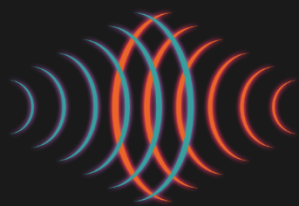


# User Manual<sub>v1.1</sub>



**ECHOTOPIA**  
Soundscape Designer™

Author(s): Pan Athen

The information in this document is subject to change without notice and does not represent a commitment from SoundFellas Immersive Audio Labs. The software described by this document is subject to a License Agreement and may not be copied to other media except as specifically allowed in the License Agreement. No part of this publication may be copied, reproduced, or otherwise transmitted or recorded, for any purpose, without prior written permission by SoundFellas Immersive Audio Labs. Registered licensees of the product described herein may print one copy of this document for personal use.

All product and company names are ™ or ® trademarks of their respective owners. For more information, please visit [soundfellas.com/knowledge-base/legal](https://soundfellas.com/knowledge-base/legal).

© SoundFellas Immersive Audio Labs, 2022.

All rights reserved.

---

# Table of contents

---

TABLE OF CONTENTS .....	2
INTRODUCTION .....	6
<b>How to use this document</b> .....	<b>6</b>
Conventions and markup .....	6
Application components .....	6
Goto paths .....	6
Panels .....	6
Figure marker .....	7
Key commands (shortcuts) .....	7
Online links .....	7
SYSTEM REQUIREMENTS .....	8
GETTING STARTED .....	10
<b>Installation</b> .....	<b>10</b>
Installing Echotopia for the first time .....	10
Updating Echotopia to the latest version .....	10
<b>Activation</b> .....	<b>11</b>
<b>Installing the Factory Content</b> .....	<b>12</b>
<b>Head-first project creation</b> .....	<b>12</b>
SETTING UP YOUR SYSTEM .....	13
<b>Setting up audio</b> .....	<b>13</b>
Configuring your devices .....	13
Choosing a device .....	13
Configuring your speaker setup .....	15
Speaker channel configurations .....	18
Special considerations .....	19
Optimum setup .....	19
Bass management .....	19
Speaker placement for live performance .....	20
Capture or stream Echotopia isolated .....	21
THEORY .....	24
<b>Sound in storytelling</b> .....	<b>24</b>
Voice .....	24
Foley .....	24
Special Sound Effects .....	24
Atmospheres .....	24
Music .....	24

<b>Acoustic environments and soundscapes</b> .....	<b>25</b>
<b>The problem</b> .....	<b>25</b>
<b>The solution</b> .....	<b>26</b>
<b>OPERATING PRINCIPLES</b> .....	<b>27</b>
<b>Philosophy</b> .....	<b>27</b>
<b>Main concepts</b> .....	<b>28</b>
Projects, Scenes, and Maps .....	28
Projects.....	28
Scenes and Maps.....	29
The Observer .....	30
Areas, Area Zones, and Global Areas .....	31
Areas .....	31
Area Zones.....	31
Global Areas .....	33
Audio Layers .....	34
Audio Layers .....	34
Instruments .....	36
Looper .....	36
Randomizer .....	37
Acoustics.....	39
Reverberation.....	41
Inward Occlusion.....	42
A creative note on convolution .....	44
<b>ASSET MANAGEMENT</b> .....	<b>46</b>
<b>Main concepts</b> .....	<b>46</b>
Projects.....	46
Creating a Project .....	46
Project folder’s default organization .....	46
Assets.....	47
Audio files.....	47
Image files .....	48
Text files .....	48
Portable vs Linked Assets.....	48
Linked .....	48
Portable.....	49
Hybrid.....	50
Automatic channel matching.....	51
Audio Channels in Echotopia.....	51
Downmixing .....	52
Upmixing .....	53
<b>Importing Assets</b> .....	<b>54</b>
Image files for Maps .....	54
Portable import using the OS .....	54
Portable import using Echotopia’s tools.....	54
Audio files for Audio and Impulse Responses.....	56
Portable.....	56
Linked .....	56
Best practices.....	58
Working safely with Assets.....	58

Choosing audio file formats .....	59
<b>FACTORY CONTENT .....</b>	<b>61</b>
<b>Sound library categories .....</b>	<b>61</b>
Ambience Kits .....	61
Sound Effects .....	62
Production Music.....	62
Particle Sounds .....	62
Designed IRs .....	63
Downloading and installing the Factory Content.....	63
<b>INTERFACE REFERENCE.....</b>	<b>64</b>
<b>Launcher .....</b>	<b>64</b>
<b>Project workspace .....</b>	<b>65</b>
Home section.....	65
Scenes section .....	66
Assets section .....	67
Create Folder dialog .....	68
Import Files dialog.....	68
Settings section.....	69
<b>Scene workspace .....</b>	<b>69</b>
Editor section .....	70
Create Area dialog.....	71
Focus Selected option .....	71
List items hover options .....	72
Map Toolbox.....	72
Selector Toolbox .....	72
Areas Overlay Color Pickers.....	73
Start Simulation button .....	74
Scene Actions menu .....	74
Inspector’s top bar .....	74
Right-clicking on Area List item or Area widget.....	75
<b>Live Mode (aka Live workspace) .....</b>	<b>76</b>
<b>Quick Render .....</b>	<b>78</b>
Quick Render the Observer .....	78
Quick Render an Area Preset.....	79
Quick Render Dialog .....	80
<b>Library workspace.....</b>	<b>82</b>
Assets Manager section.....	83
Adding Locations dialog .....	83
Area Presets section .....	84
Area Preset Editor .....	86
Save, Save As, and Quick Render options.....	87
<b>Preferences workspace .....</b>	<b>88</b>
Interface section .....	88
Interface section .....	88
Paths section.....	89
Links section .....	89
About section.....	89

---

<b>System Tray Utility .....</b>	<b>89</b>
<b>WHERE TO GO FROM HERE .....</b>	<b>91</b>
<b>Online resources .....</b>	<b>91</b>
Public Roadmap.....	91
Request Features.....	91
Changelog.....	91
Quickstart Guide.....	91
Knowledge Base .....	91
Customer Support Portal.....	91
Forum .....	91
Discord .....	91
<b>Learn Soundscape Design .....</b>	<b>91</b>

---

# Introduction

---

This is the User Manual for SoundFellas' Echotopia. Here you will find detailed information about all the features and functions of the program.

## How to use this document

This document contains information about the parts of Echotopia, how to use them, and various examples of typical usage scenarios. Although recommended, you don't have to read it from start to end.

Echotopia is based on traditional interactive audio philosophy, and at the same time, it contains a healthy amount of novelty. By reading this manual, you will be able to understand Echotopia's philosophy and soundscape theory better and get the most out of it.

## Conventions and markup

In this document, we use typographical and markup elements to structure information.

### Application components

Various application parts, like panes, boxes, buttons, etc., are highlighted using capitalization in all significant words and presented in bold text. Example: First select the **Area** in the **Area List** and then go to the **Area Properties Panel** to find the **Acoustics** section.

