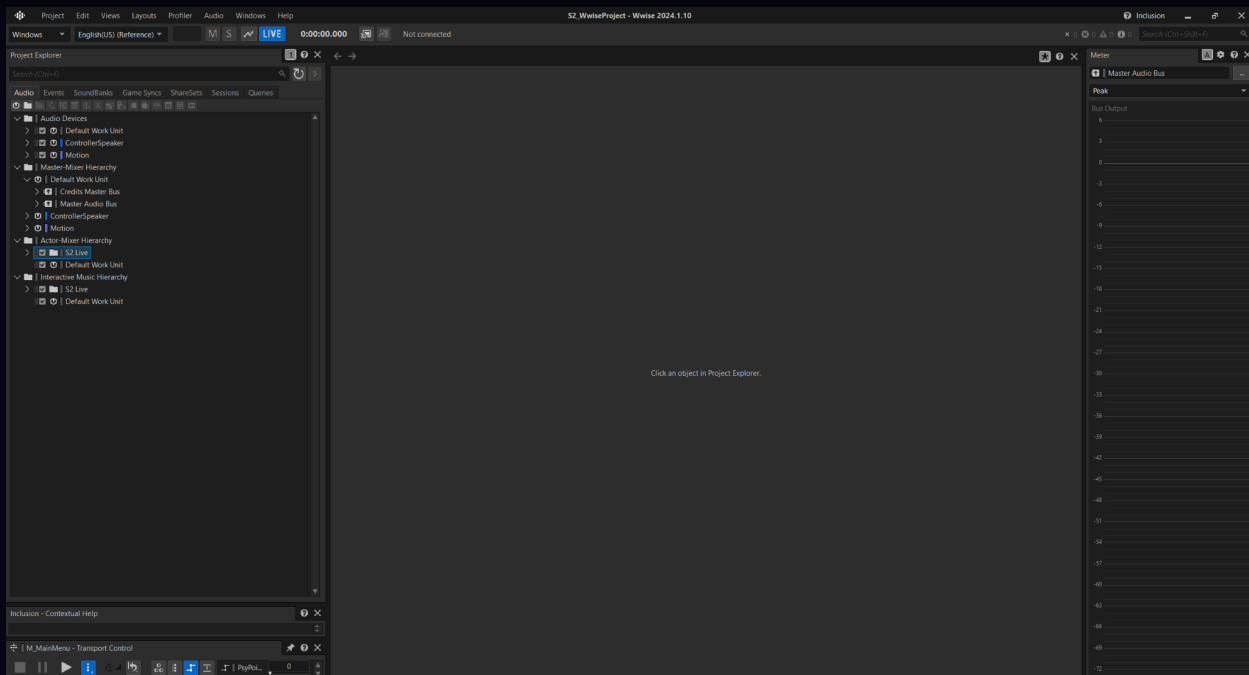


Step 2 – Opening the Wwise project

1. Make sure you have created a new mod, or select an already created one.
2. Select the **Audio Modding** button.
3. Select the **Open Wwise Project** button.



This operation will open the *Wwise Authoring application with S2_WwiseProject* specific to your currently selected mod.

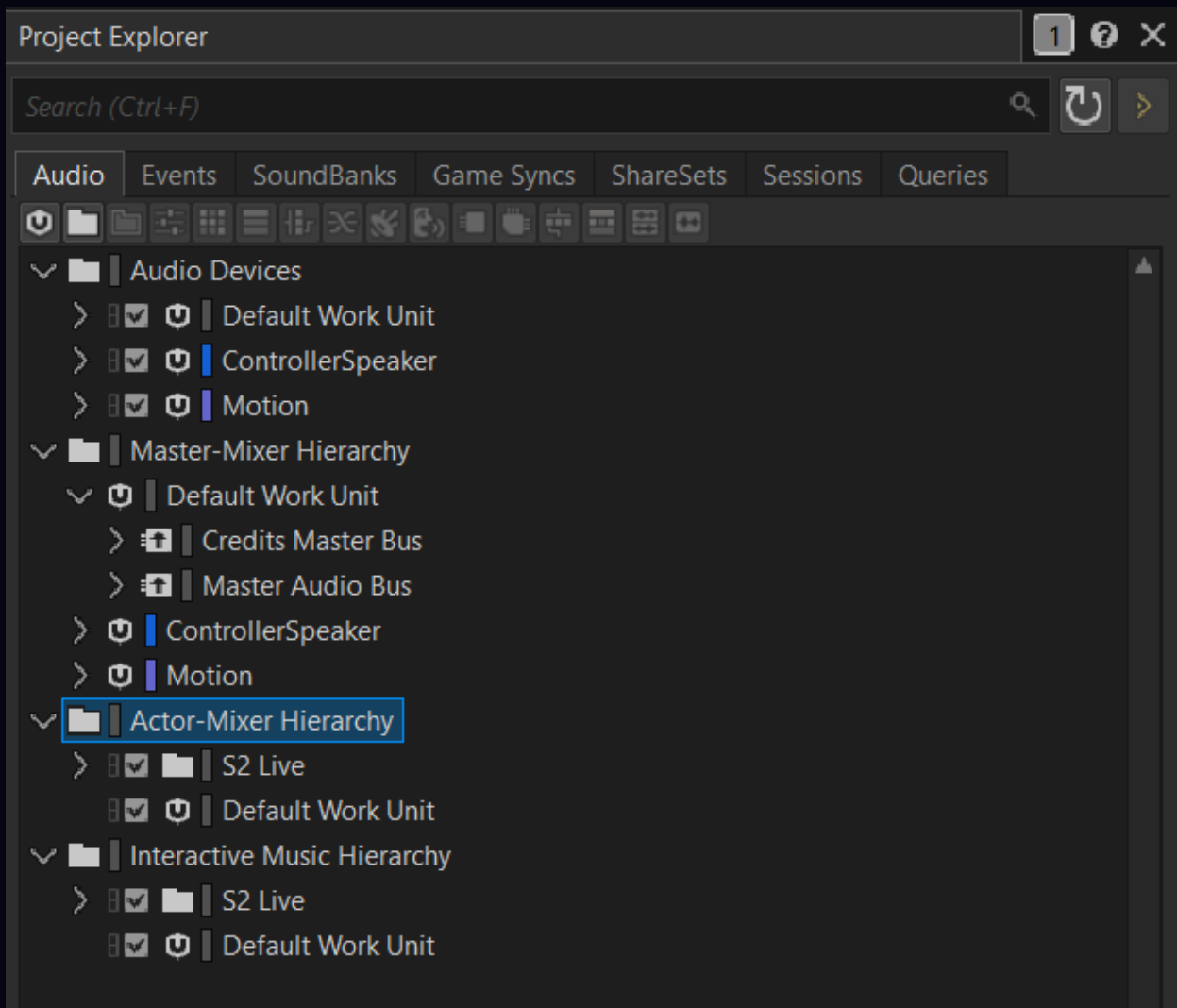


Step 3 – Exploring the Wwise project

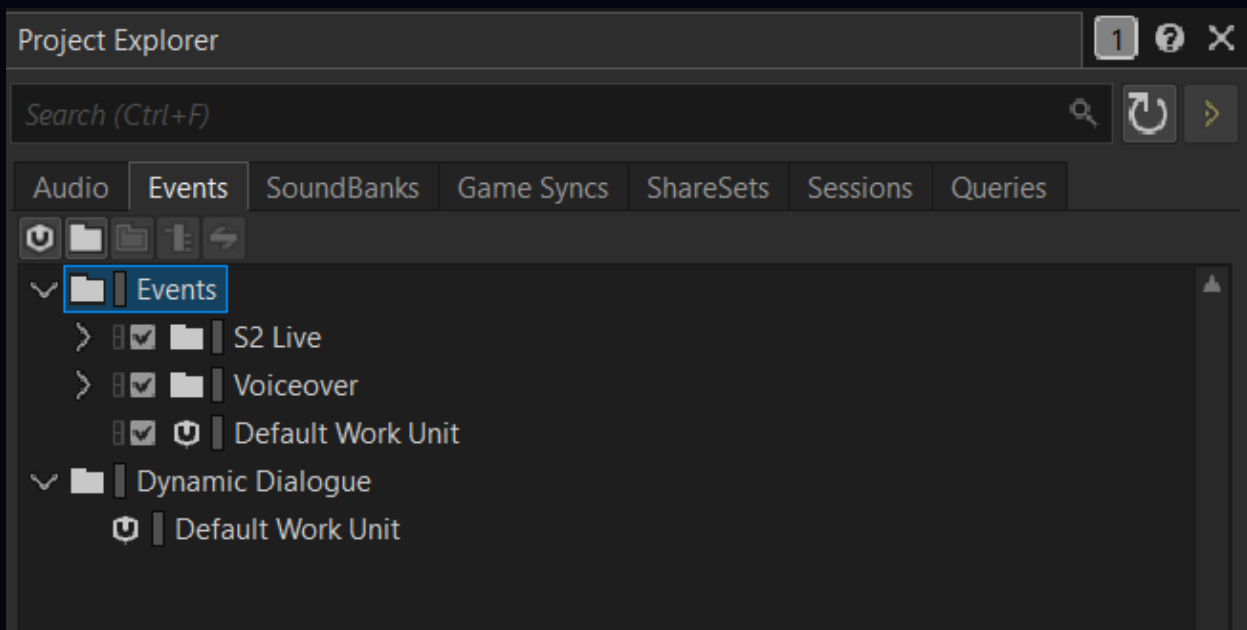
From now on, you can use the [Project Explorer](#) window to explore different hierarchies of Wwise objects.

A detailed introduction to [the project hierarchy](#) is available on Audiokinetic's documentation portal in the [Introduction to Wwise](#) section.

For this guide, you will mainly focus on [Actor-Mixer Hierarchy](#) in the **Audio** tab.



Also, you will focus on the [Events](#) hierarchy in the **Events** tab.

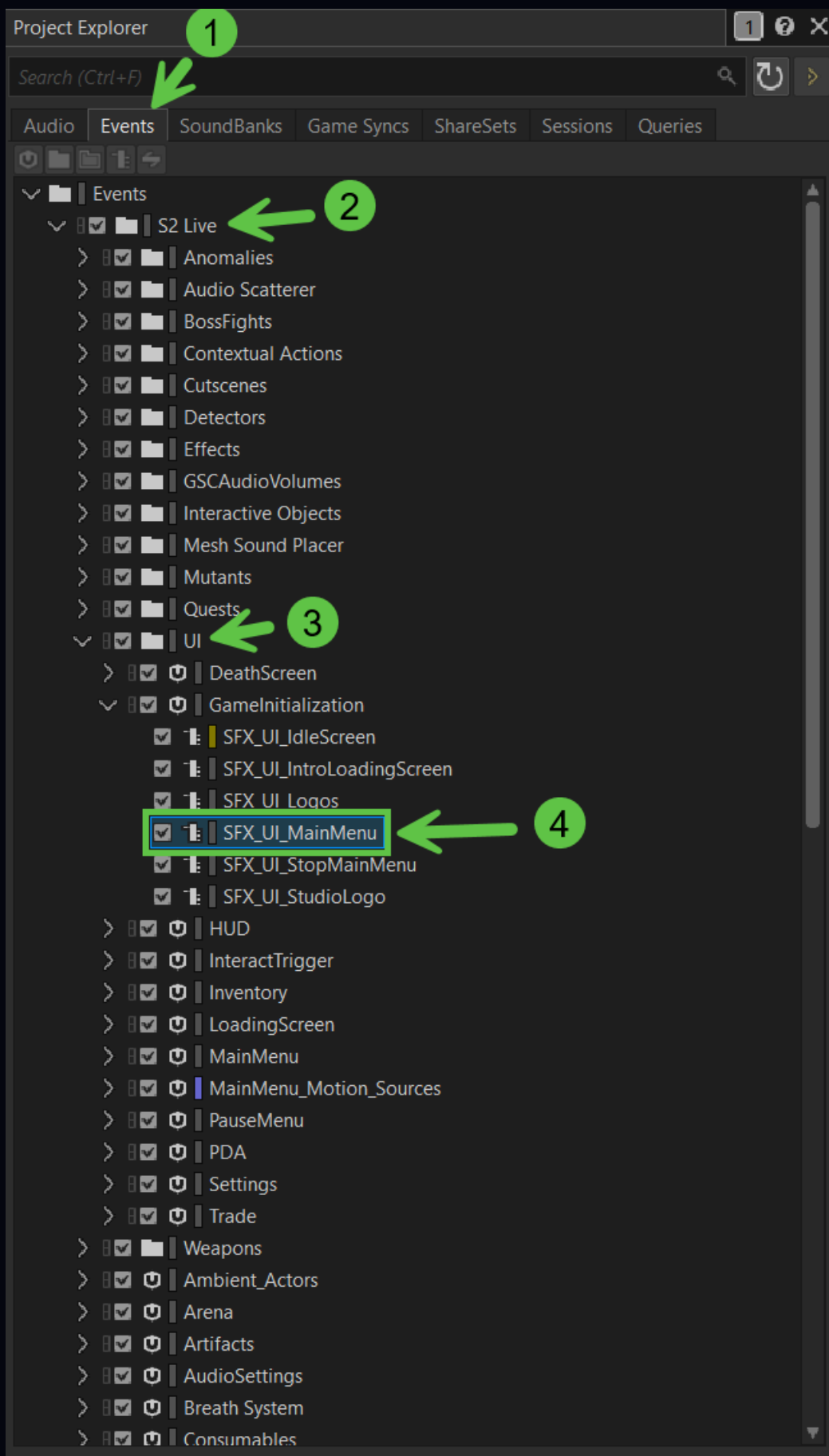


Searching for objects

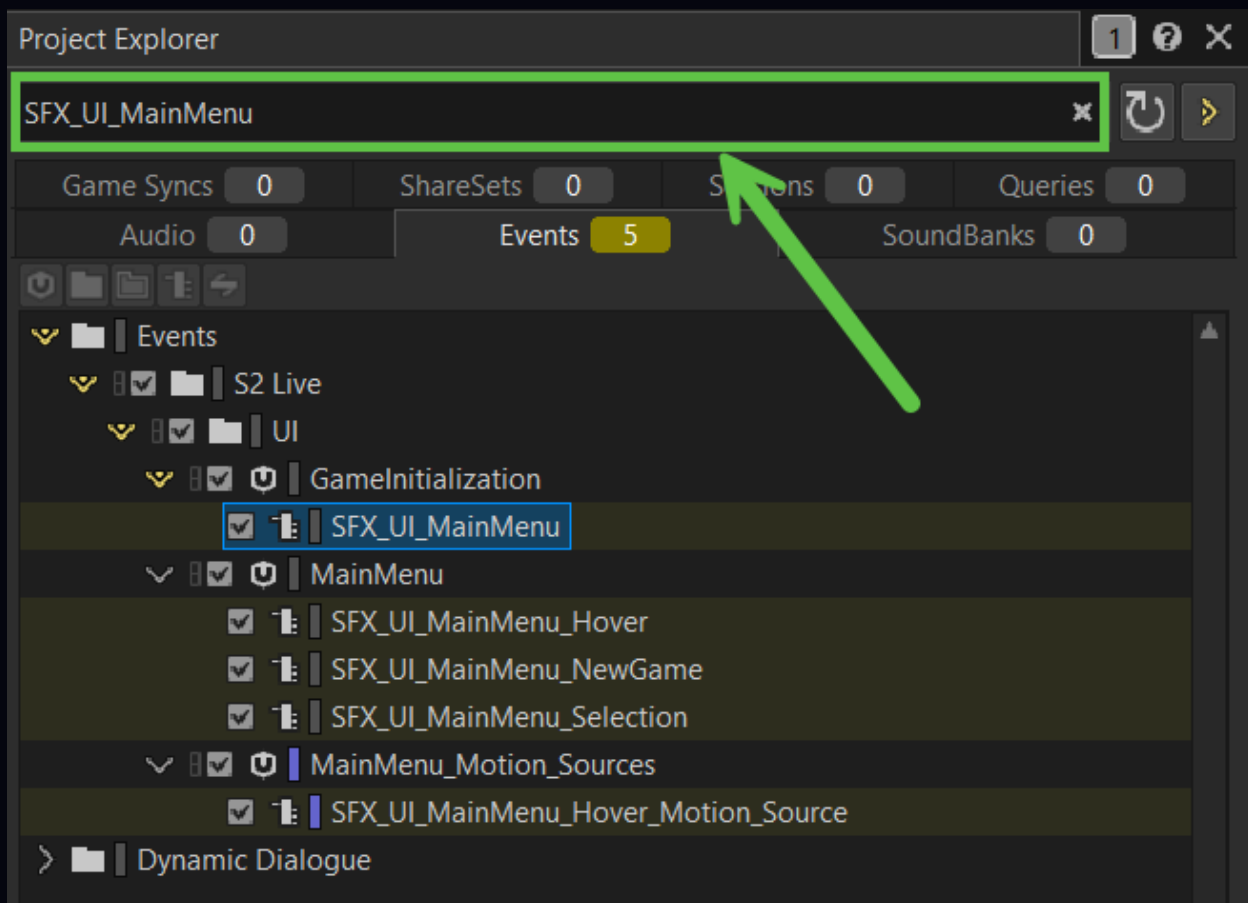
Now, you have a simple task to complete – find the [Event](#) responsible for the main menu music playback and view how it does that, and view where this music is located inside the hierarchy.

To complete this, go through the following steps:

1. Enter the **Events** tab.
2. Go through the hierarchy in **S2 Live** and **UI** physical folders, opening the **Game Initialization** work unit. Then, finally, you can see the desired **Event** – **SFX_UI_MainMenu**.



Alternatively, use the Search bar if you are looking for something specific.



Also, use Search to find something general, for example, UI.