### Goto paths

Goto paths describe the menus and options the user must follow in a specific order to navigate to a particular application location or result. Example: You can find the maps included in your project by selecting **Project > Assets > Maps**.

### Panels

When there is important information, i.e., destructive actions or best practices, you will see this information inside a Panel. The panels look like this:

This panel contains valuable information that demands more attention from the reader.

Panels have color coding:

- **Blue:** Generic information
- **Green:** Best practices or success
- **Yellow:** Attention needed here
- **Orange:** Dangerous stuff

### Figure marker

When there are markers inside a figure, and there are references in the text, you will see a marker in box brackets with the same number or title using this format:

- **[1]** for numbered figure markers
- **[A]** for letter figure markers
- **[Acoustics]** for titled figure markers

Ordered Lists work the same together with figure markers. In some sections you might find simple numbering of lists that references numbered markers in a figure. Those have a normal text format with no extra markup, still they refer to the corresponding location marked on the figure.

### Key commands (shortcuts)

When an action can be triggered by a key or a combination of keys (shortcut), a styled markup will highlight the key combination. Key commands look like this:

**CTRL+A**

We don't support shortcuts, but they will be added in a future version.

### Online links

When we need to reference an online location, you will see a hyperlink markup. You can access this location by clicking on the hyperlink. Example: We keep an **Online System Status Monitor** so you always know the state of our online systems, you can find it here: [SoundFellas Online System Status Monitor](#)



---

# System requirements

---

## Operating System

Right now Echotopia runs on Windows, but we plan to support macOS, subscribe to get notified.

- Minimum: Windows 7, Windows 8, Windows 8.1, Windows 10, or later.
- Recommended: Windows 10 or later.

## Architecture

- Supported: 32-bit or 64-bit.
- Recommended: 64-bit.

## Processor

- Minimum: Intel® or AMD® processor with SSE3 capability or later.
- Recommended: Intel® or AMD® processor with SSE3 capability or later. Speed 2.4 GHz or faster.

## RAM

- Minimum: 4 GB (depends on project size).
- Recommended: 8 GB or higher (depends on project size).

## Monitor Resolution

- Minimum: 1024 x 720 display at 100% UI Scaling (DPI). Echotopia offers full support for HiDPI displays.
- Recommended: 1920 x 1080 display or greater at 100% UI Scaling (DPI). Echotopia offers full support for HiDPI displays.

## Sound Card

- Sound card with Windows-compatible drivers (MME/WDM). USB sound cards (Class Compliant) will also work just fine. Simply put, if your browser works through your sound card, then Echotopia will too. Echotopia supports all Windows system audio channel configurations from simple stereo to full 7.1 surround sound.

## File Formats

- Audio files: WAV, MP3, OGG, FLAC.
- Image files: For scene maps JPG, JPEG, PNG, GIF, BMP. For impulse response covers JPG, JPEG, PNG.

## Available Storage

- Hard Disk Space for Editor: 1 GB of available hard-disk space for basic installation. Additional space may be required for installation.
- Hard Disk Space for Content: Libraries are available in 3 quality levels that the user has access to depending on the purchased license:
  - High-Resolution (Wav PCM 96 kHz 24-bit) needs 184 GB to install.

- Broadcast (Wav PCM 48 kHz 24-bit) needs 92.7 GB to install.
- Multimedia (Ogg Vorbis VBR 48 kHz 0.75q) needs 8.78 GB to install.

**Internet Access**

- Internet connection and registration are necessary for required software activation, and access to online services/downloads. The Echotopia Creator and Producer editions come with large-size content libraries that the user has access to download. Due to the large sizes of those content libraries, a stable modern fast internet connection is recommended (30-50 Mbps or higher).

**Interface Language**

- Echotopia currently supports the English language in its user interface.

---

# Getting started

---

## Installation

### Installing Echotopia for the first time

Installing Echotopia on your machine is a straightforward process. It all happens through the **Installer**, that will guide you through the steps.

The **Installer** came as a downloadable link in the receipt of your purchase, or you got it directly from the SoundFellas website, or a third party reseller.

Sometimes, depending on your system and settings, you might get a warning that you are trying to install software from an unknown publisher; this happens because Echotopia is currently not code-signed on the Windows Code Signage program. If you got the installer executable from the SoundFellas store or other official reseller, you are safe to continue despite any alerts from the Windows User Account Control, Windows Defender, or your antivirus and firewall software. Select “YES” on the question “Do you want to allow this app to make changes to your PC?” and continue with the installation.

If the Windows Defender SmartScreen outputs a window stating that “Windows protected your PC,” you can continue the installation by selecting **More Info > Run Anyway**.

If you have any questions on the matter, you can always contact with our [Customer Support](#).

Run the **Installer** and follow the steps. This process is straightforward. If you don't have any specific reason to change the **Installer's** default options, we recommend leaving them as-is.

### Updating Echotopia to the latest version

If you already have Echotopia installed on your machine and would like to update it to a newer version, you can download the latest version's **Installer** from the product's page on the SoundFellas website and run it.

Echotopia's **Installer** can be run without uninstalling the previous Echotopia version. The **Installer** will make sure to keep your previous settings.

Echotopia **Projects** are automatically migrated to the new version of Echotopia when you first open them with the new version of Echotopia. Echotopia **Projects** are not backward compatible. When we say that a new version of Echotopia breaks the **Projects'** compatibility with the previous version, we mean that by opening them one time with the new version of Echotopia, you lose the ability to

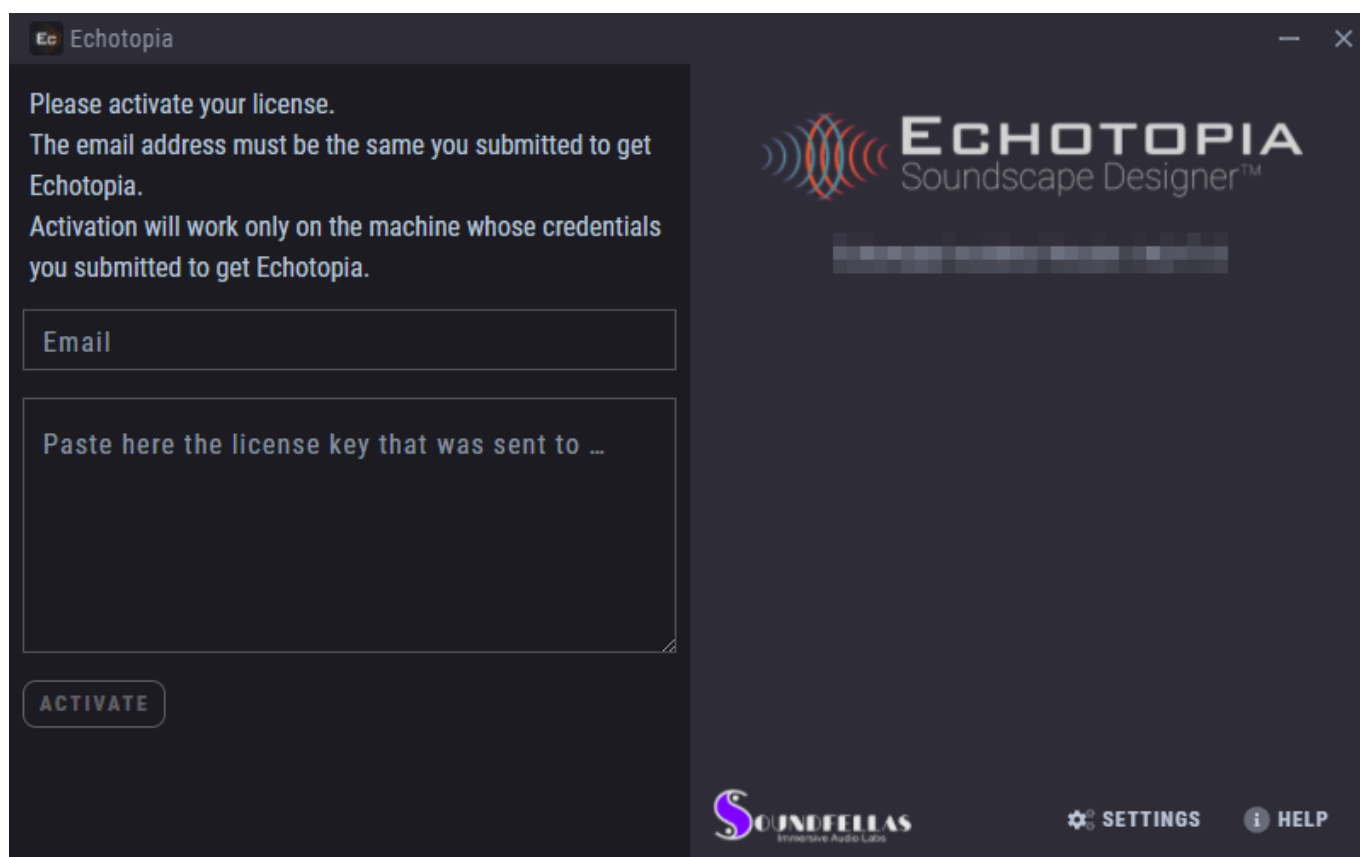
open them later with an older version of Echotopia. When that happens, we will always state that in [Echotopia's Changelog](#).

## Activation

Each license of Echotopia allows you to activate Echotopia on two machines, provided that you use one at a time (one user/not multi-user license).

Echotopia uses a classic automatic request-response activation mechanism to manage the licensing of the application on your machine(s).

After installing Echotopia on your machine, and when you run Echotopia for the first time, the application's **Launcher** will open and ask you to activate your license on this machine to use the application.



In the **Email Address Field**, enter the email address you used to purchase Echotopia. If you enter a different email address, the activation will not work and will return an error.

Below the **Email Address Field**, you will find the **License Key Field**; enter the license activation code you received with the email with the receipt of your purchase. Please check your spam folder if you didn't receive your receipt with the activation code. It might be a good idea to whitelist our domain "soundfellas.com" on your email client to ensure you receive future news and updates.

If you have any trouble with any of those steps, you can create a ticket at our [Customer Support Portal](#), and we will assist you in the process.

If you want to install the Free 30-Day Trial edition of Echotopia, you still need to pass through the "buy" process for free, to get a license that will allow you to activate your free trial on your machine. To do that, navigate to the [Product's Official Page](#) and click on **Get A Free 30-Day Trial**, then follow the process. After finishing the process to get your free trial, check your emails for instructions and your license serial number. Using that serial number will allow you to activate Echotopia on your machine for free as a fully-featured 30-day demo.

If you already activated Echotopia on two machines and you would like to activate it on a third machine, you should first **Deactivate** it on one of the other two machine you have it already activated. That way, one machine activation will be freed and you will be able to activate Echotopia on the new machine now following the default activation process. To do that go to **Launcher > License Manager > Deactivate**.

The **Launcher** is the first window you will always see when you launch Echotopia. There you will find a list of the recently opened projects and useful shortcuts like the **License Manager, Knowledge Base, Customer Support Portal**, and more.

## Installing the Factory Content

Most versions of Echotopia come with Factory Content. This is a large collection of sound libraries offering many ready-made ambience loops, sound effects, noiseprints, and impulse responses, so you will be able to create high-quality soundscapes right out of the box.

Currently, the Echotopia editions that come with this collection are the **Storyteller, Creator, and Producer** editions.

We created an online guide on how to find, download, and install the content that comes with your edition of Echotopia. You can find it here: [How to Download the Echotopia Content](#).

## Head-first project creation

You could dive in immediately from here and start creating projects, we even created a [Quickstart Guide](#) to help you do just that. But we recommend reading the rest of this manual to be able to use Echotopia at its full power.

---

# Setting up your system

---

## Setting up audio

A key concept to understand, is that when you launch Echotopia, it automatically gets your sound card configuration and connects with it through the default Windows system MME/WDM driver. The same happens with your internet browser and most videogames you play on your PC.

## Configuring your devices

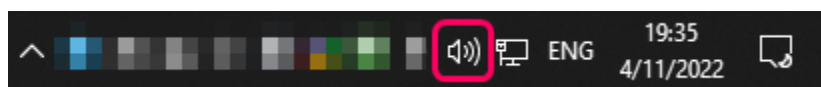
As Echotopia uses the operating system's sound system, the way to configure your devices is the same as when you configure them in order to play games or movies.

Echotopia will automatically match your default device's output configuration. This happens on Echotopia's launch, so you have to first configure your sound device and then launch Echotopia, especially if you want to take advantage of any extra channels you like Echotopia to use.