UI

X



Game Syncs 1

ShareSets 0

Sessions 0

Queries 0

Audio 149

Events 46

SoundBanks 0



Events

S2 Live

UI

GameInitialization

- ☒ SFX_UI_IdleScreen
- ☒ SFX_UI_IntroLoadingScreen
- ☒ SFX_UI_Logos
- ☒ SFX_UI_MainMenu
- ☒ SFX_UI_StopMainMenu
- ☒ SFX_UI_StudioLogo

InteractTrigger

> Weapon_Unload

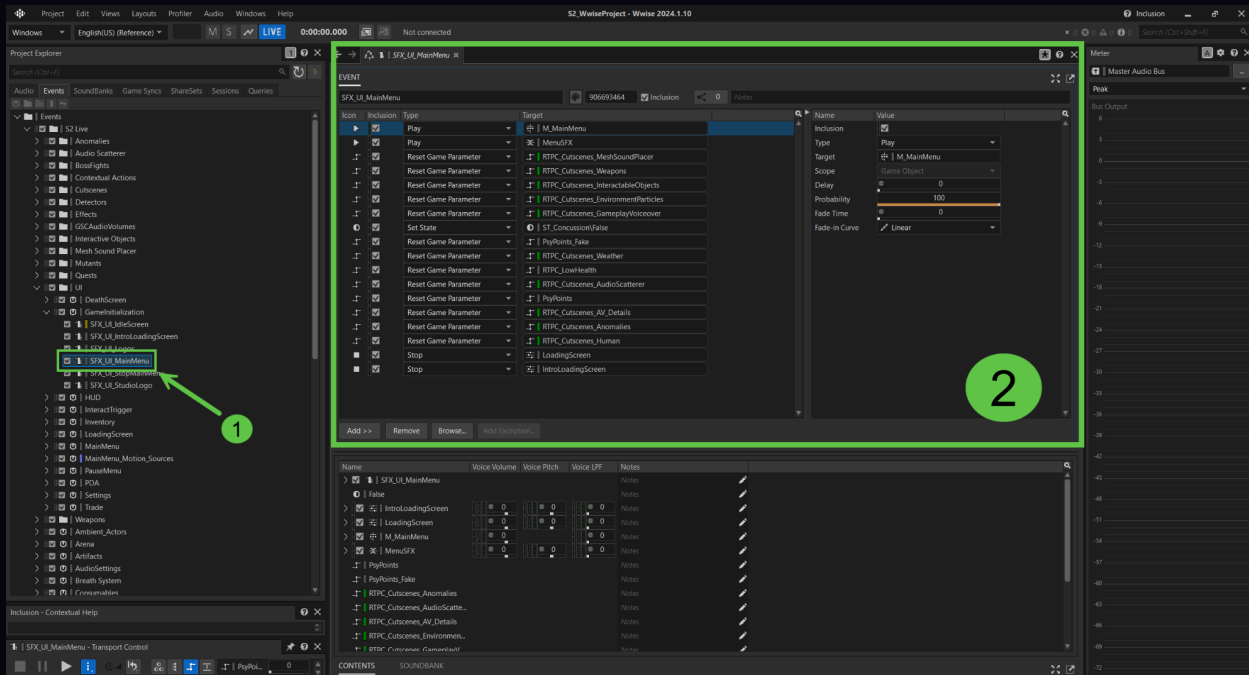
- ☒ SFX_UI_InteractTrigger_SearchDeadBodyMutant
- ☒ SFX_UI_InteractTrigger_InteractiveObjectOpensWithKey
- ☒ SFX_UI_InteractTrigger_InteractiveObjectLocked
- ☒ SFX_UI_InteractTrigger_InteractiveObjectLockedbyCard
- ☒ SFX_UI_InteractTrigger_SearchDeadBodyNpc

MainMenu

- ☒ SFX_UI_MainMenu_Hover
- ☒ SFX_UI_MainMenu_NewGame
- ☒ SFX_UI_MainMenu_Selection

Browsing Events

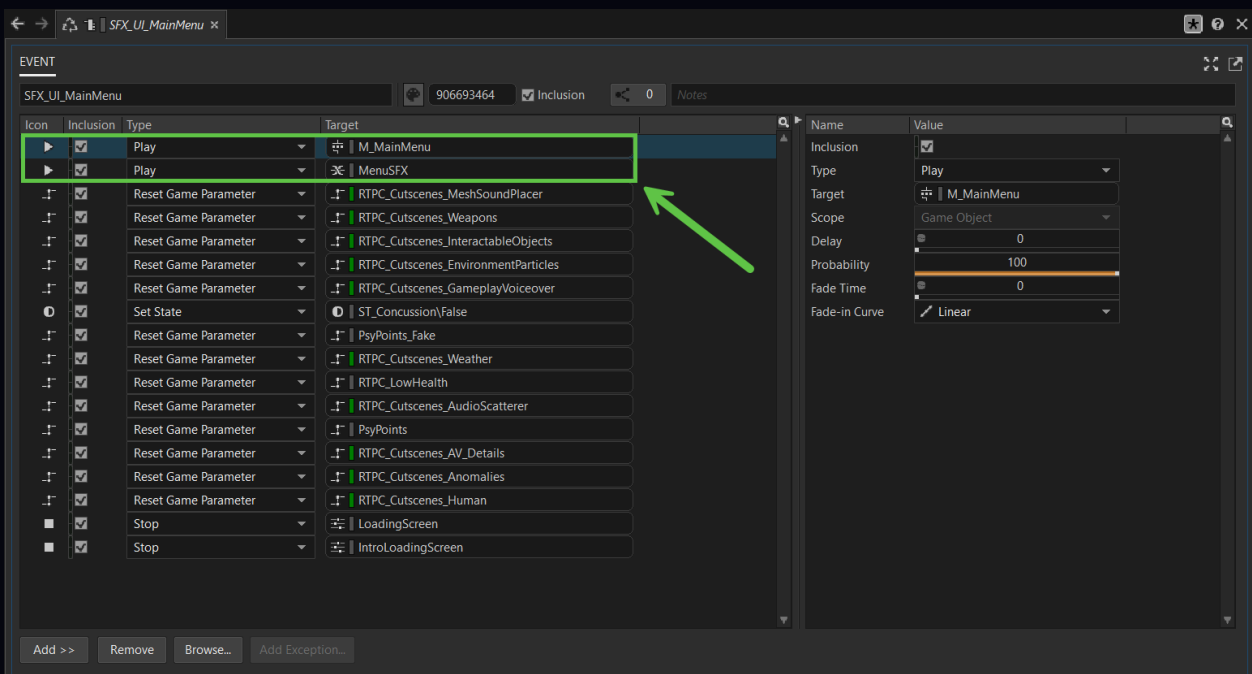
Now, as you found the SFX_UI_MainMenu [Event](#), let's see what it does. To do so, simply select it – the [Event](#) will open in the [Contents Editor](#) view.



You can see lots of [Event Actions](#) for which this [Event](#) is responsible. Most of them are related to setting [Game Parameters](#) or stopping some other SFX, but you are interested in the first two:

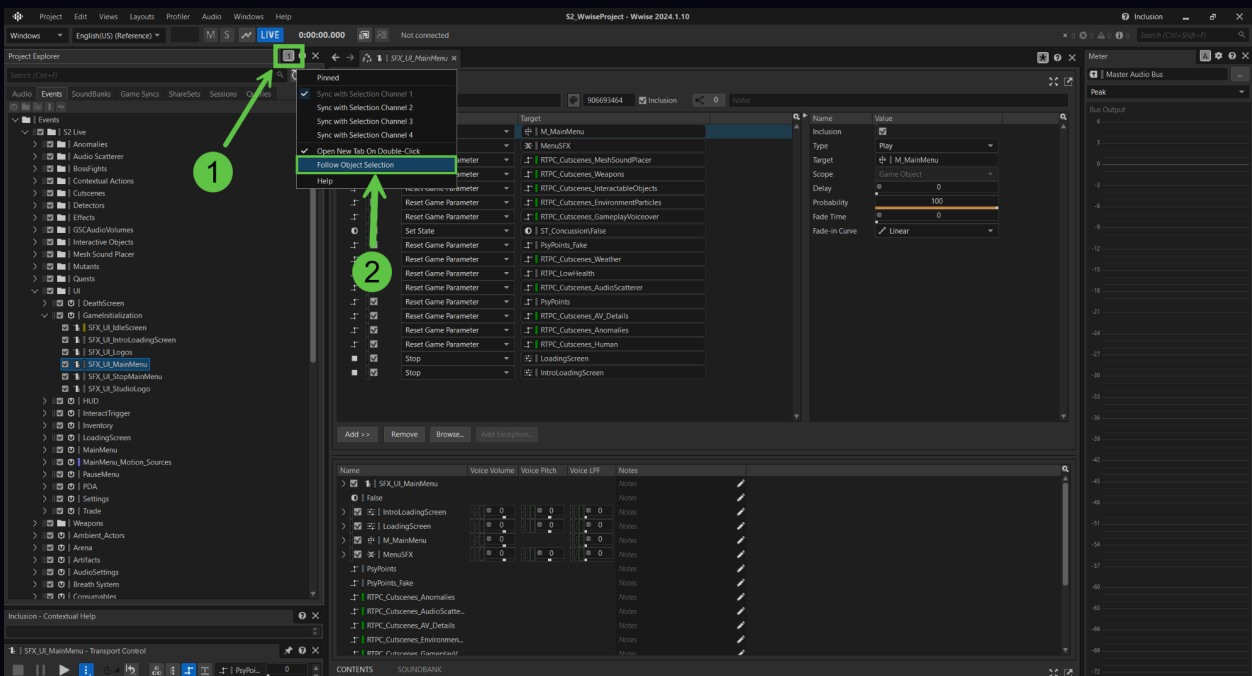
1. Play M_MainMenu [Music Switch Container](#)
2. Play MenuSFX [Blend Container](#)

These [Event Actions](#) are responsible for playing the main menu music, as well as background SFX, right after this [Event](#) is triggered by the game.

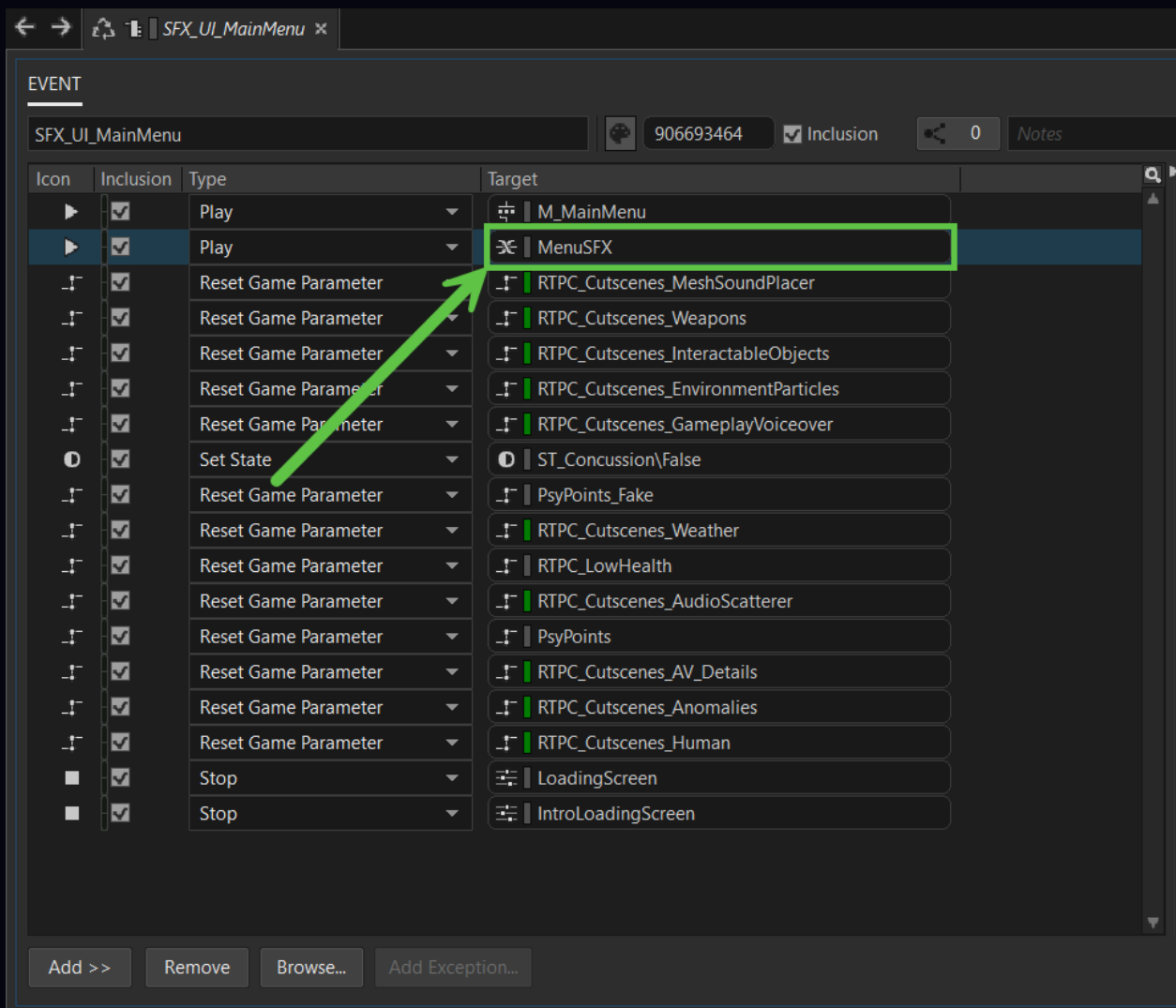


Browsing containers

Now let's find these containers in [Actor-Mixer Hierarchy](#). To do this right in the [Contents Editor](#) view of such an [Event](#), configure the [Project Explorer](#) window to Follow the Object Selection.

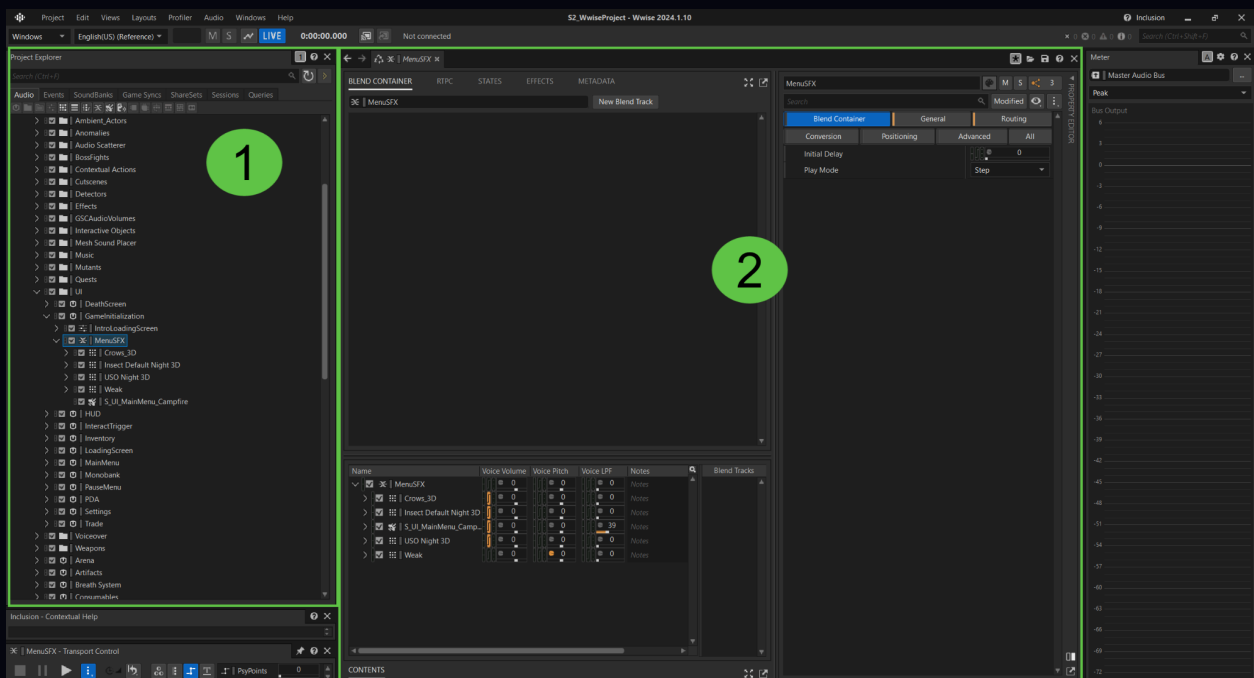


Then, double-click Target of the [Action](#). For example, select MenuSFX [Blend Container](#).



Now, you can see this [Blend Container](#) here:

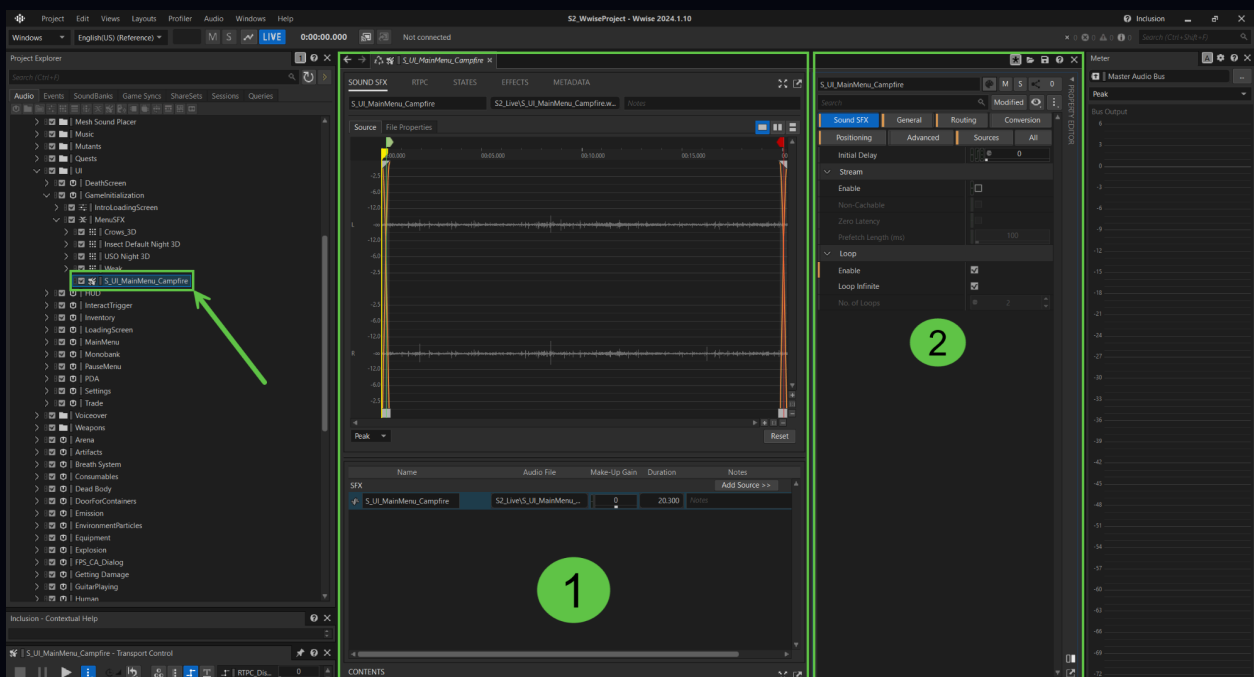
1. [Project Explorer, Actor-Mixer Hierarchy](#)
2. [Contents Editor](#)



You can notice that this Blend Container is grouping some other types of containers for simultaneous playback, such as Random Containers, as well as a simple Sound SFX object.

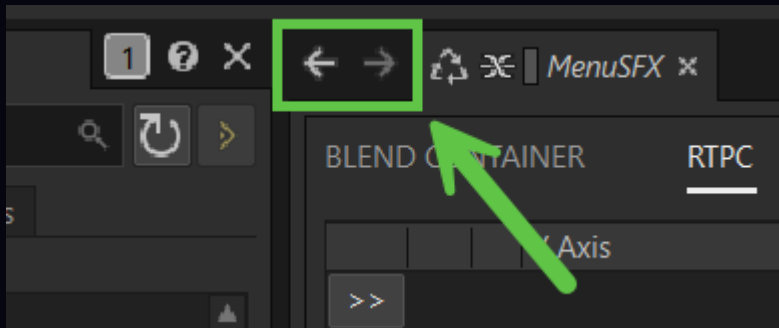
Now you can select *S_UI_MainMenu_Campfire* to observe its Contents and properties here:

1. Contents Editor
2. Property Editor

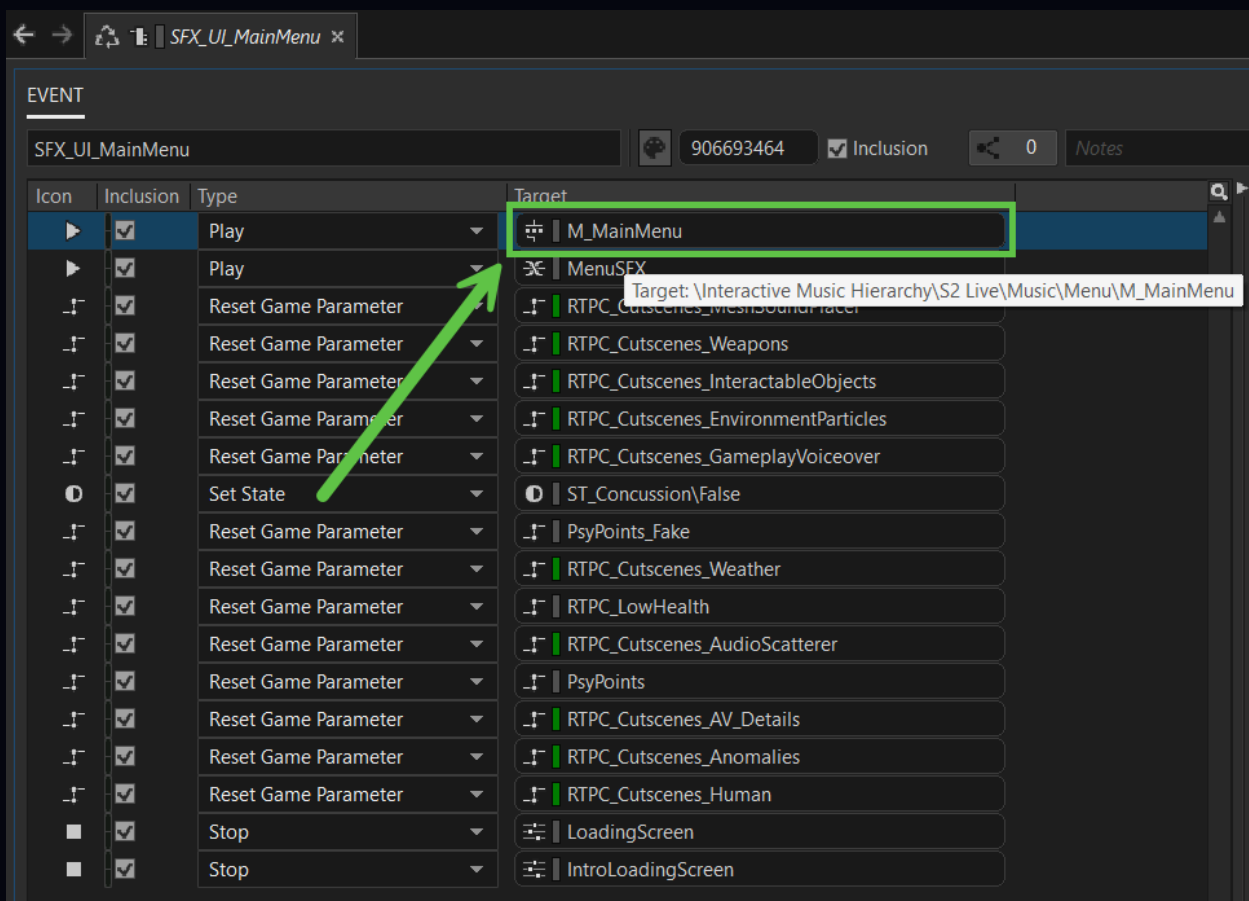


Let's get back to the SFX_UI_MainMenu [Event](#) to inspect the remaining type of container that it plays.