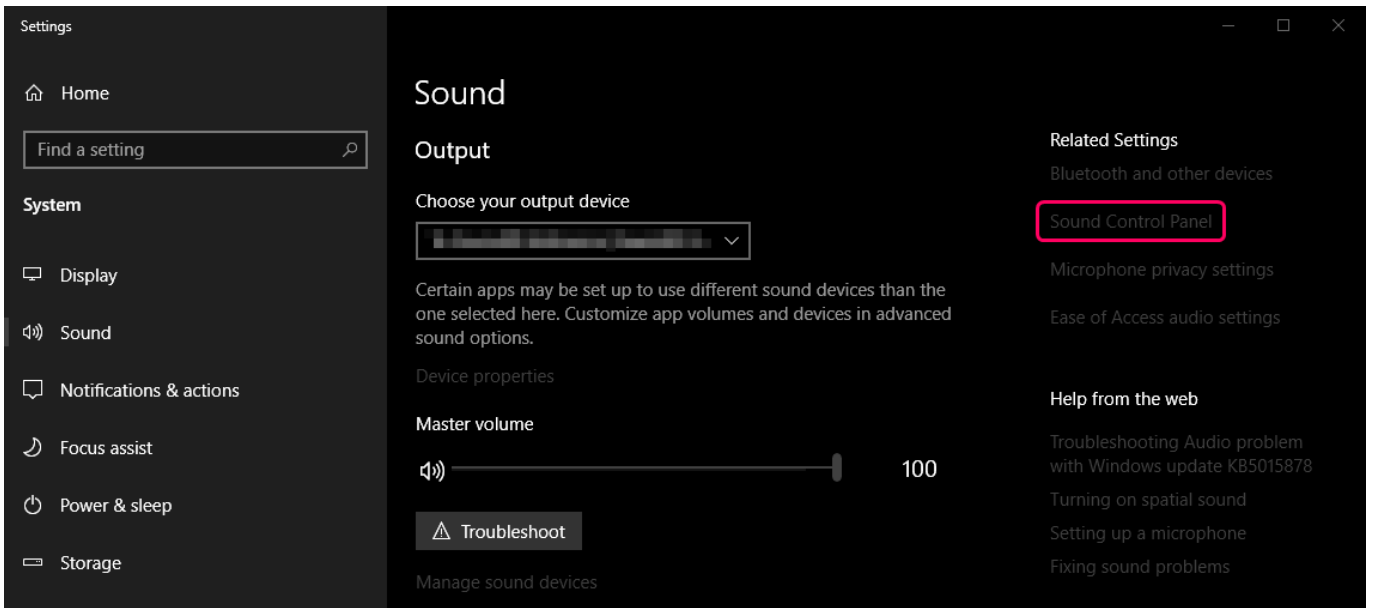
Not only Echotopia will match your channel configuration automatically on launch, but its audio engine will upmix/downmix all the audio files and processors to match your channel configuration. This way you can always deliver immersive experiences without having to worry about your assets' format or how the acoustics simulation is set up. You have an 8 channel sound card but all your sounds are in stereo? No worries, Echotopia's intelligent algorithm will choose the best way to upmix your content so that in the end you end up with full surround sound. For more details on Echotopia's **Automatic Channel Matching** function, check out the **Main Concepts/Automatic Channel Matching** topic.

## Choosing a device

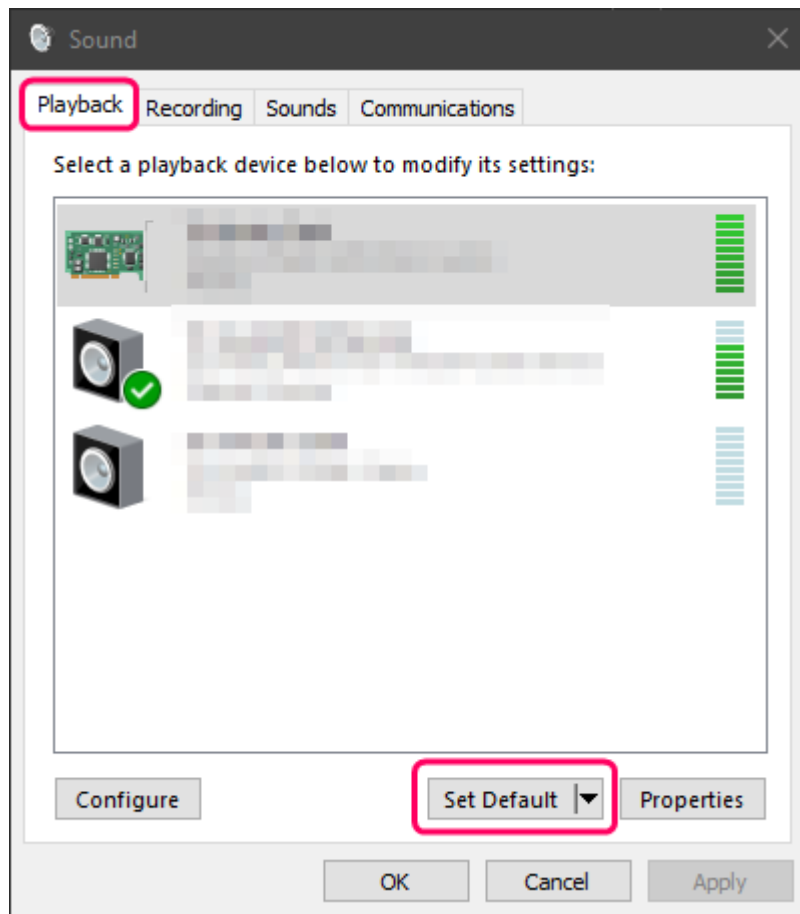
To configure your device you need to access the **Windows Sound Control Panel**. To do that **Right-Click** on the **Speaker Icon** on the right corner of the **Windows Taskbar**.



Then choose **Open Sound Settings**, from there you can choose the **Sound Control Panel** link at the top-right corner of the window.



When the panel opens navigate to the **Playback** tab. There you can choose the device you want to stream audio to and set it as default by clicking the **Set Default** button.

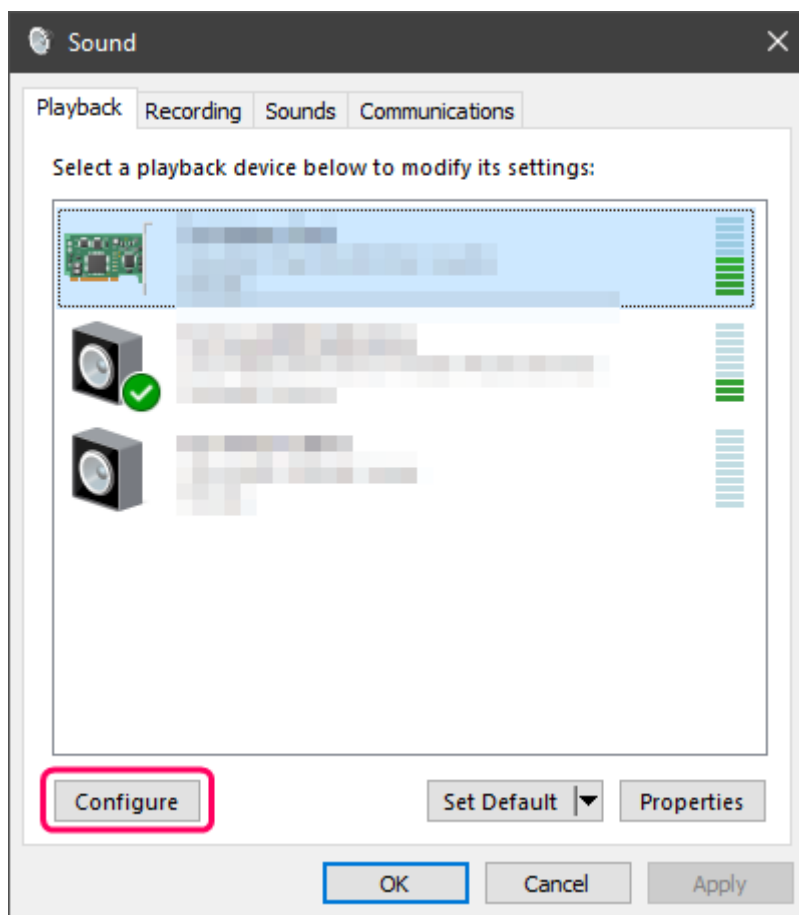


You can also use another device with Echotopia, than the default, by choosing a specific device for the application using an advanced sound configuration panel on Windows. See later in this chapter.