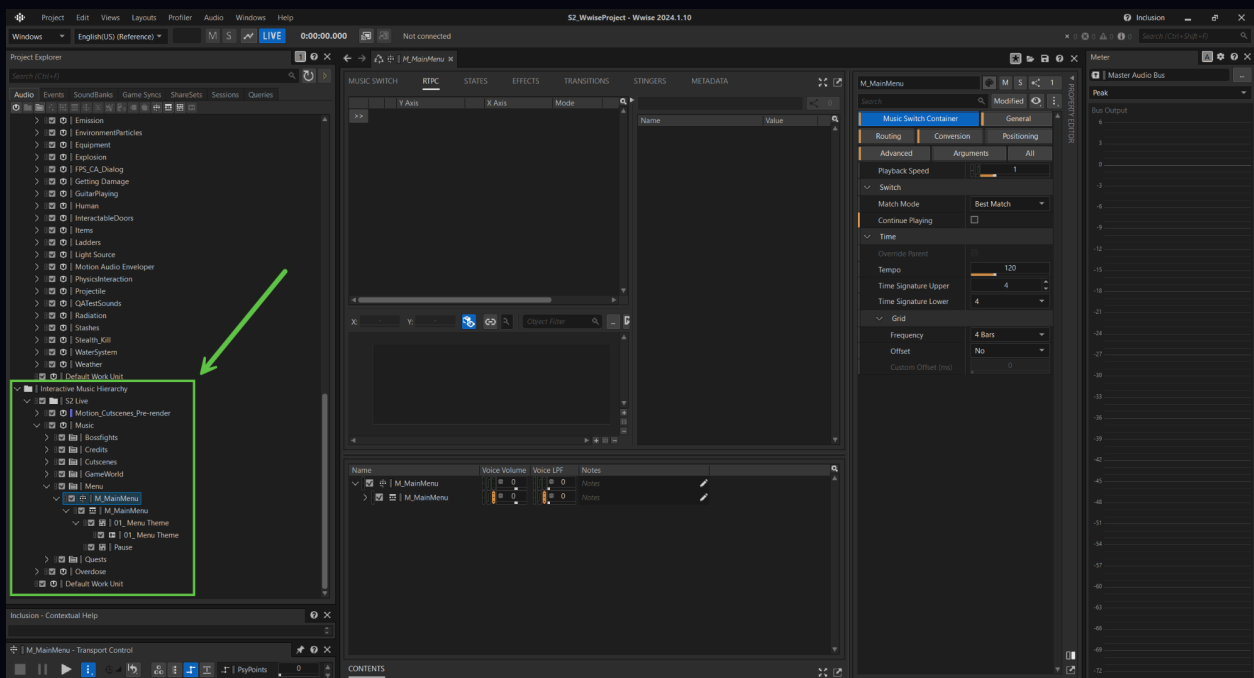
You can do it by selecting the Event tab in [Project Explorer](#) again or by using the arrows in the [Contents Editor](#).



Then, as you did previously, double-click Target of the first Play [Action](#).

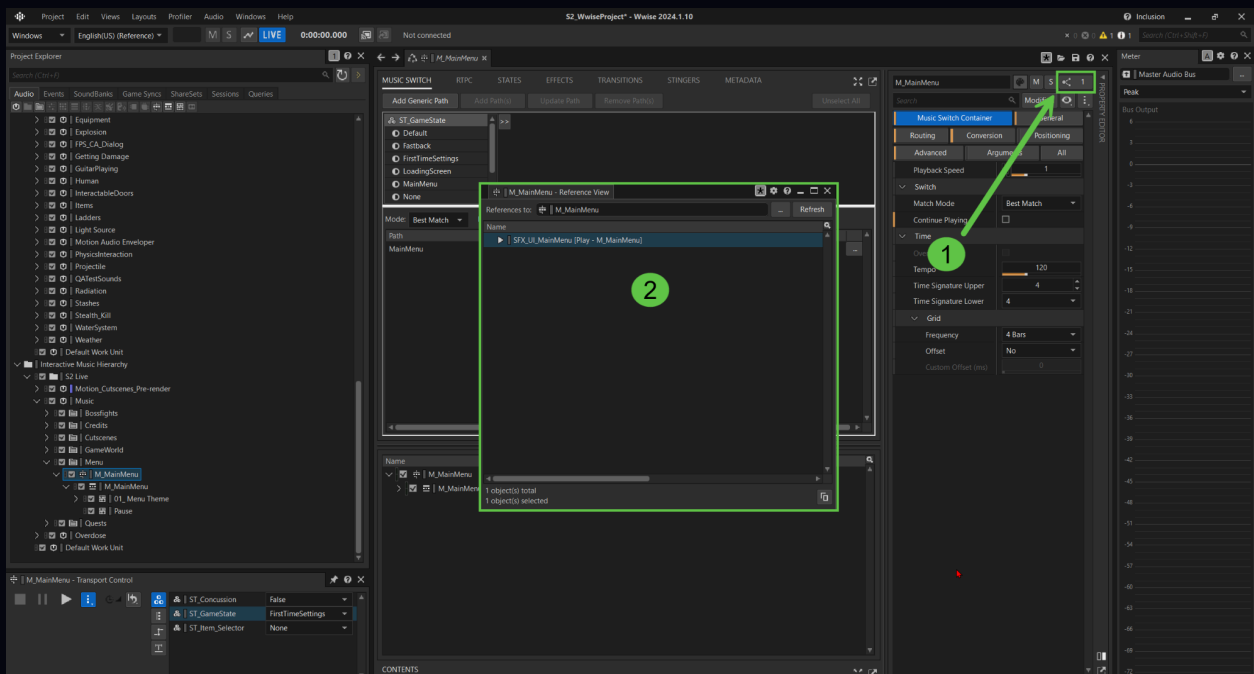


Now, you can see the M_MainMenu [Music Switch Container](#) in [Interactive Music Hierarchy](#).



Looking for references/usages

You also have an option to see where in the project your selected object is used or referenced. To perform this, select the Show References button in the [Property Editor](#) window.

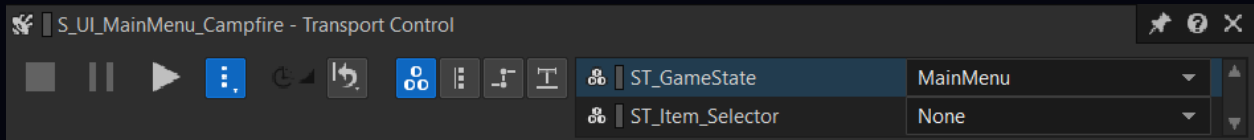


Step 4 – Simulating playback

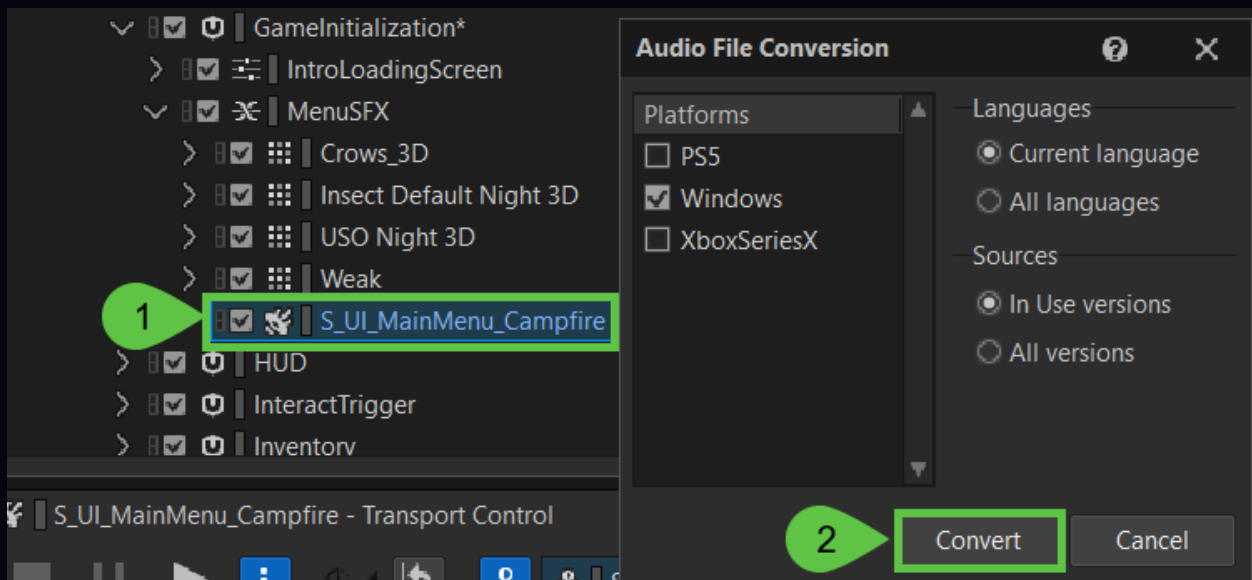
After you've become familiar with [Actor-Mixer Hierarchy](#) and [Interactive Music Hierarchy](#) of different objects played by the SFX_UI_MainMenu [Event](#), you may want to actually play them.

Using Transport Control

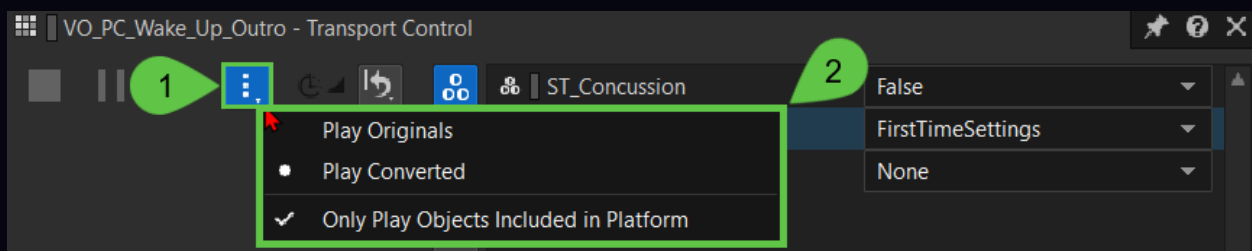
Most types of containers can be played right away when selected by using the [Transport Control](#) window or by pressing the Space key.



You may encounter unconverted [Sound SFX](#) objects. Their name will be displayed in blue colour (for example, [S_UI_MainMenu_Campfire](#)). In this case, you can convert them by selecting them and then pressing the Shift + C shortcut.

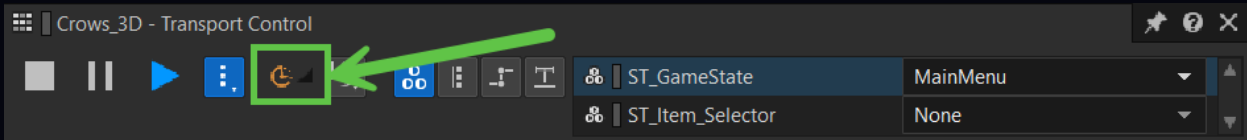


Alternatively, you can configure the [Transport Control](#) window to play the original or converted versions of the Audio Sources.



We recommend that you try playing all child containers of the MenuSFX [Blend container](#), as well as the 01_ Menu Theme [Music Segment](#), by using [Transport Control](#) to familiarize yourself.

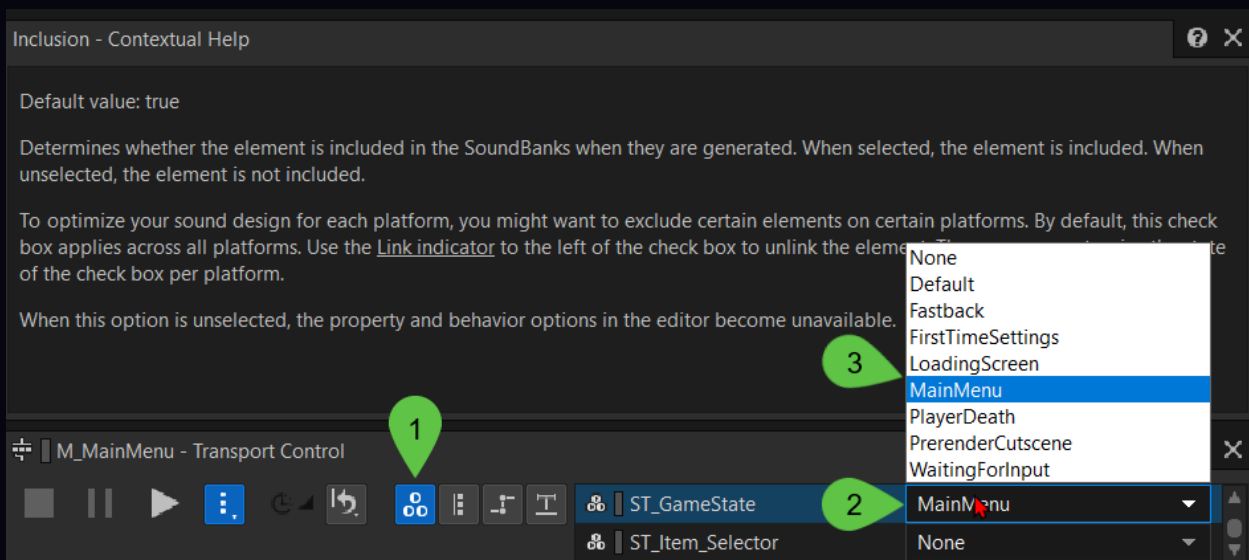
Some containers may play with predefined Delay or Fade. If Delay or Fade is taking action, specific icons will be highlighted.



In this case, you can play [Sound SFX](#) objects directly instead of playing their parent container.

When trying to play any other containers, you may encounter ones that require you to set some Game Syncs/Parameters ([States](#), [Switches](#), and [RTPCs](#)) before playing them.

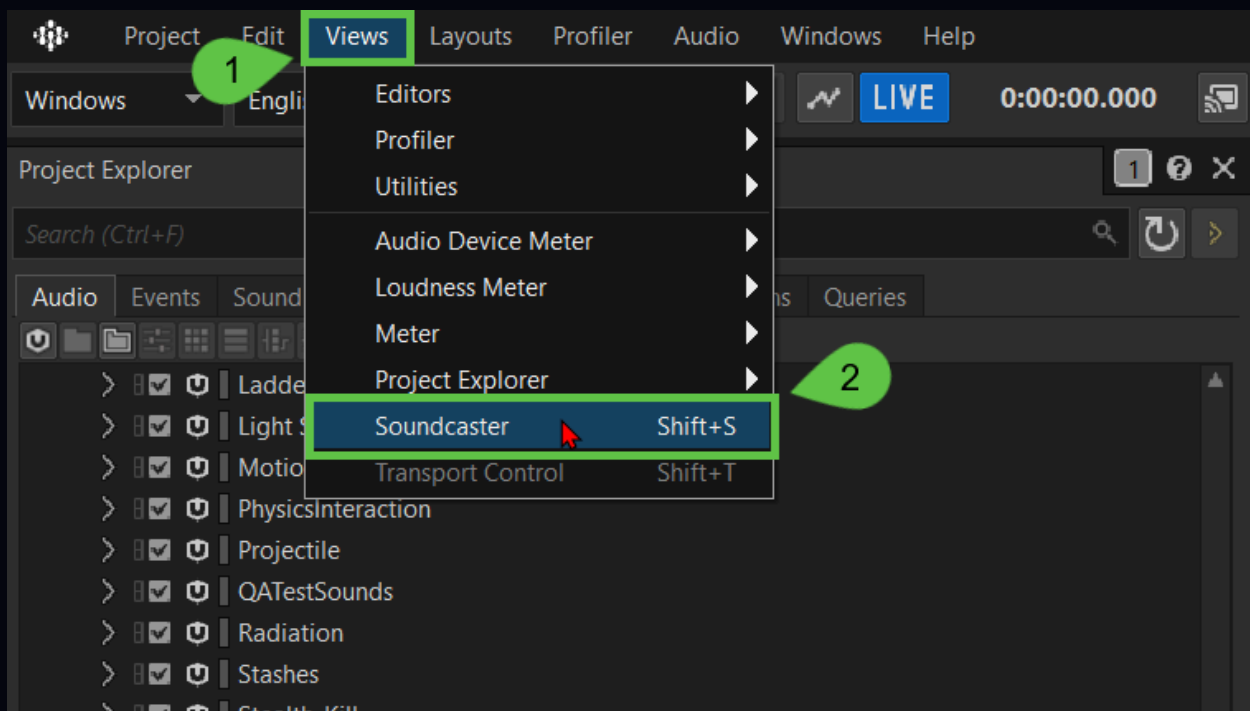
In case you need to play M_MainMenu [Music Switch Container](#), set ST_GameState [State](#) to the MainMenu state value in the [Transport Control](#) window.



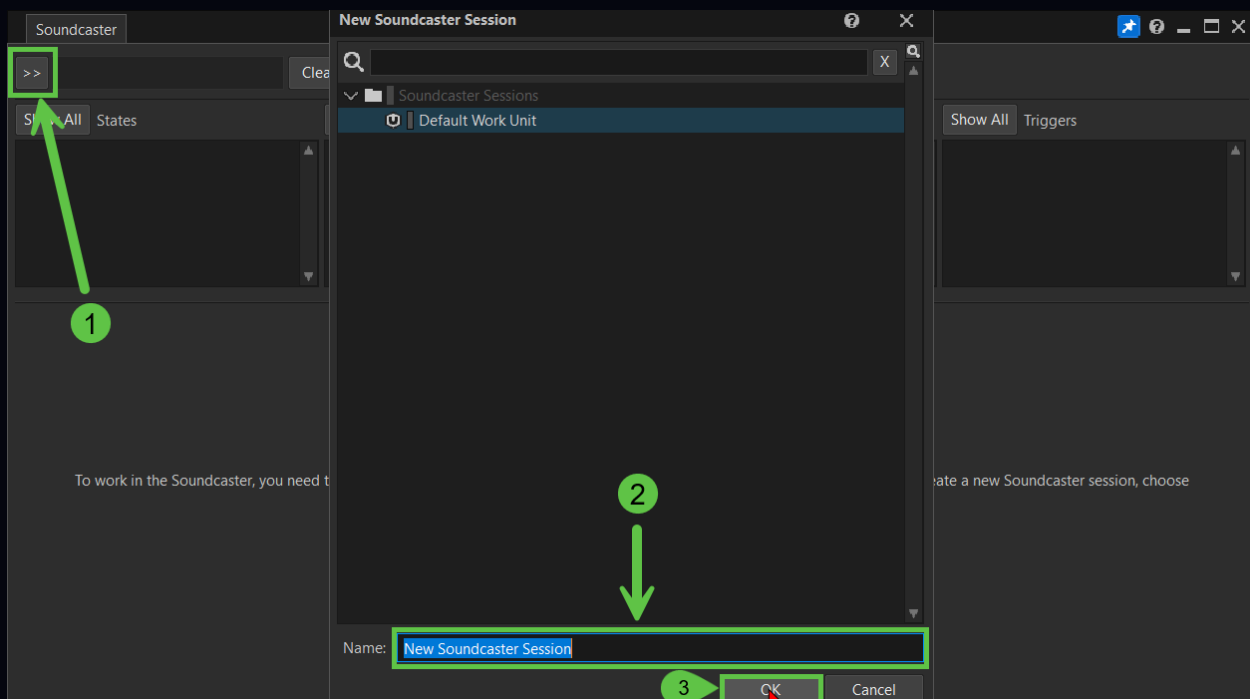
Using Soundcaster

When there's a need to play multiple containers or even [Events](#) together or sequentially from one place, the [Soundcaster](#) window can be used.

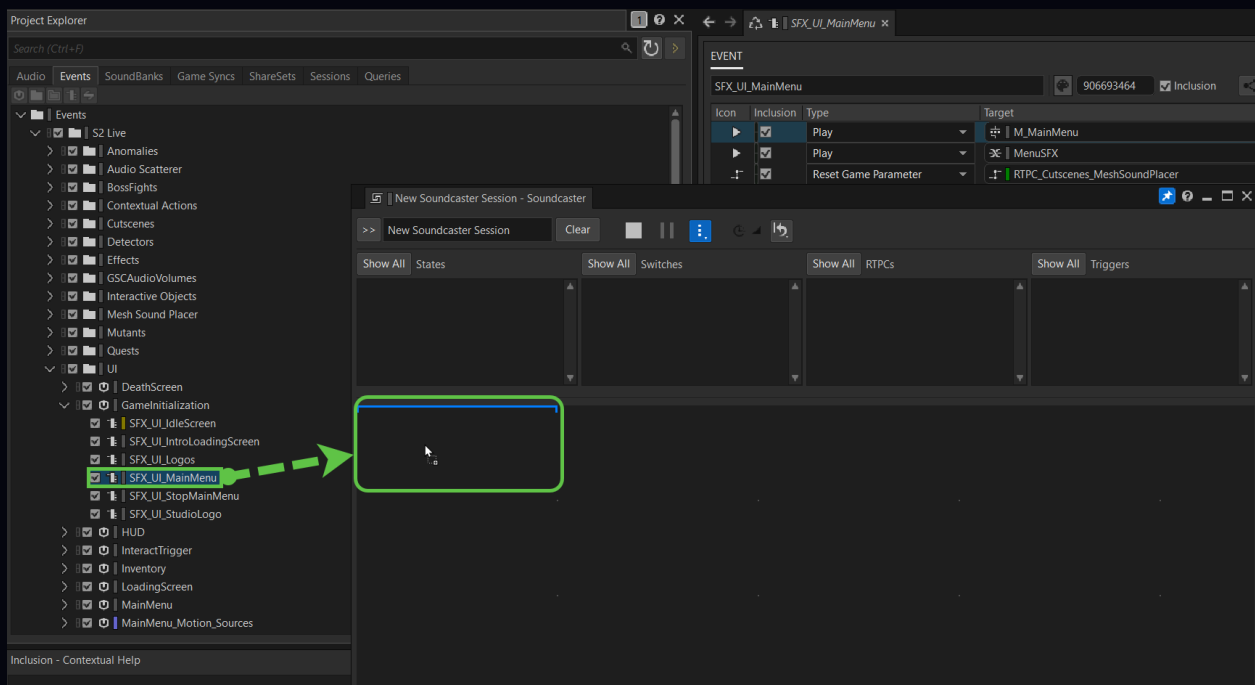
You can open the [Soundcaster](#) window by the Shift + S keyboard shortcut or by selecting the Views → Soundcaster in the Wwise header.



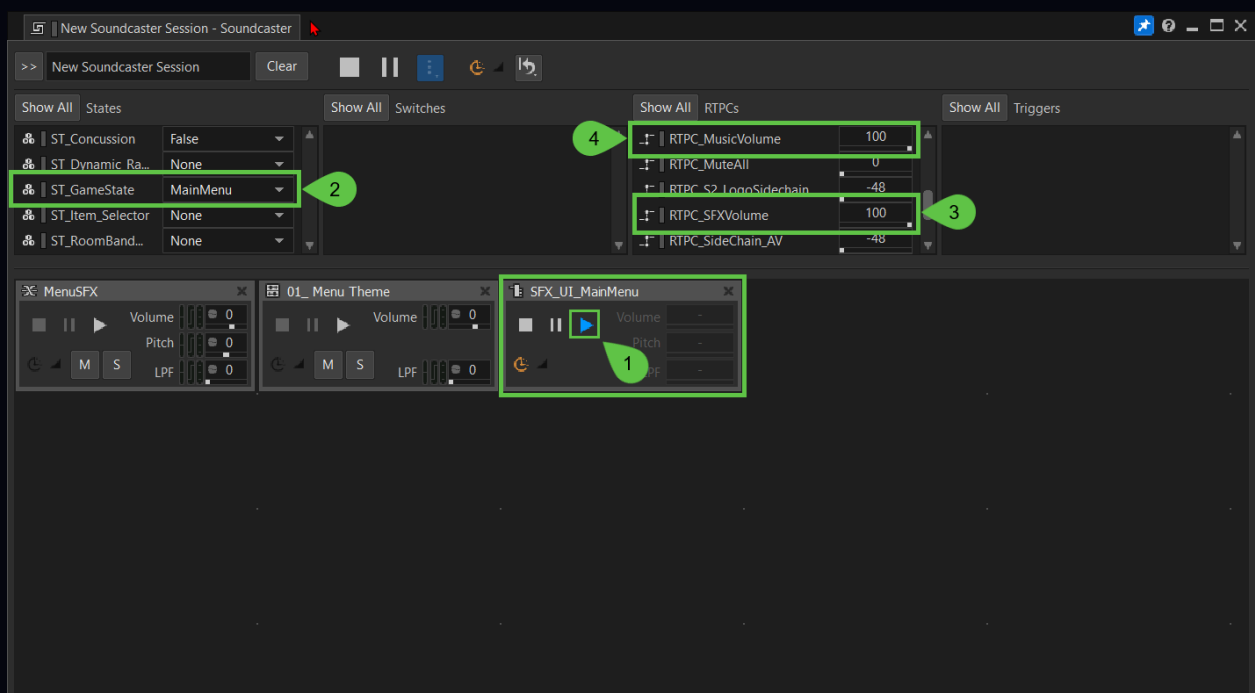
To start working with [Soundcaster](#), create a Soundcaster Session first.



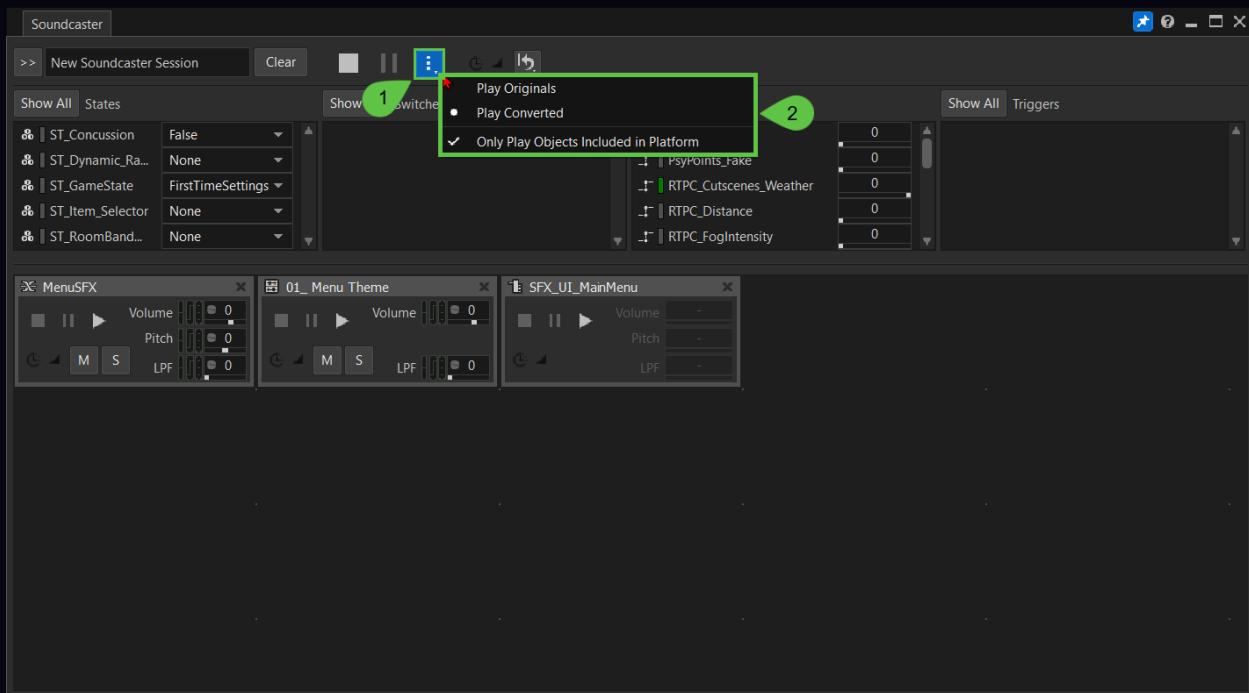
Then you can proceed with drag-and-dropping desired objects from the [Project Explorer](#) window.



1. For example, add the SFX_UI_MainMenu [Event](#) to the Soundcaster Session and play it right away.
2. Change ST_GameState [State](#) to the MainMenu or None state values to observe how music appears or leaves the mix.
3. RTPC_SFXVolume [Game Parameters](#) can be changed to observe changes in the volume of SFX in the current mix. For instance, changing these parameters simulates how the user changes the volume slider values in game settings.
4. RTPC_MusicVolume [Game Parameters](#) can be changed to observe changes in the volume of Music in the current mix.



Additionally, [Soundcaster](#) can be configured to play original or converted Audio Sources in the same way as the [Transport Control](#) window.



Step 5 – Importing Audio Sources and creating containers

Now, let's add the new music for the SFX_UI_MainMenu [Event](#).

You have two ways to complete this objective:

- Use existing container hierarchy (simpler way)
- Create your own containers (more advanced approach)

Using existing container hierarchies

During the short project exploration phase, you've already noted that the SFX_UI_MainMenu [Event](#) is configured to Play M_MainMenu [Music Switch Container](#).

This means that you can simply add the new [Music Track](#) to its child M_MainMenu [Music Playlist Container](#).

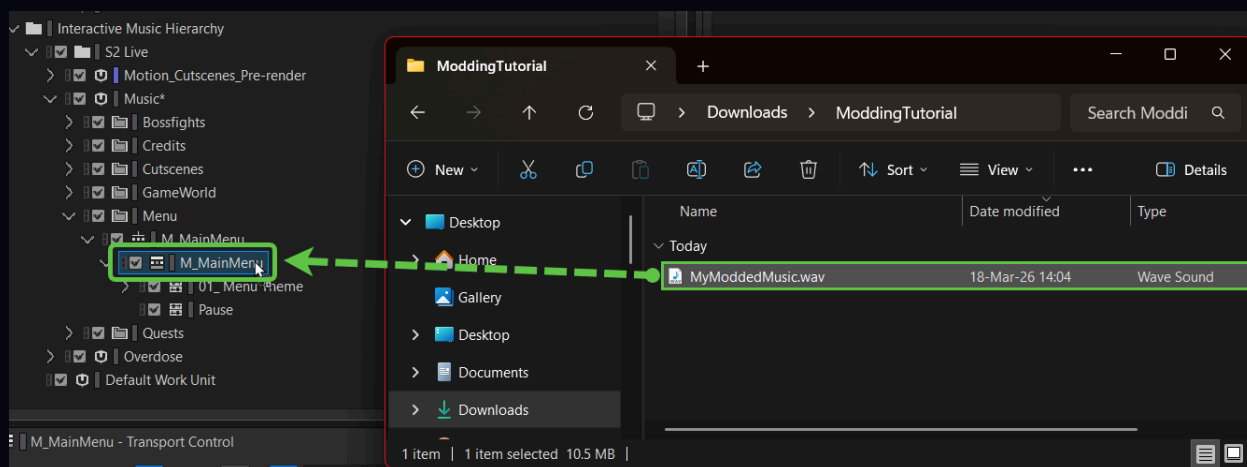
Note

All imported files should be in the .wav format.

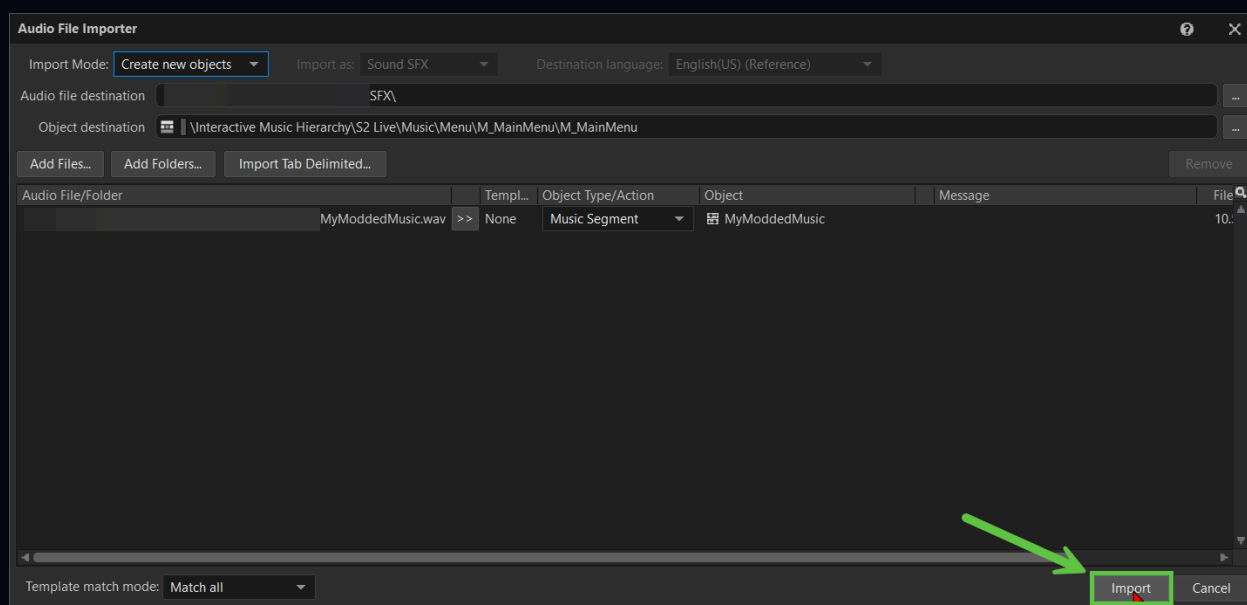
Find more details on imported media requirements here: [What media files are supported?](#)

For the first time practise you can borrow any music track from the **Originals** folder supplied with Zone Kit (for example, ZoneKit Installation *Directory\Originals\ISFX\IS2_Live\M_End Titles.wav*) and move it to some other folder.

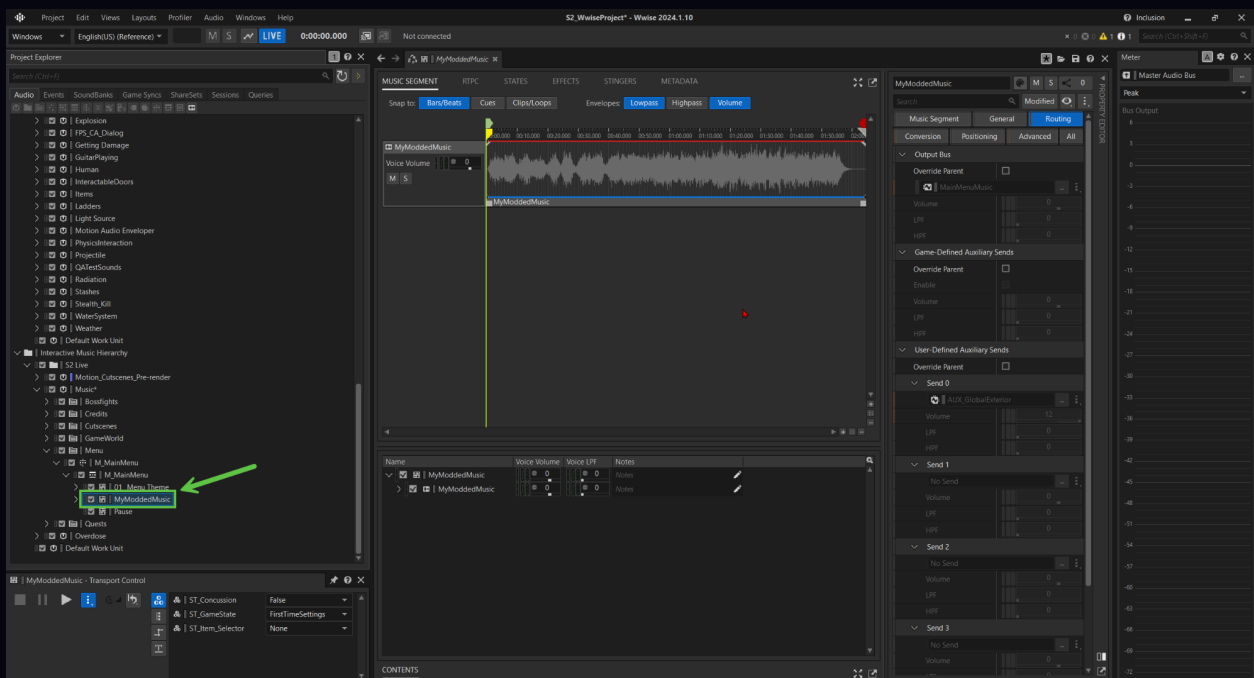
To perform this, first locate and open the music in the Windows File Explorer, and then drag-and-drop the file into the M_MainMenu [Music Playlist Container](#).



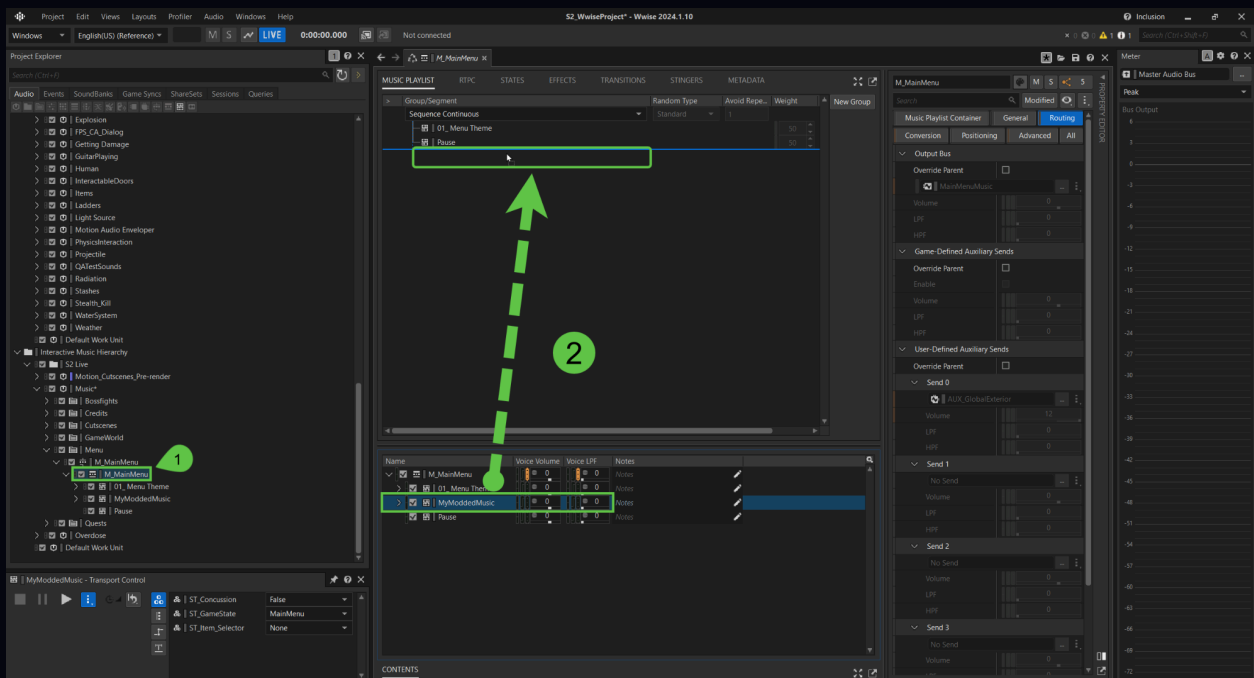
This action will open the [Audio File Importer](#) window in which you need to select the Import button.