### Configuring your speaker setup

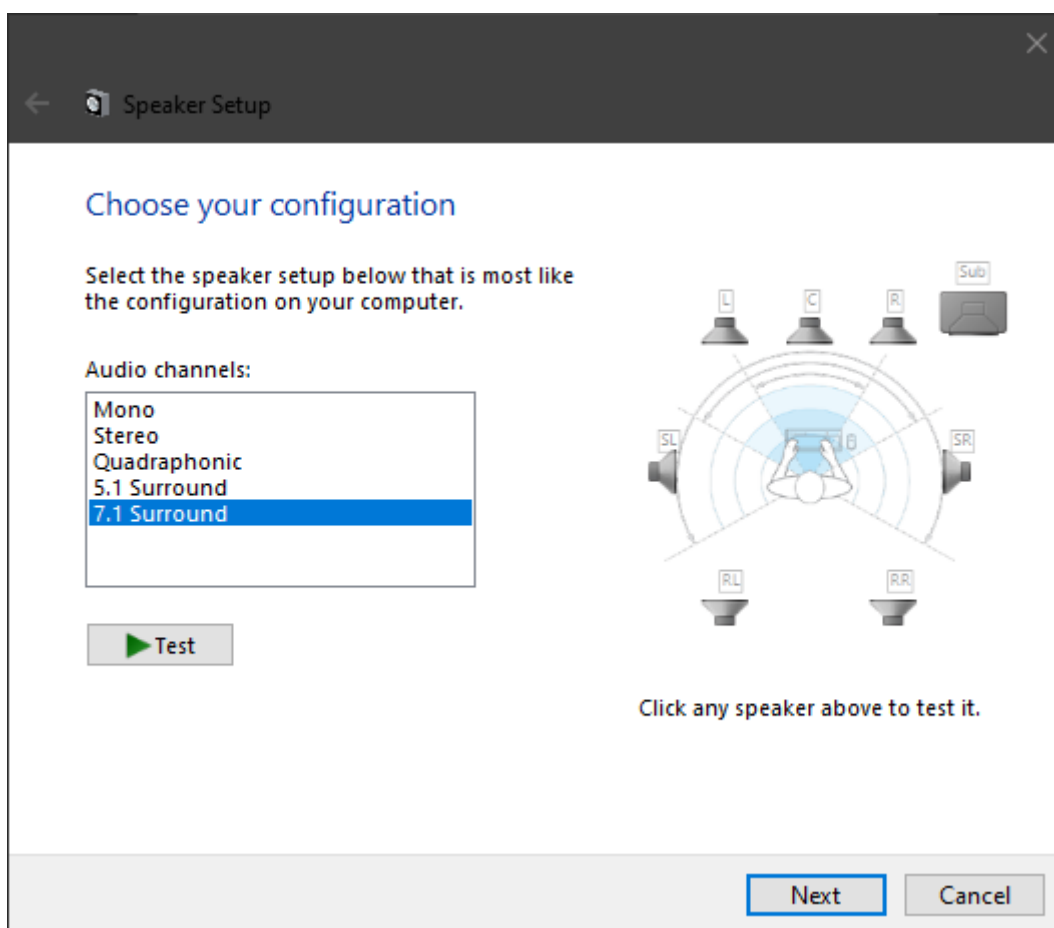
In this panel you can select the sound card you would like to use and press the **Configure** button to enter the **Speaker Setup**.

Before changing sound card configurations, it's a good idea to close any open application to protect your system from errors coming from applications that cannot adapt live to system configuration changes. Also, mute your speakers to protect the speakers and your hearing from random signals that system configuration changes often generate.



A wizard will open to guide you on your speakers' configuration. Let's analyze the most important decisions you will have to make in this wizard.



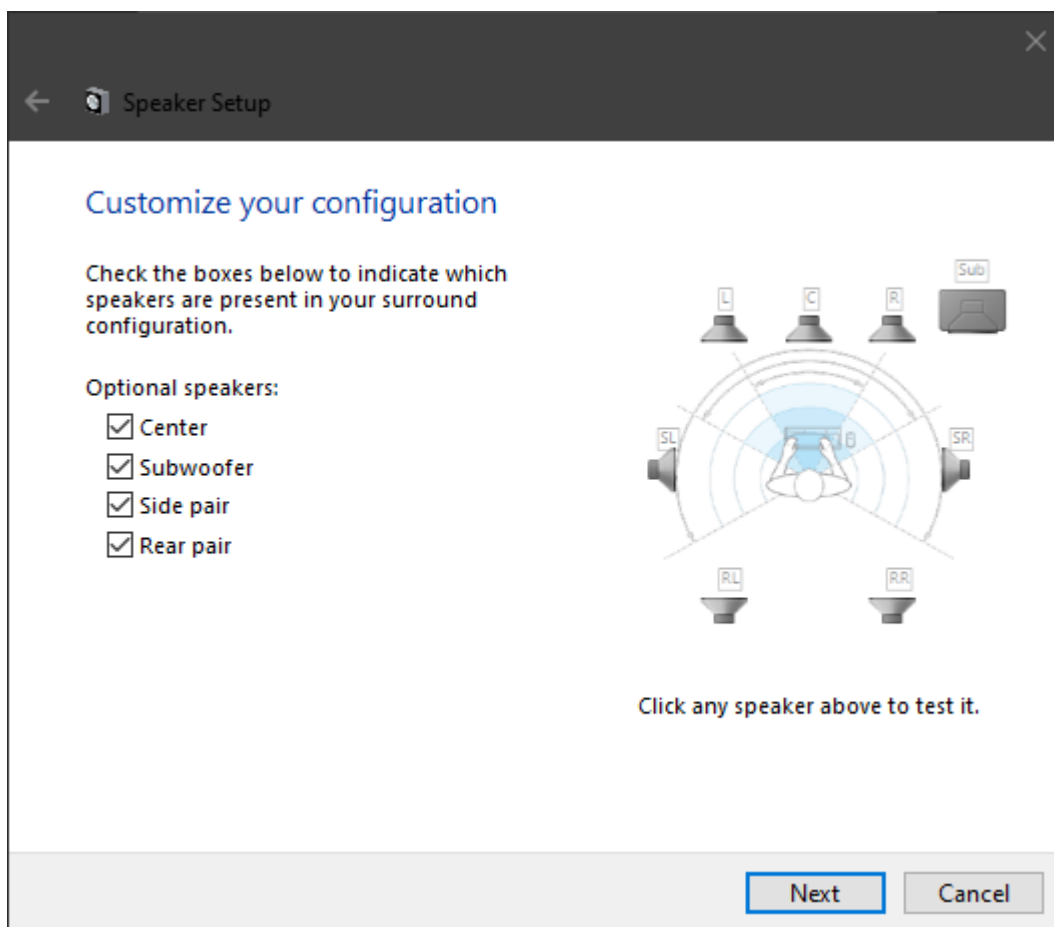


As you see above, the first thing to do is to select the speaker setup you would like to have. That depends to the physical speaker setup you have in your listening area, but it can also be the channel format that you would like to record/capture or stream to another place or app through virtual connections.

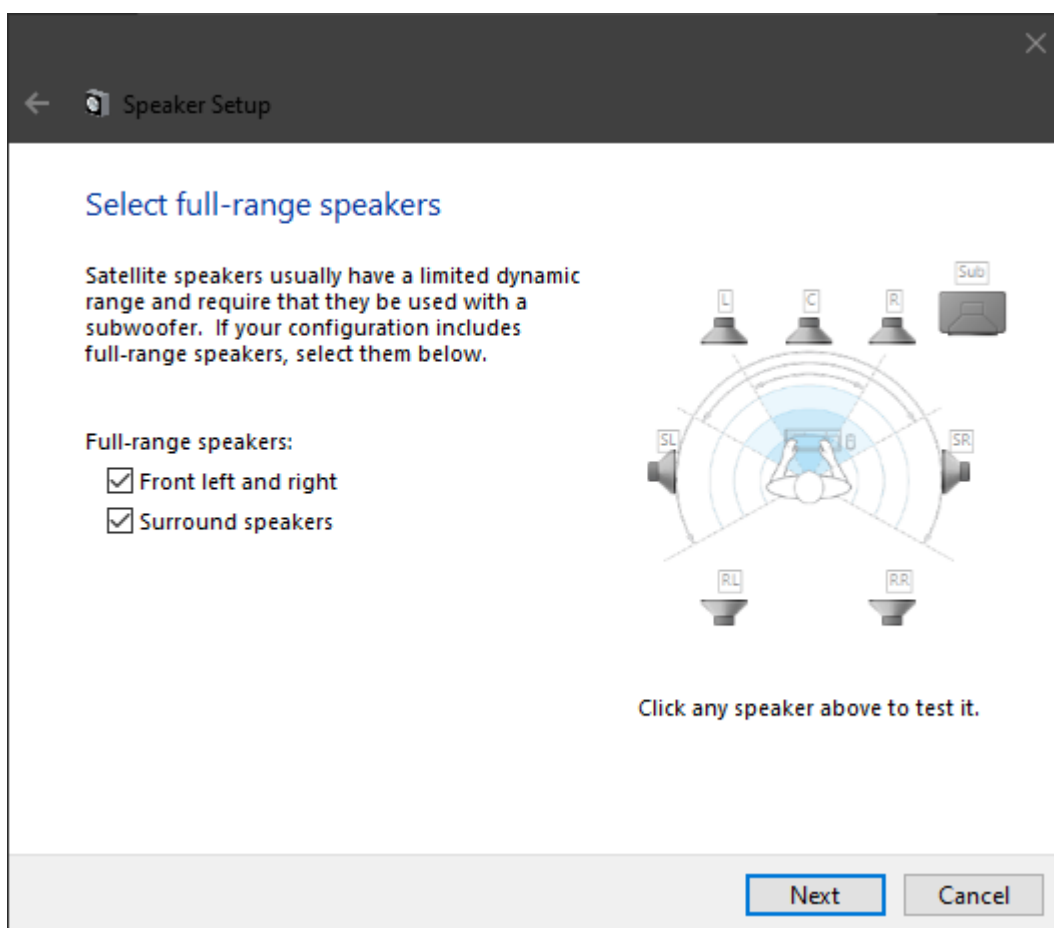
Echotopia uses an equal distribution model for all channels, as opposed to the traditional surround formats that have been developed for screen viewing. Echotopia creates a full envelopment of the audience with no need to focus most of the speakers around a screen to accompany a movie viewing or videogame playing. This means that in an 8-channel system, Echotopia uses all 8 channels to render sound in a planar octagon configuration around the listening area, using all speakers arranged around a circle or rectangle, with each speaker equally distanced from the next. More on that later.

In home entertainment speaker systems that support 5.1 or 7.1 surround sound, the speaker configuration is weighted towards the area of the viewing screen and two of the speakers have specialized use. The Center speaker/channel is there to carry dialog and the subwoofer speaker is the to carry the LFE (Low-Frequency Enhancement) signals. Echotopia uses those two channels the same way it uses the rest, as the next speaker in line from the previous, all positioned equally-distanced around a listening area.

You should choose your preferred speaker configuration here and move to the next step.



In this step, you can select which speakers are present in your configuration. Usually you don't have to change anything here, unless you're missing a speaker from your set. If you do miss a speaker, you can uncheck it here so the operating system will know not to use it.



The last step of the wizard will allow you to declare which of your speakers are full-range speakers.

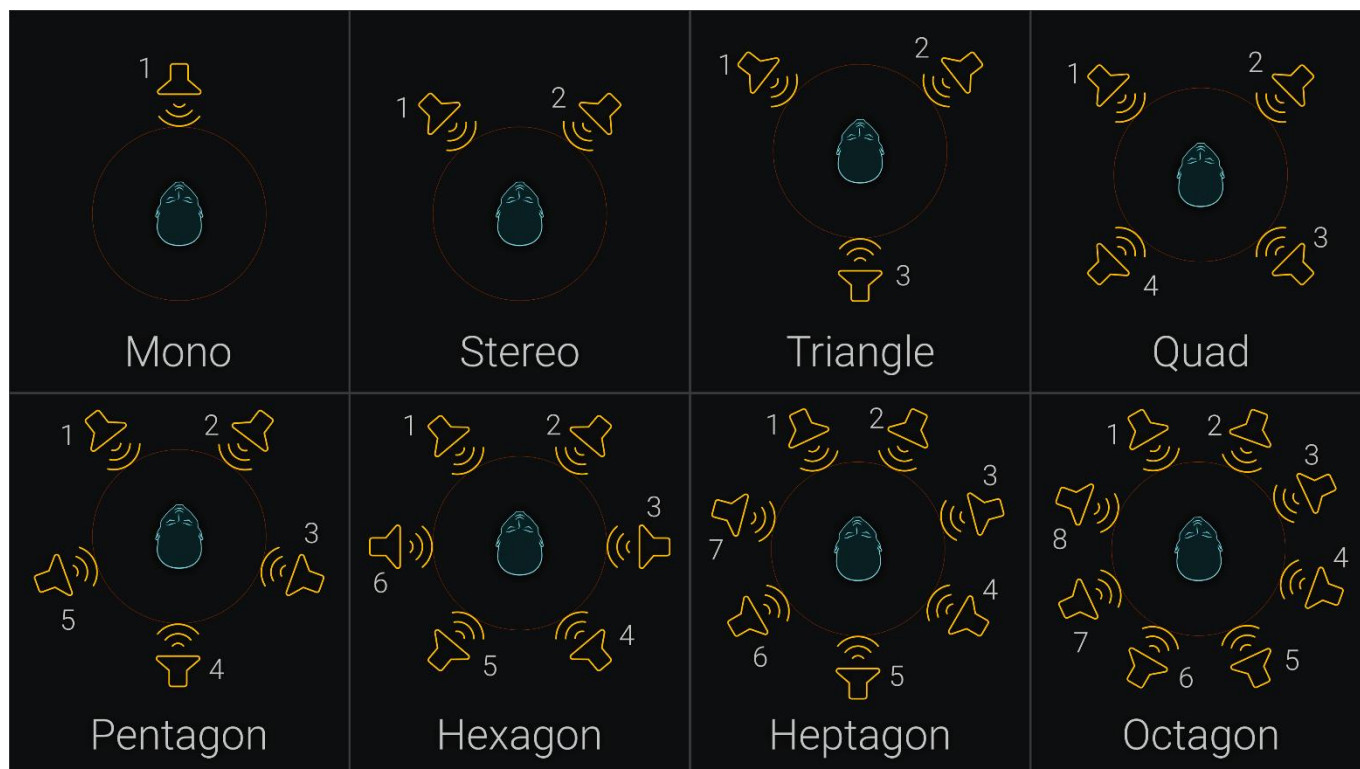
Consult your speakers' operation manuals and set things here accordingly.