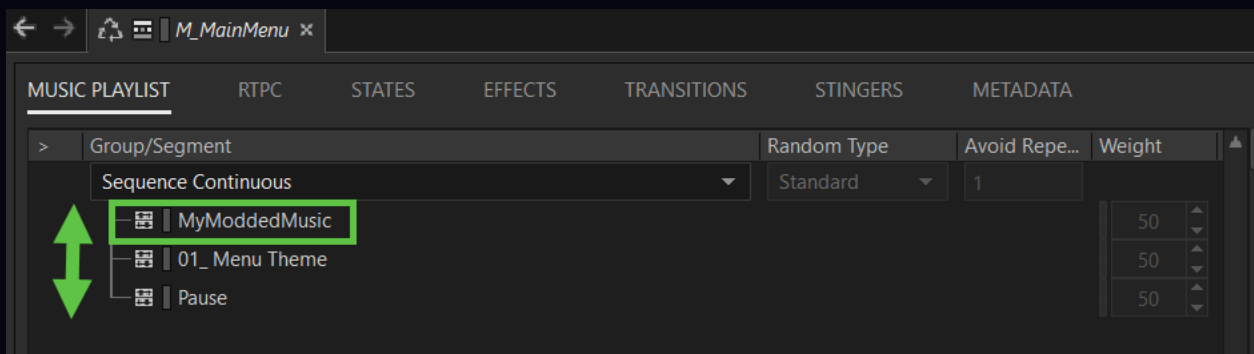
Now, you have the MyModdedMusic [Music Segment](#) successfully added to M_MainMenu [Music Playlist Container](#) as a child object. This means that you don't need to tweak any properties as they will be derived from objects higher in the hierarchy.



However, you still need to add your MyModdedMusic Music Segment to the M_MainMenu Music Playlist Container playback order.



Also, you may want to rearrange the playback order by drag-and-dropping available objects so the MyModdedMusic Music Segment is played first.



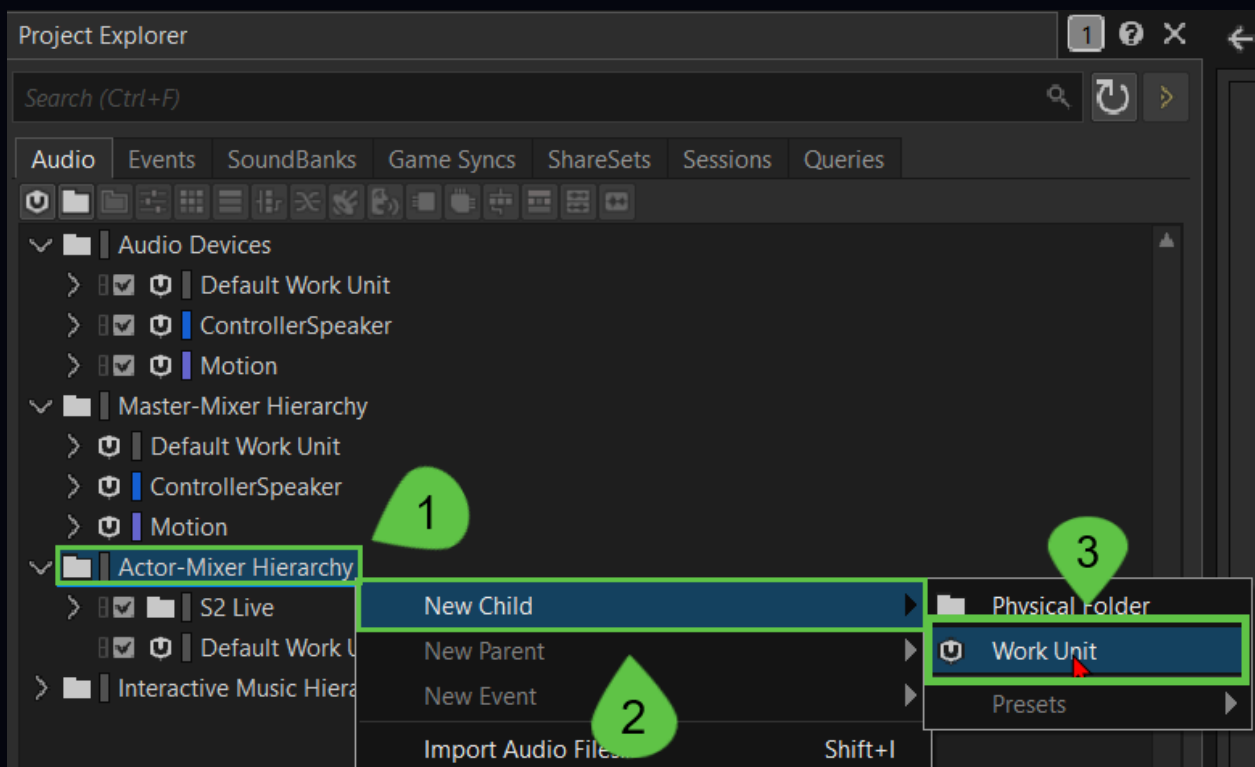
Note

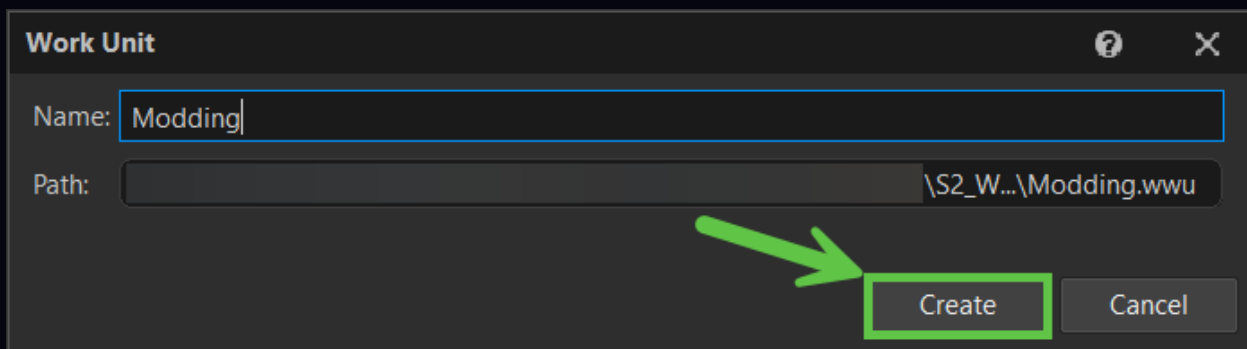
Don't forget to save your work by pressing the **Ctrl + S** shortcut.

Now that you have finally integrated your new [Music Track](#), you may want to test the integration by playing the SFX_UI_MainMenu [Event](#) in [Transport Control](#) or [Soundcaster](#).

Creating new container hierarchies

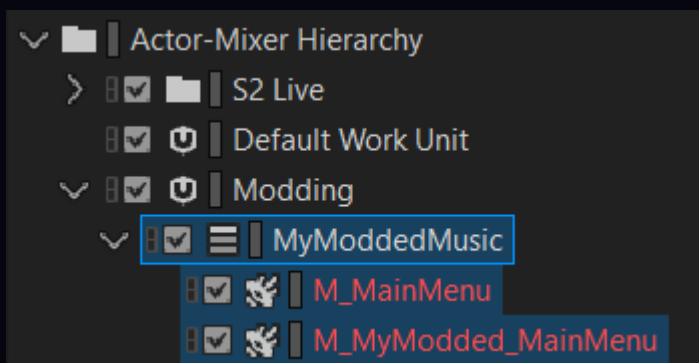
As an alternative, you may create your own container hierarchy. Let's start by creating a new work unit to hold all of your work.



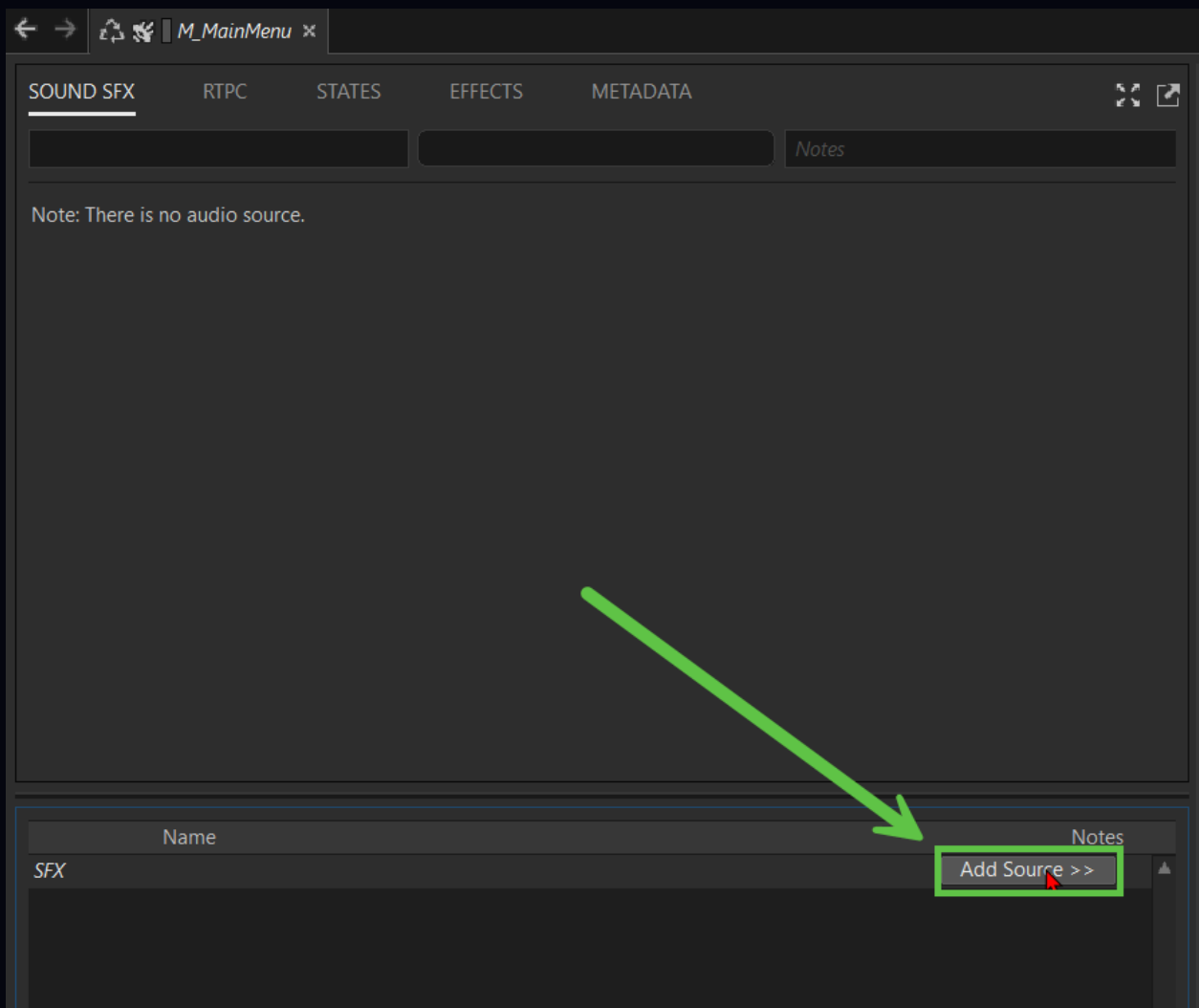


Now, you can create a MyModdedMusic [Sequence Container](#) as a child of the Modding work unit by right-clicking and selecting New Child → Sequence Container and giving it a name.

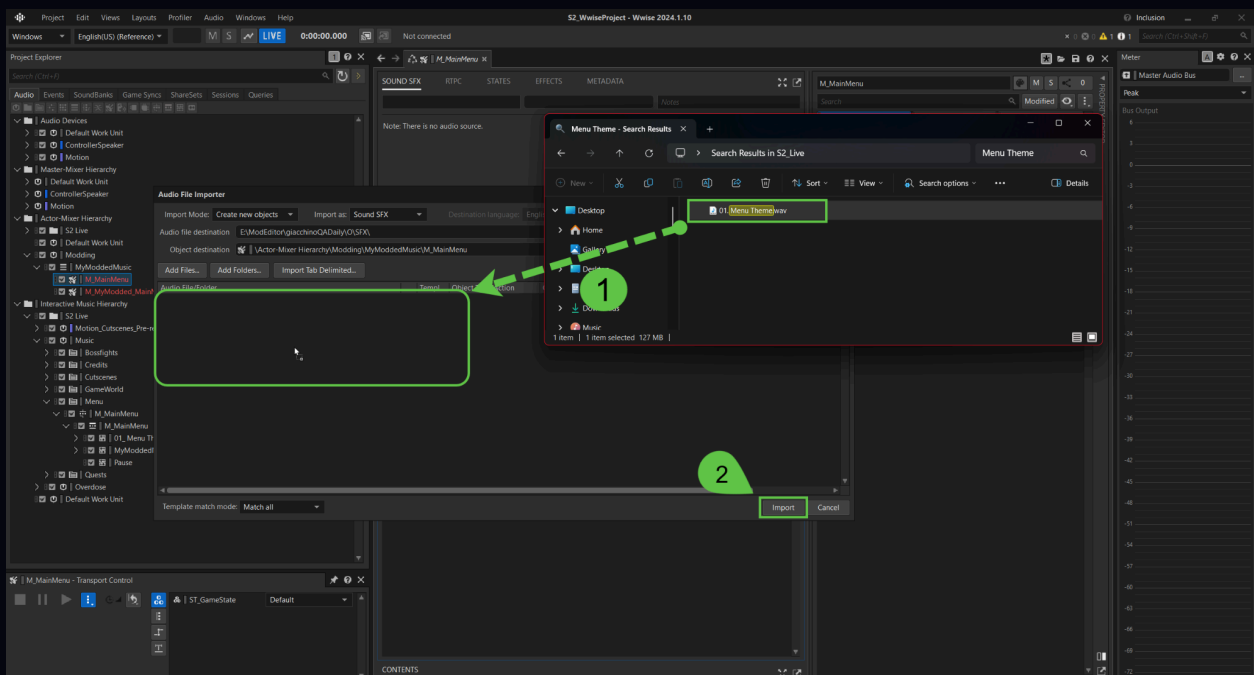
Then, create two [Sound SFX](#) objects as descendants of the MyModdedMusic [Sequence Container](#) and give them M_MainMenu and M_MyModded_MainMenu names.



After that, use the existing source for the original Main Menu in the M_MainMenu [Sound SFX](#) – to do so, select the Add Source button.



Then, find the ZoneKit Installation *Directory\Originals\SFX\S2_Live\01. Menu Theme.wav* in the Windows File Explorer and drag-n-drop it into the [Audio File Importer](#) window and select the Import button.

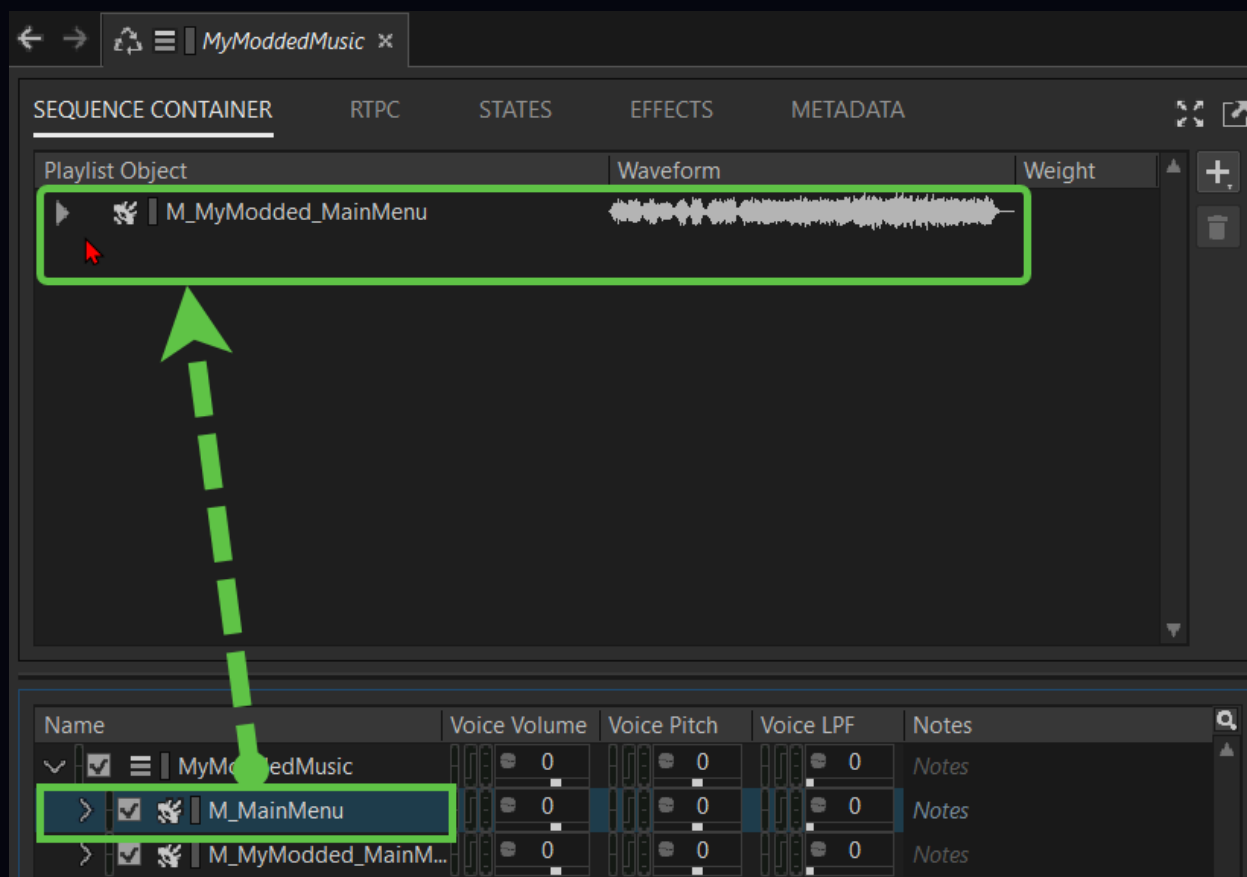


As a next step, do the same with the M_MyModded_MainMenu [Sound SFX](#), but use ZoneKit Installation Path\Originals\SFX\MyModdedMusic.wav, which you previously imported.

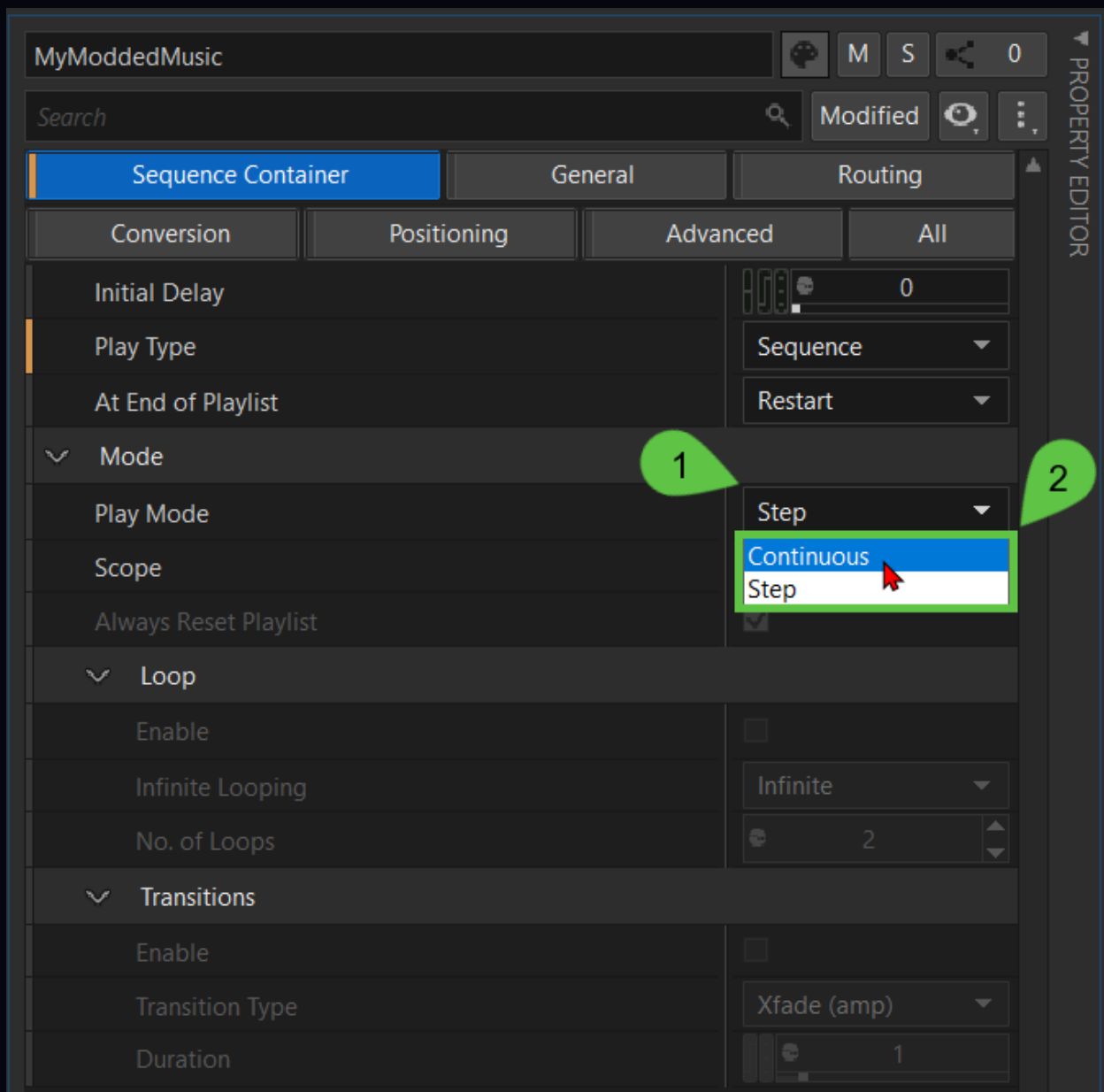
After all Audio Sources are associated with your [Sound SFX](#) objects, you may want to play them via [Transport Control](#).

Then, configure MyModdedMusic [Sequence Container](#) by doing the following:

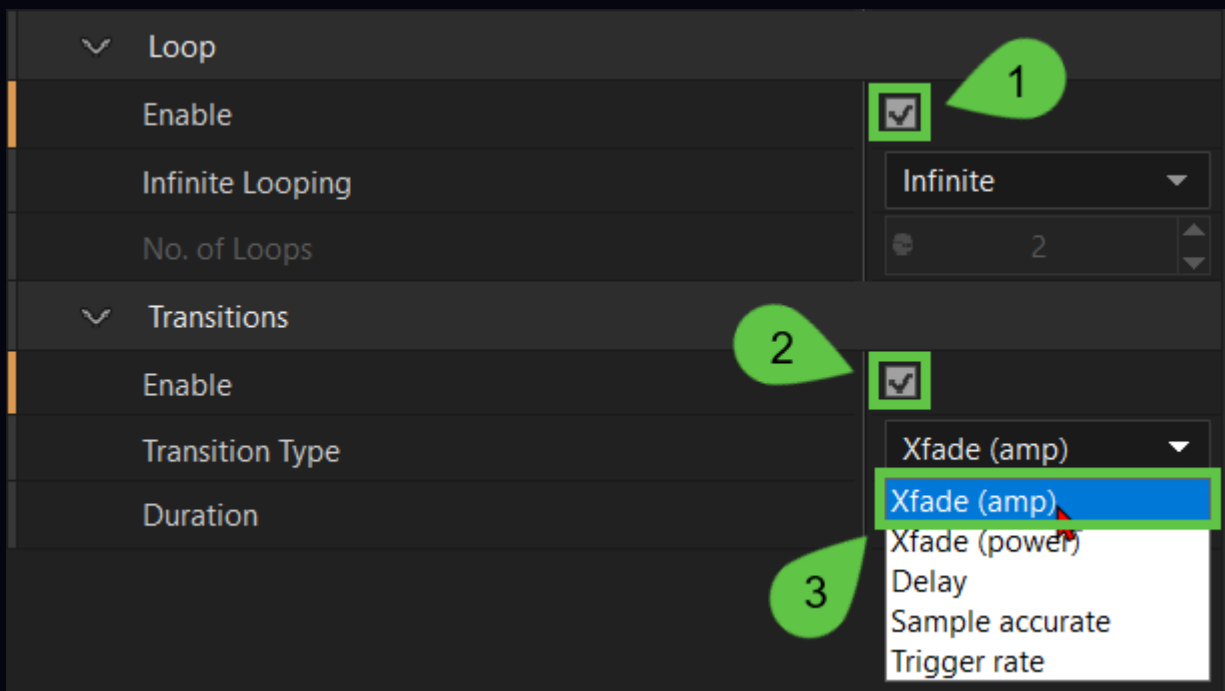
1. Create the playlist order.



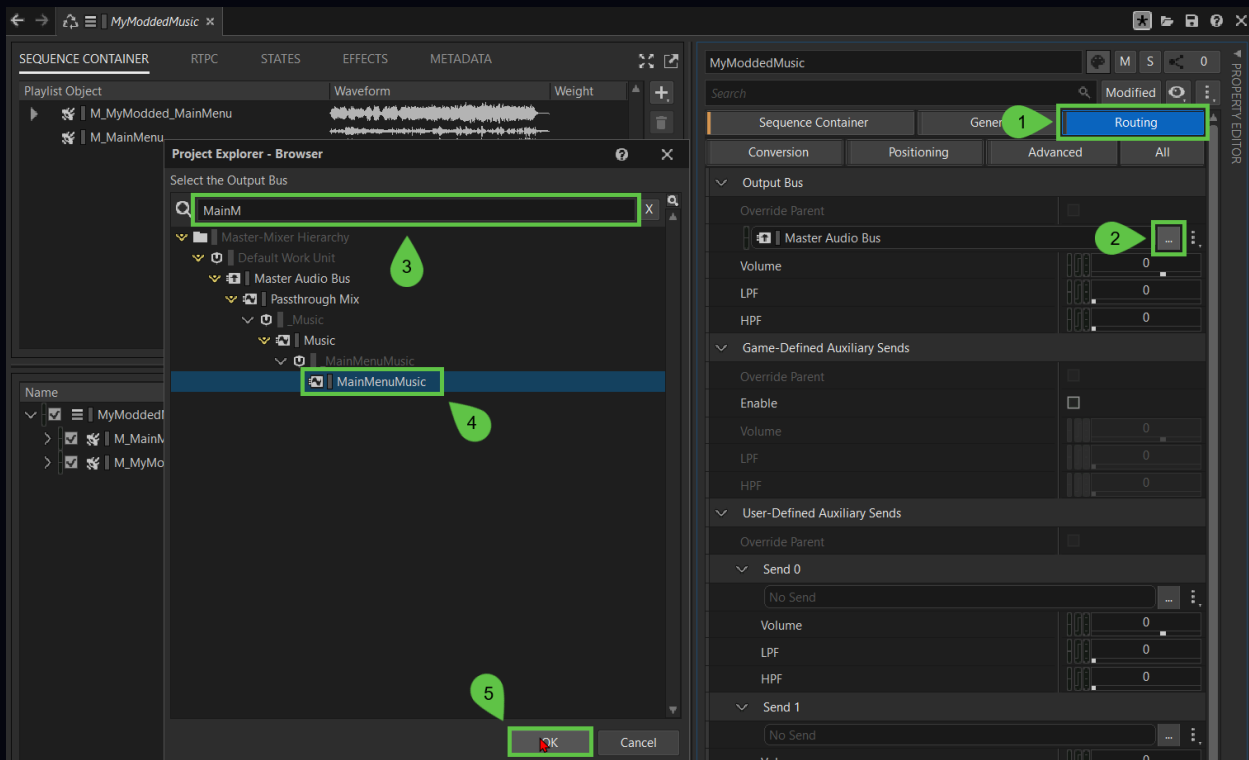
2. Change [Play Mode](#) from Step to Continuous.



3. Select Enable in Loop and Transitions.
4. Select Xfade (amp) in Transition Type.



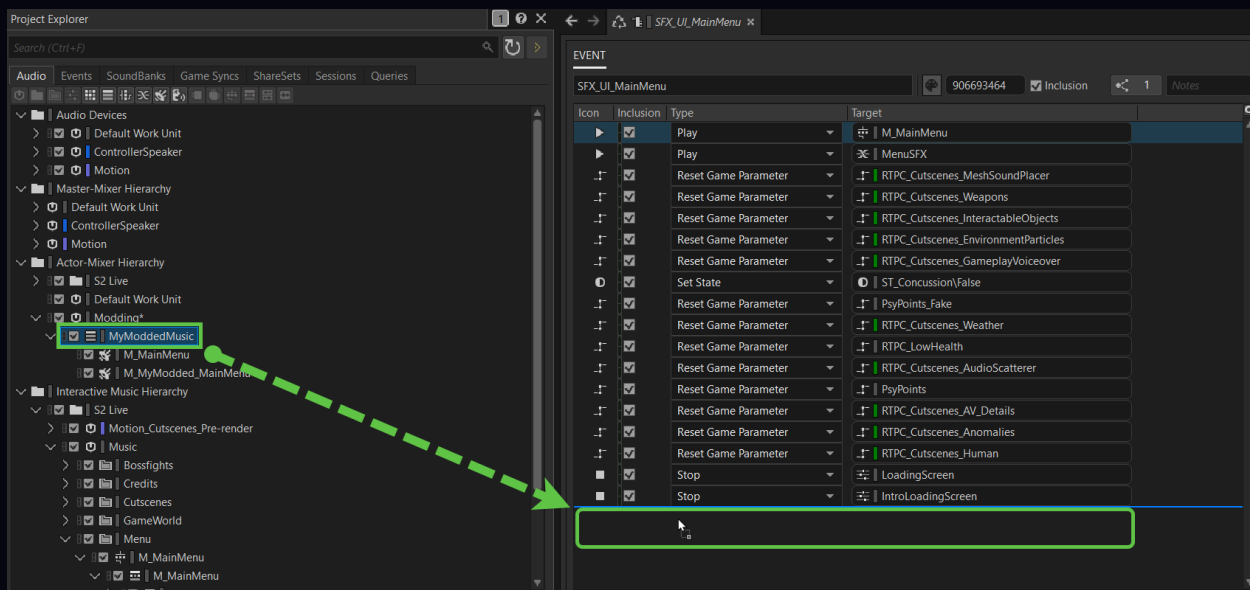
5. Configure Output Bus. To find it, switch to the Routing tab of the [Property Editor](#).



By routing the MyModdedMusic [Sequence Container](#) to the MainMenuMusic [Bus](#), you allow volume sliders in game settings to affect the output of this container.

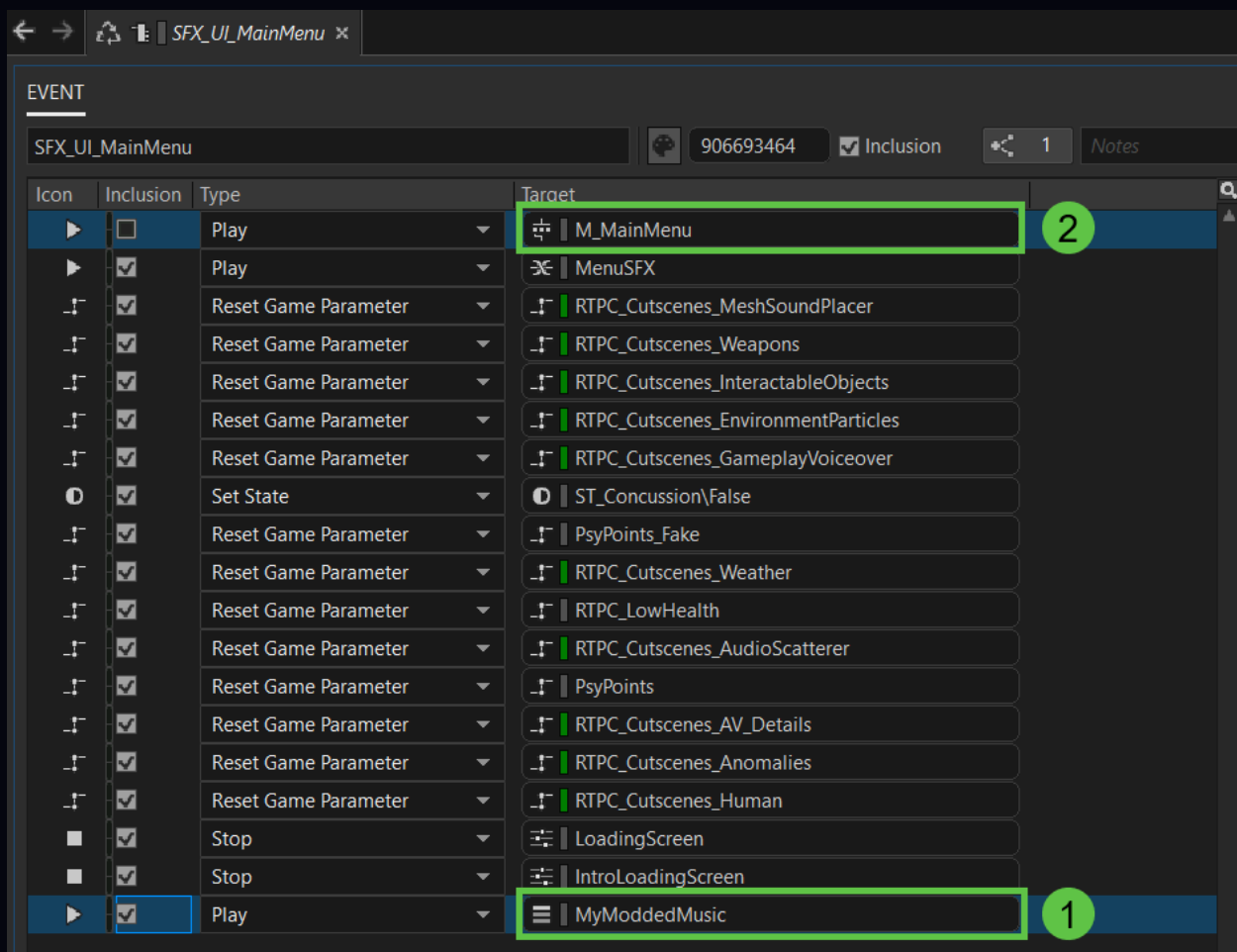
Now, as you have finished configuring the MyModdedMusic [Sequence Container](#), you need to integrate it into the SFX_UI_MainMenu [Event](#).

First, locate and select it in [Project Explorer](#) → [Events](#). After that, go back to the Audio tab and drag-n-drop [MyModdedMusic Sequence Container](#) into [Event Actions](#) in the [Contents Editor](#).

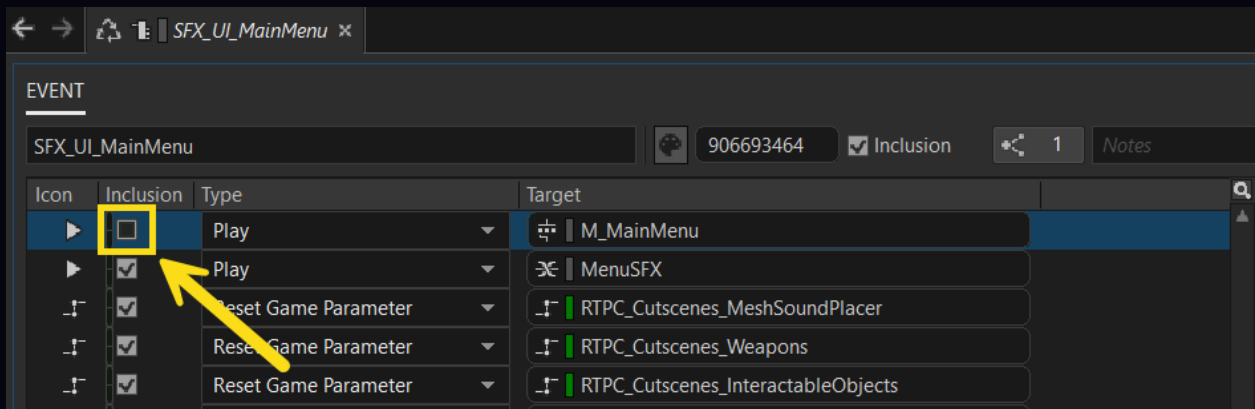


Now, the SFX_UI_MainMenu [Event](#) has two options to play your modded music:

1. Through the M_MainMenu [Music Switch Container](#)
2. Through the MyModdedMusic [Sequence Container](#)



You might want to disable the Play [Action](#) on the M_MainMenu [Music Switch Container](#) so your music is only played from a newly created MyModdedMusic [Sequence Container](#).



After this, you can play the SFX_UI_MainMenu [Event](#) using [Transport Control](#) or [Soundcaster](#) to test whether everything is intact.

Step 6 – Generating SoundBanks

When you have finished configuring your containers and an [Event](#), it's time to make these changes applicable to the game.

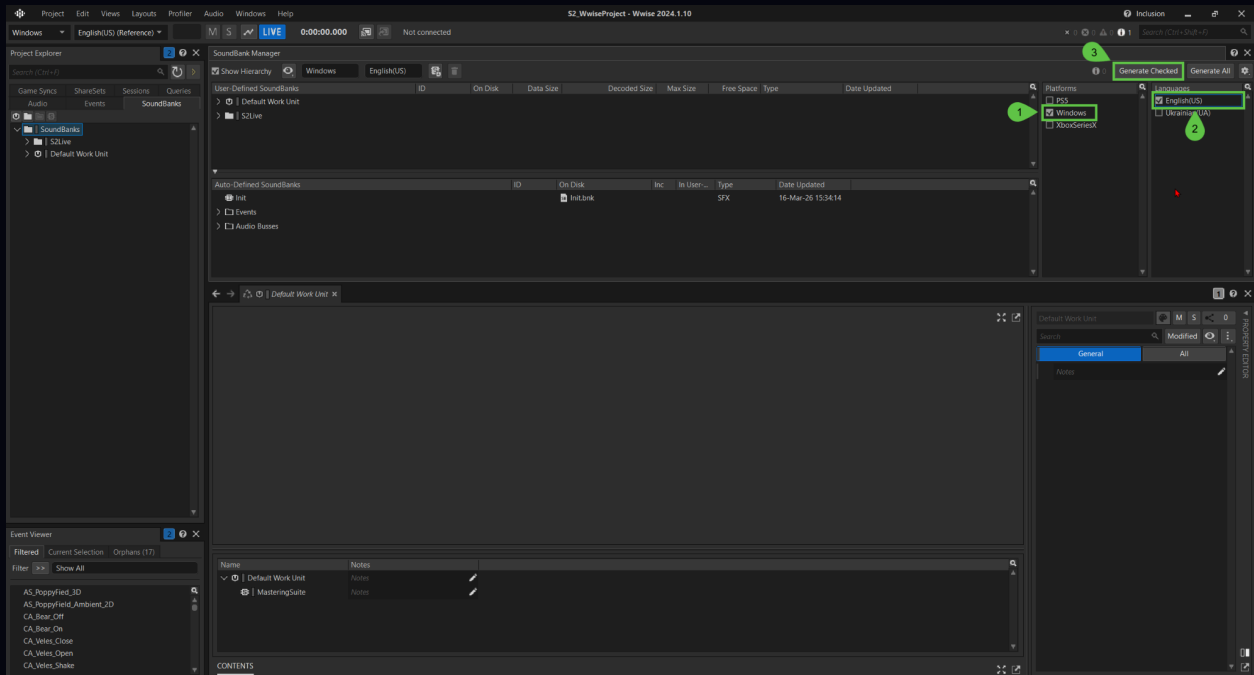
To perform the SoundBank generation, select SoundBank in Layout in the Wwise header (or press the F7 key).