That's it, you're done. Now the operating system knows your channel/speaker configuration, and can inform Echotopia how to play back audio when operating.

Configuring your sound system setup correctly benefits you not only when using Echotopia, but also when you enjoy movies, videogames, and any other entertainment media that includes audio.

### Speaker channel configurations

Echotopia supports the speaker configurations below. Depending on your system setup, sound card configuration, and speakers' positioning, you can achieve various levels of separation between the distribution of the energy around your listening area.



If you have a traditional (usually 5.1 or 7.1) surround system speaker configuration in your listening area and you don't want to change the position of your speakers, don't worry. You can use the **Speaker Setup** dialog box shown on the **Configuring your speaker setup** paragraph above, and choose the **Quadraphonic** configuration. This way, Echotopia will use the four corner speakers as it should be and not use the center and subwoofer speakers which you might have positioned for film viewing. Check your operating system's documentation and your sound card's user manual for the exact channel numbering.

## Special considerations

### Optimum setup

For Echotopia, the optimum speaker setup is eight full-range speakers arranged on a circle or around a rectangle around your listening area, as equally-distant as possible from each other.

### Bass management

Bass management is when your sound system can direct audio from the main and surround channels to the subwoofer or the opposite (forward and reverse bass management respectively).

If your sound system (usually the amplifier menu or controls on the subwoofer speaker) offers bass management, you should set it up accordingly so you always enjoy full-range audio.

As stated before in this document, Echotopia doesn't use the LFE channel to route extra enhancement signals, this is something usually done in movies and some videogames. So, if you use bass management in your setup, you might want to deactivate it when using Echotopia.

There is one case in which bass management can benefit you while using Echotopia. If your main and surround speakers are not full-range and your system can redirect the low frequencies of the main and surround channels to the LFE channel (forward bass management) so the subwoofer will play them (because your main and surround speakers can't), you should use it to get full-range sound. If you do so, make sure that the LFE channel doesn't carry a discrete signal and only plays the low frequency parts of the other speakers.

### Speaker placement for live performance

If you are planning on using Echotopia in your storytelling session to entertain a group of people on-site, you should place your speakers around the room to create a sound image that comes from everywhere around the listening area.

Don't be afraid of not using a film-based speaker setup, think of the room as your own escape room. Soundscapes are best perceived when coming from everywhere and you don't have a movie to sync the audio to. Be creative. You can hide the speakers, turn them to face the walls and diffuse the sound around the room. Spend some time to create the configuration that gives you the most immersion in the soundscape.

For permanent setups in game rooms and purpose-build entertainment areas, you can get really creative. Here are some ideas we tested in our labs and worked very well:

- Use all eight channels of your sound card but drive two speakers per channel using line signal duplicators, effectively expanding your setup to 16 speakers. This will give you more area coverage. You can extend this with more duplicate lines and adding more speakers to cover more area. Also, using more speakers of lower power creates an entertainment area that doesn't tire the audience with points of loud sound.
- Put the speakers on the ground and face them with an upward angle toward the walls, creating a diffused sound fountain for each speaker position. This will fill the room more than facing the speakers directly towards the listening area and also create a better environment for storytelling/discussion between you and your guests, as the sound coming from the speakers will not interfere with your talking.
- Do the opposite of the above. Create sound curtains by positioning the speakers on top of the room and direct them with a downward angle towards the walls.
- You can also go all the way and use all of the above. Duplicate the signal of all your channels to create both sound fountains and sound curtains for the ultimate immersive game room setup. You can use self-powered

multimedia speakers that are almost full-range so you don't blow up your budget.

- Use vibration speakers, a special kind of speaker that adheres to a surface and uses that surface to produce sound. Those can be put under your game table or you can even hide them behind your walls for the ultimate augmented experience.

## Capture or stream Echotopia isolated

In some case you might want to capture and stream Echotopia's sound output isolated from the rest of your apps.

You can do this using a virtual audio device (aka virtual audio cable) utility and a special Windows setting.