Layouts	Profiler	Audio	Windows
✓ Designer			F5
Profiler			F6
SoundBank			F7
Mixer			F8
Schematic			F9
Audio Object Profiler			F10
Voice Profiler			F11
Game Object Profiler			F12
User Layout 1			
User Layout 2			
User Layout 3			
User Layout 4			
Reset Factory Layouts...			

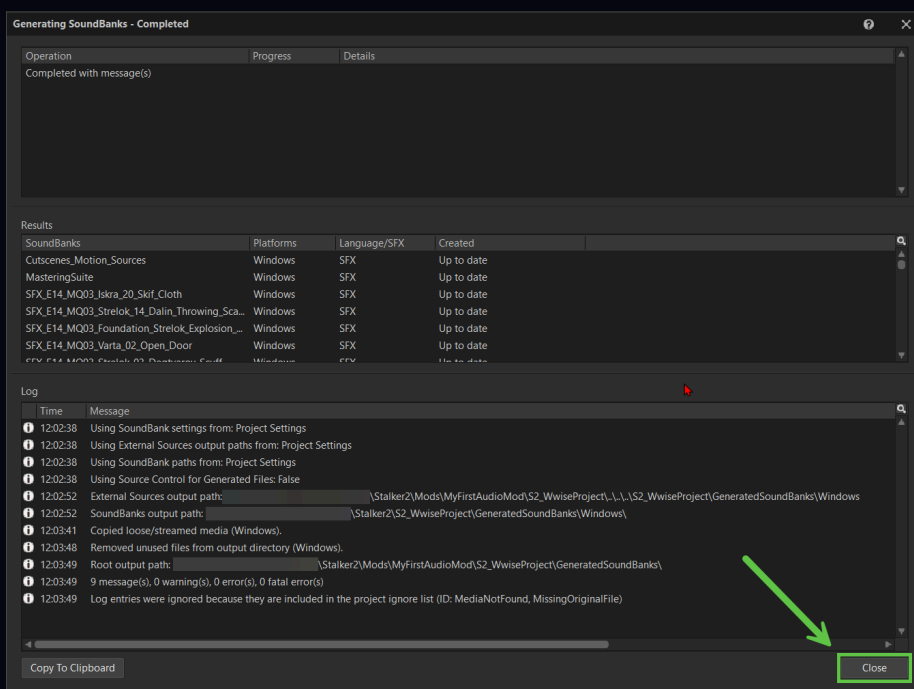
Generating Auto-Defined SoundBanks

In case you don't care which objects are placed in which [SoundBank](#), you may use Auto-Defined SoundBanks generation, which will automatically assign different types of objects to [SoundBanks](#) based on references to [Events](#).

You simply need to pick Platforms and Language, and then select Generate Checked or Generate All, and wait for the process to finish.



After the process is completed, you can close the Generating Soundbanks window.



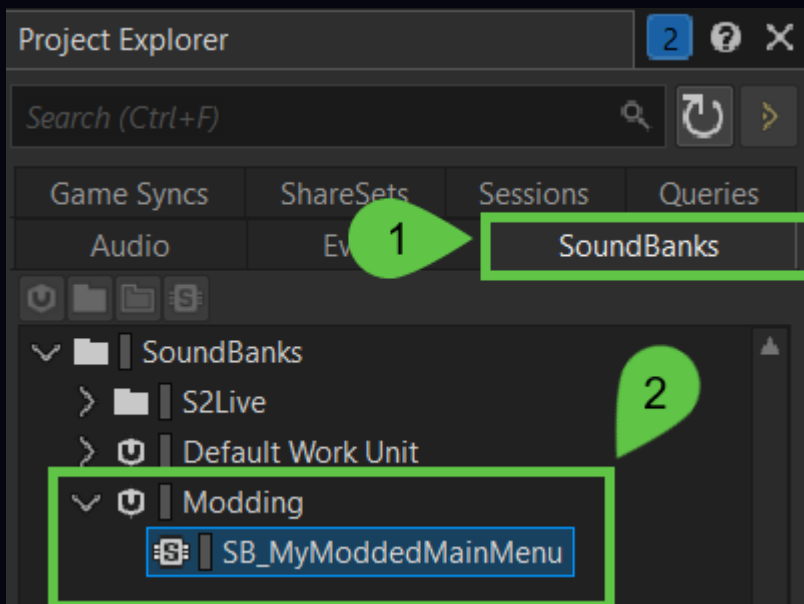
Generating User-Defined SoundBanks (optional)

Note

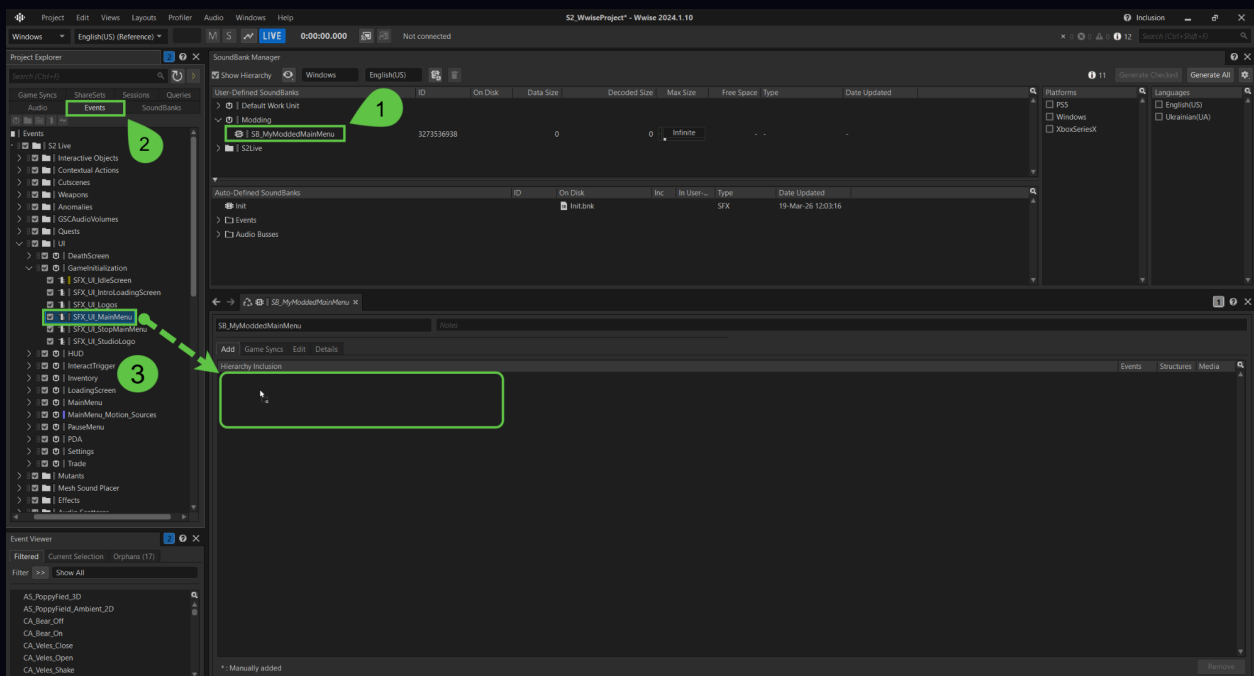
This part of the guide is optional and could be useful only for more advanced modding approaches.

If you need to be specific in the content of [SoundBanks](#) that you are planning to include in your modification, you may create and set up User-Defined SoundBanks.

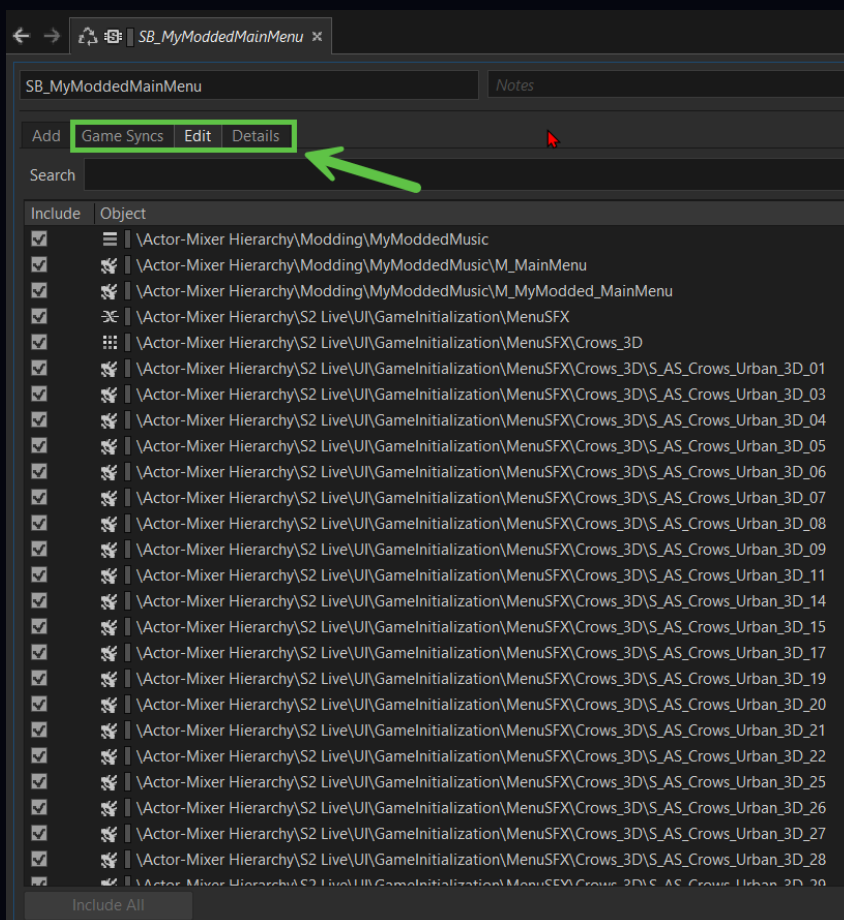
1. Switch to the SoundBanks tab of the [Project Explorer](#) window.
2. Create a Modding work unit.
3. Add a new Soundbank as its child – let's name it SB_MyModdedMainMenu.



4. Do the following sequence of actions to define the content of the [SoundBank](#):
 - a. Select the SB_MyModdedMainMenu [SoundBank](#) in the SoundBank Manager window.
 - b. Switch to the Events tab of the [Project Explorer](#) window and find the SFX_UI_MainMenu [Event](#).
 - c. Drag-n-drop the SFX_UI_MainMenu [Event](#) into the [SoundBank](#) Contents Editor window.



Now, you can inspect the contents of your **SoundBank** by switching tabs in the SoundBank Contents Editor window.



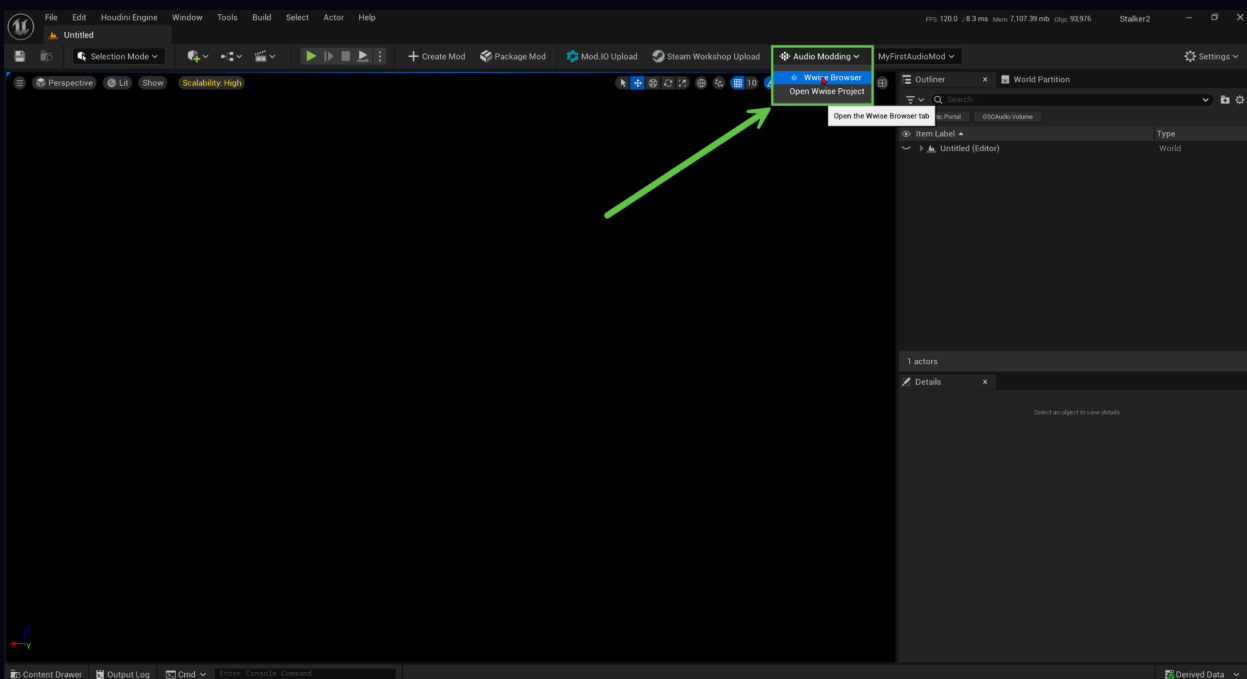
After this, you can generate SoundBanks in the SoundBank Manager window.

Step 7 – Wwise Assets in Unreal Engine

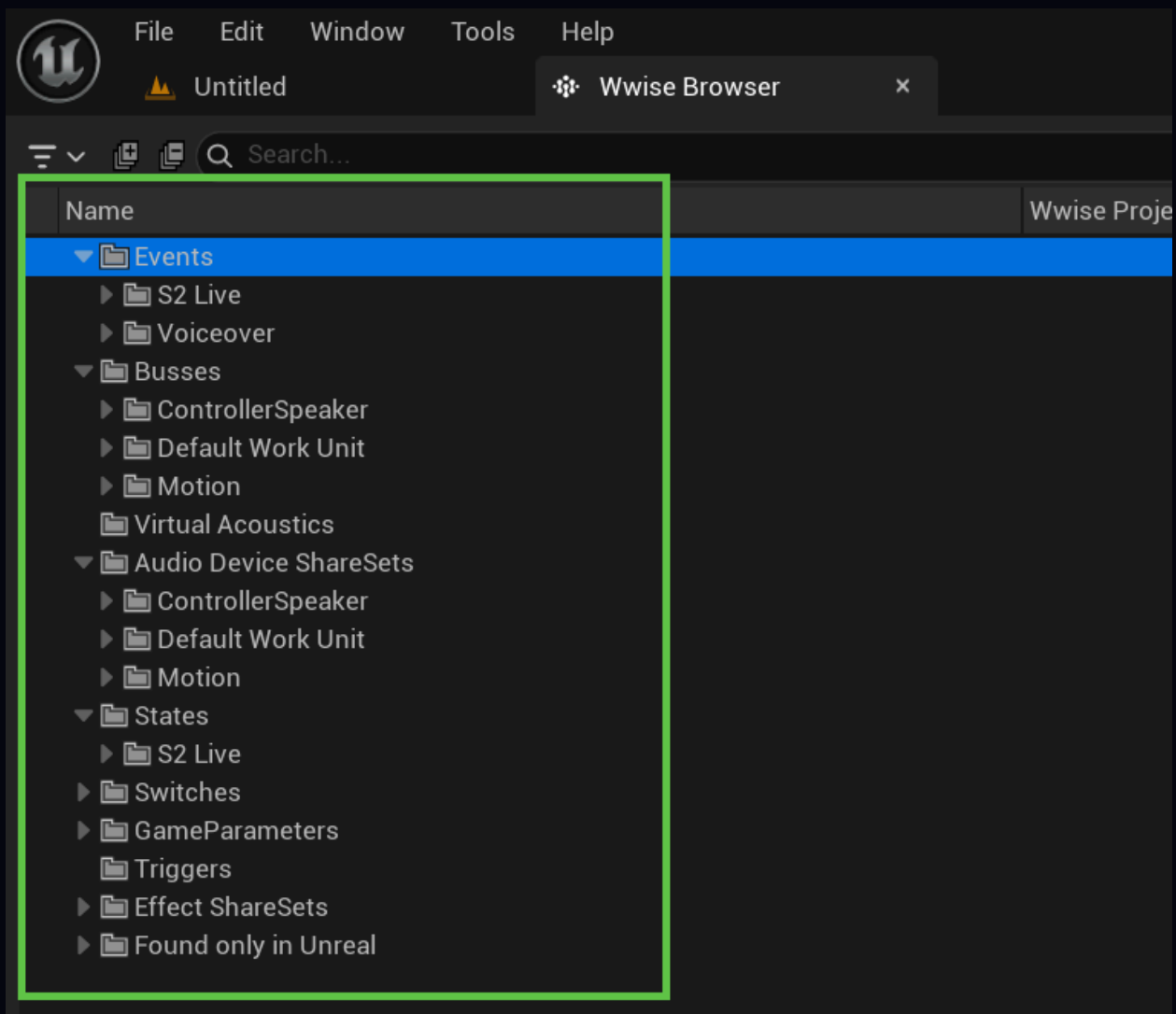
Wwise Unreal integration features multiple types of [Wwise Unreal Assets](#), which you can view by using the Unreal Engine Content Browser or [Wwise Browser](#) windows.

Browsing Wwise Unreal Assets through the Wwise Browser

To open the [Wwise Browser](#) window, select Audio Modding → Wwise Browser.



In the [Wwise Browser](#) window, you can see the full hierarchy of Wwise Unreal Assets.

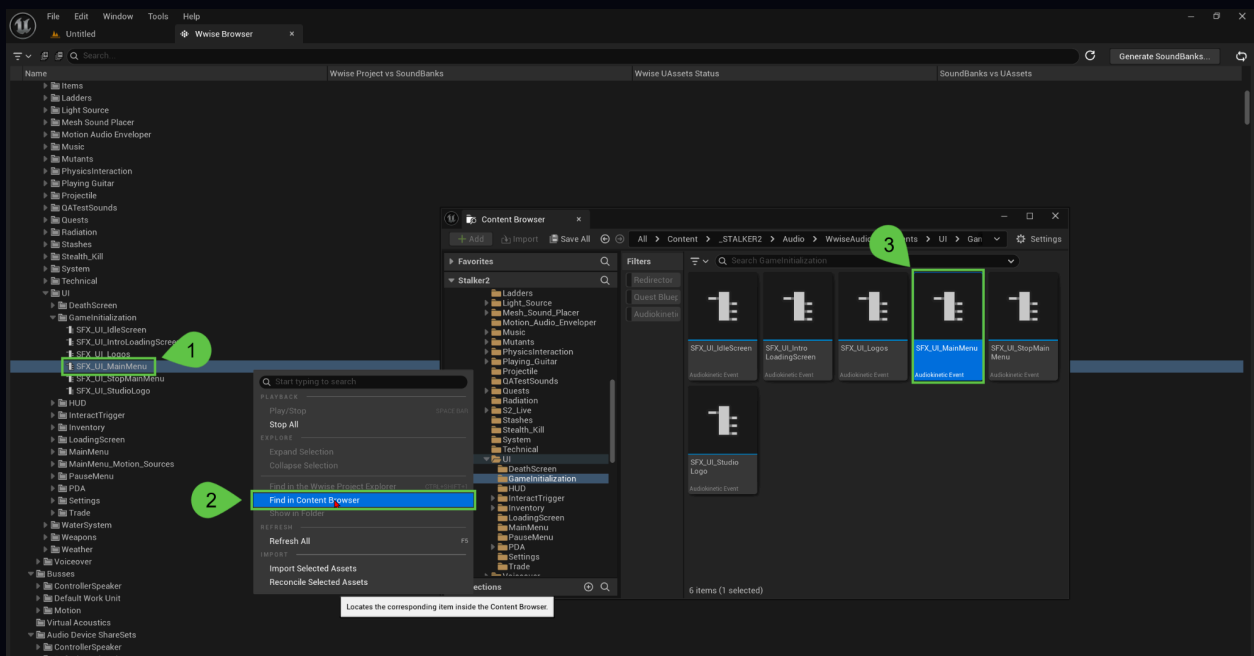


Let's find the SFX_UI_MainMenu [Event](#) that you have previously modified using the Wwise Authoring application.

You may use the Search bar or simply find it within the Event hierarchy, which will be mirrored from the one that you can see in the Wwise project.

Finding Wwise Unreal Assets in the Content Browser

After locating the [Event](#), right-click it, select Find in Content Browser, and then you will be able to see the SFX_UI_MainMenu AkAudioEvent UAsset in the Content Browser window.

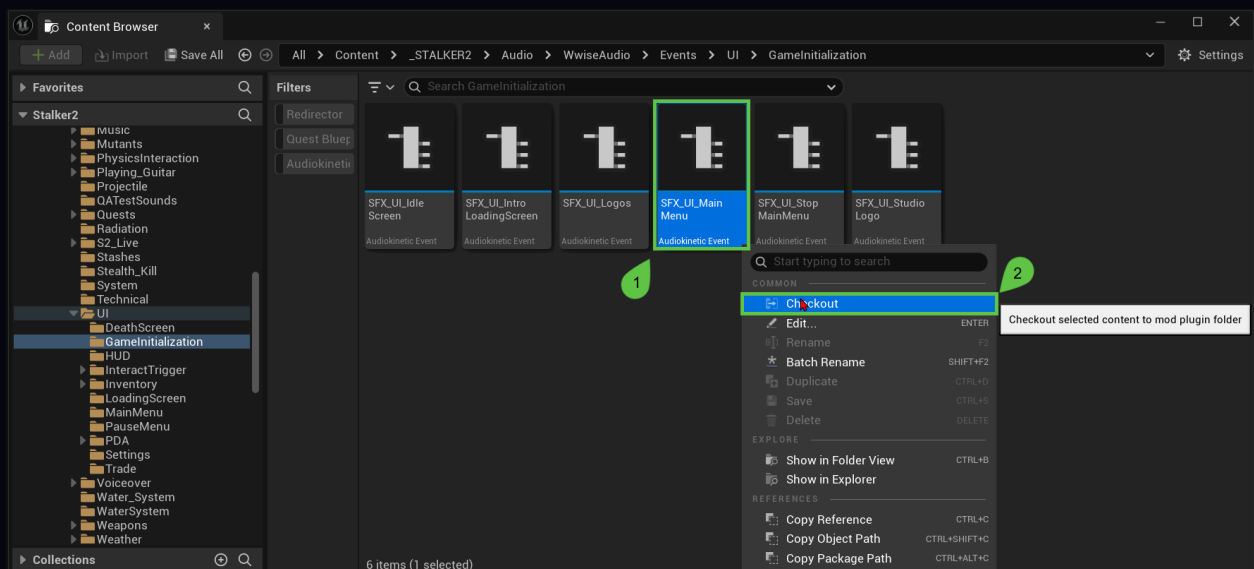


AkAudioEvents can be played from the Content Browser window by selecting them and then pressing the Space key. By doing this, you are simulating how this AkAudioEvent would play when it is posted by the game at runtime.

Checking out Wwise Unreal Assets

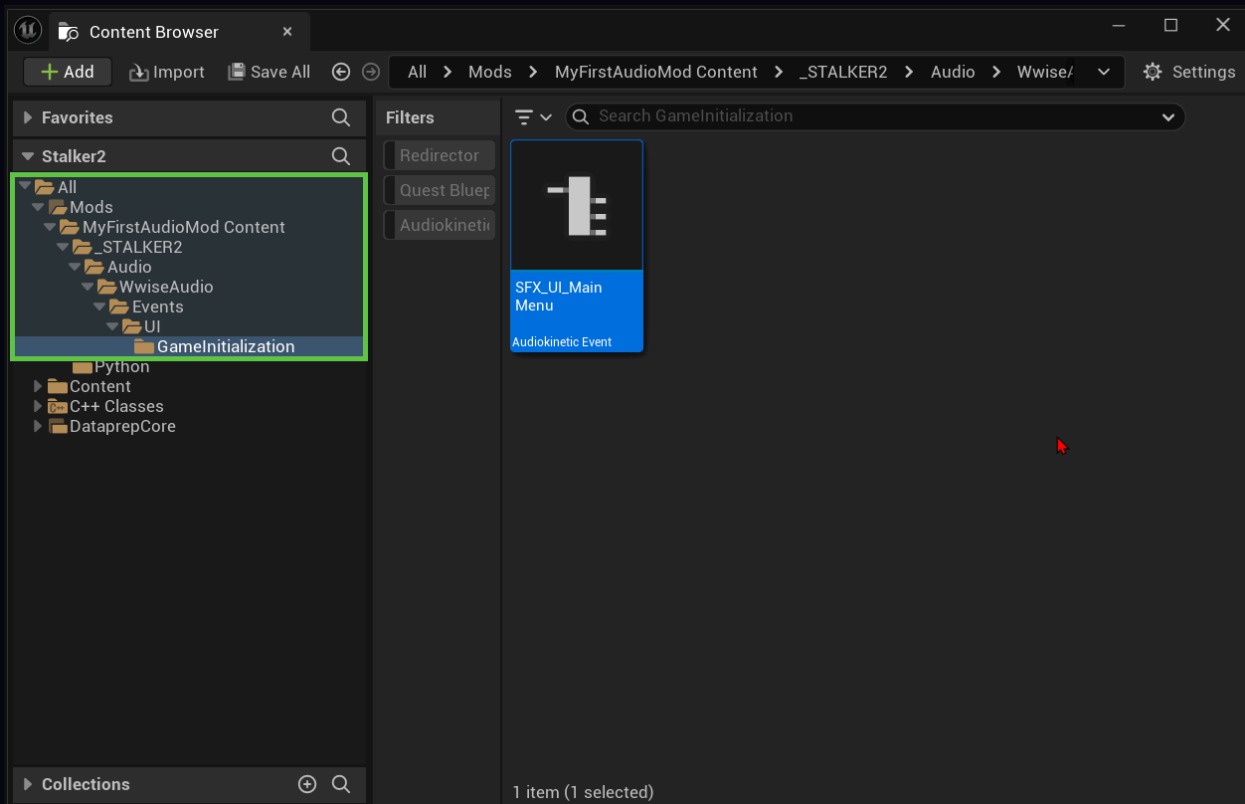
To proceed further with packaging your modified Wwise Unreal Assets into the mod, you need to check them out.

Perform this by right-clicking the Asset and selecting the Checkout option.



By doing this operation, you are preparing this Asset to be packaged into the currently selected mod.

You can check the list of checked-out Assets in the Content Browser by opening the folder of your current mod.



Creating Wwise Unreal Assets (optional)

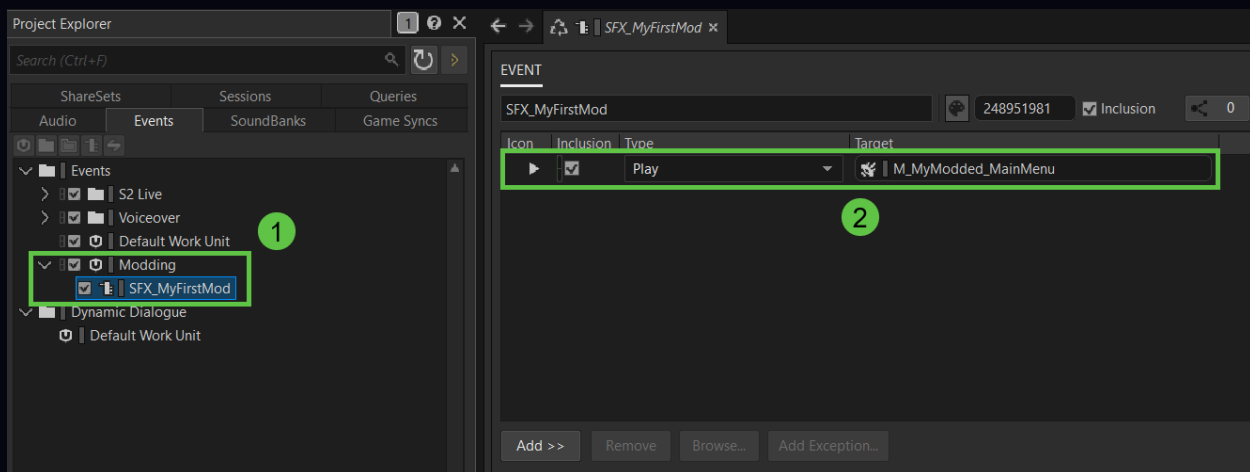
Note

This section is optional and only has information on the subject of Wwise Unreal Asset creation. Please look for the separate guide for integrating Wwise Unreal Assets into the game systems.

You need to create corresponding objects in the Wwise Authoring application, generate SoundBanks, and then proceed with reconciling them through Wwise Browser.

1. Create a new work unit within the Event hierarchy.
2. Create a new Event as its child.

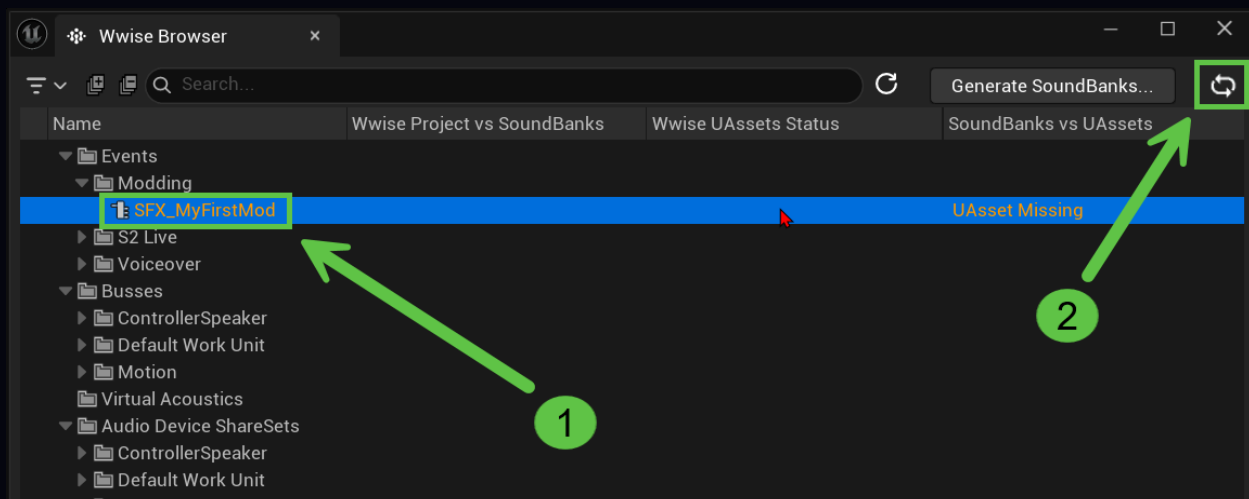
3. Drag-n-drop any container of [Sound SFX](#) into [Event Actions](#).



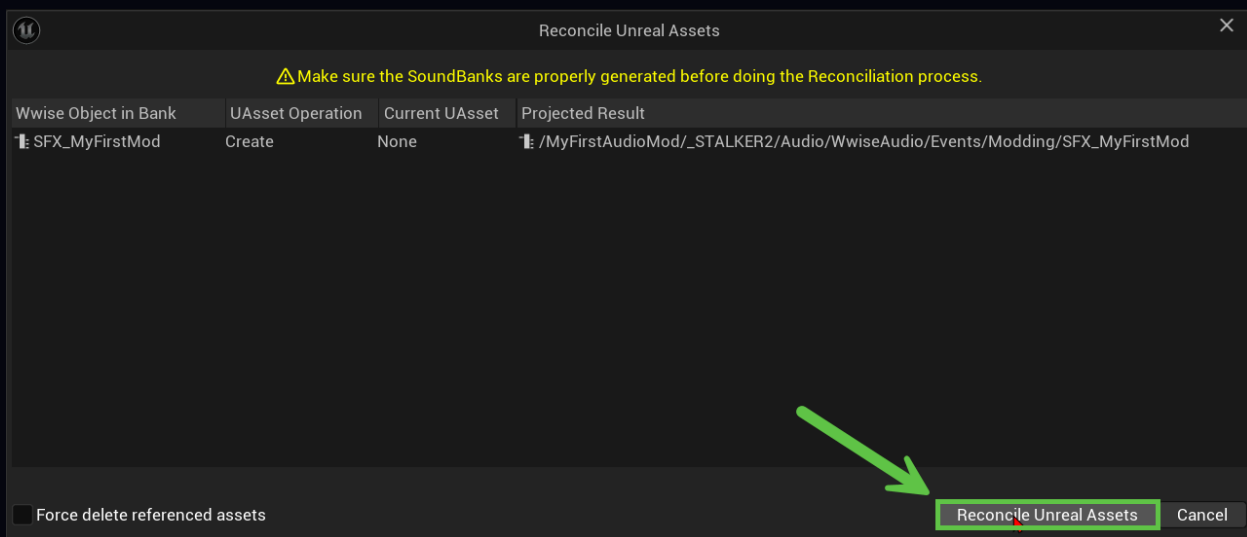
Now, as you have a playable [Event](#), you will need to Generate SoundBanks for it. Please refer to [Step 6 – Generating SoundBanks](#) for instructions if needed.

After successful SoundBank generation, the SFX_MyFirstMod will appear in the [Wwise Browser](#). Do the following:

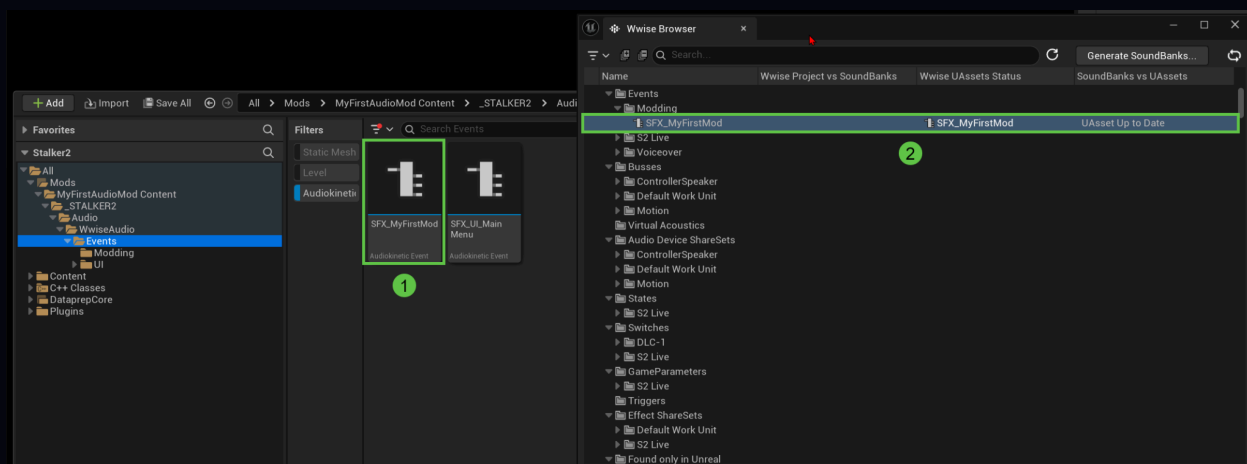
1. Select it.
2. Select the [Reconcile](#) button .



The Reconcile Unreal Assets window will appear right after. Select the Reconcile Unreal Assets button to continue.



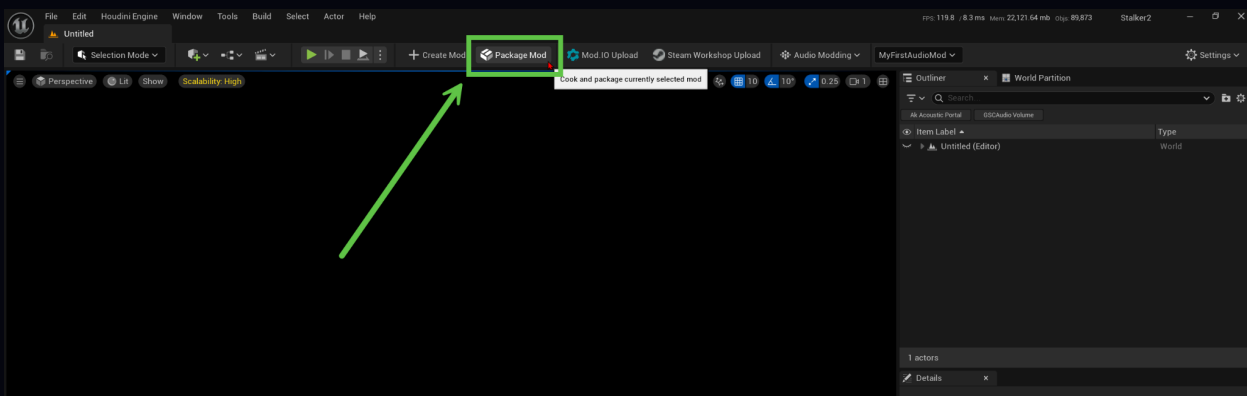
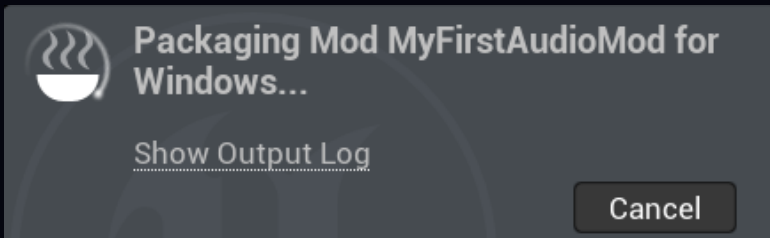
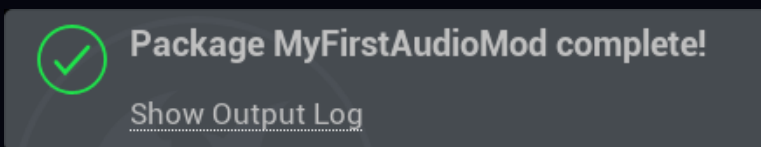
Great Job! Now you can see the newly created SFX_MyFirstMod AkAudioEvent in the Content Browser as well as in the [Wwise Browser](#).



All created Wwise Unreal Assets via the [Wwise Browser reconcile](#) process will be automatically checked out to the currently selected mod and ready to be packaged into your modification.

Step 8 – Finishing up

Now, as you have finished the setup in the Wwise Authoring application as well as managed your Wwise Unreal Assets, you should proceed with packaging your modification.



After that, you can upload the mod to mod.io or Steam Workshop.

Switching between mods

You may want to start working on another modification the right way. To correctly switch between different Wwise projects for your mods, do the following:

1. Close the Wwise Authoring application (don't forget to save your work).
2. Repeat [Step 1 – Creating a new mod](#).
3. Repeat [Step 2 – Opening Wwise Project](#).

Now, you can start fresh with the clean Wwise project and work on something else.

In case you are going back to mods you previously worked on, you might need to regenerate SoundBanks.

After opening the Wwise project for a selected mod and generating Soundbanks (please refer to [Step 6 – Generating SoundBanks](#)), you can now listen to the results of your accomplished work.

You should always regenerate SoundBanks after switching between mods using the Wwise project related to the currently selected mod.