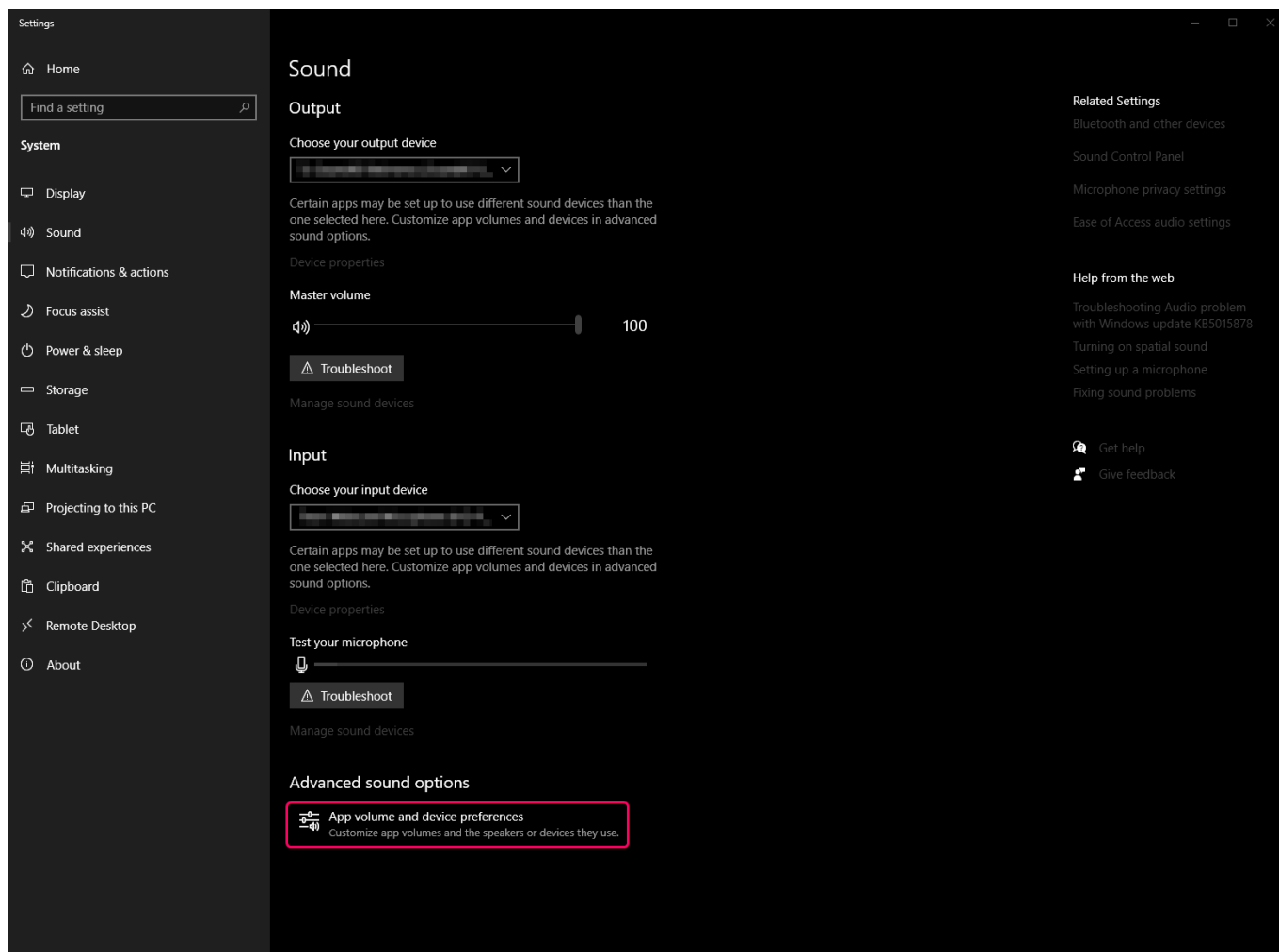
Regarding the virtual audio device utility, there are many options, and you should check the interne to find one that fits your purposes. Try searching for the terms **Virtual Audio Cable, Virtual Sound Card**.

To route the output of Echotopia to a separate sound device (in that case the virtual audio device), you **Right-Click** on the **Speaker Icon** at the **Windows Taskbar** on the bottom-right corner of your desktop:



Then choose **Open Sound Settings**.

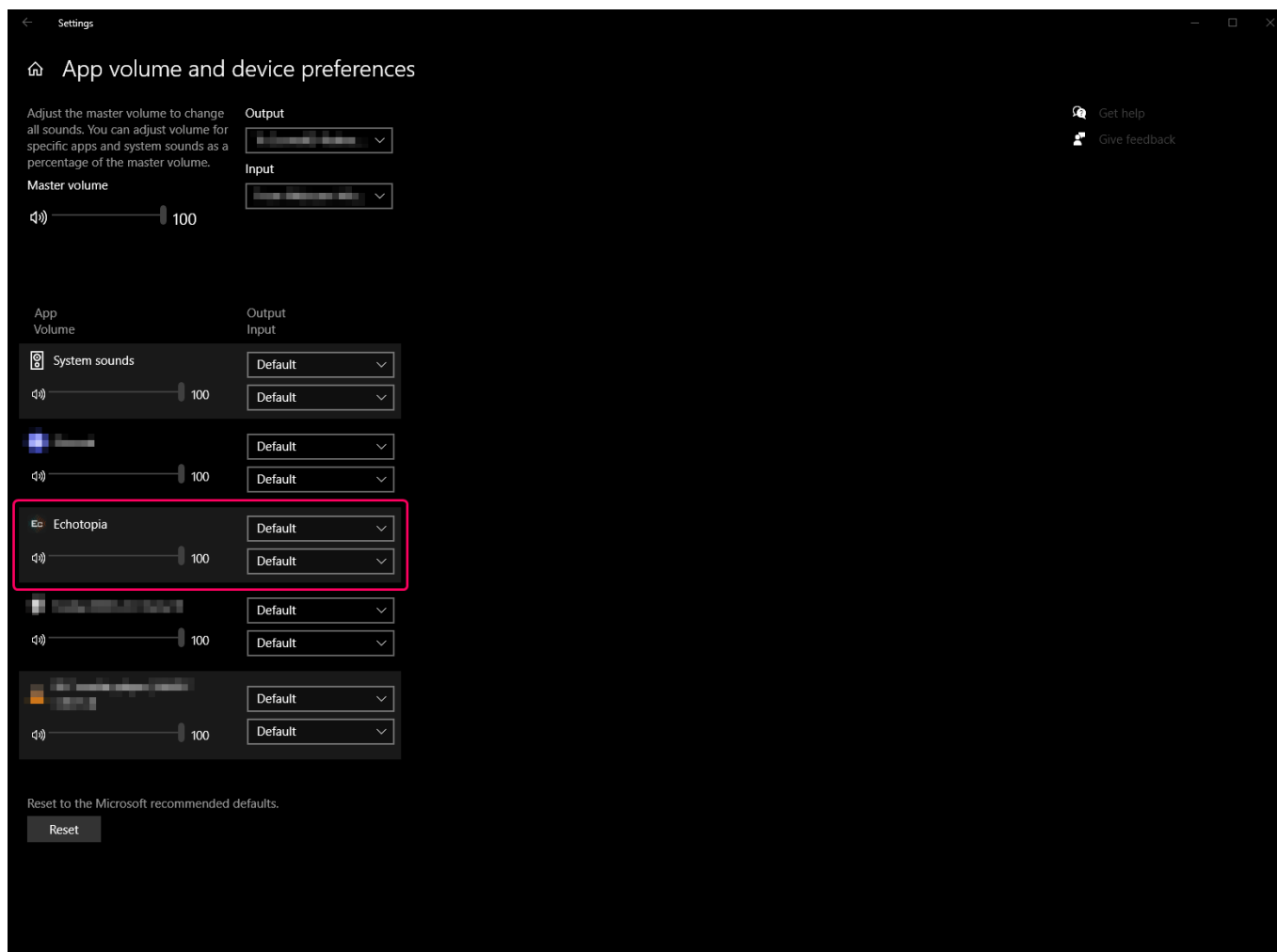
On the **Settings > Sound** windows that appears you find the **Advanced Sound Options** section and select **App Volume and Device Preferences**:



This will open a window with all your open applications and their respective input and output devices. Here you can choose where to send Echotopia's audio output.

To capture or stream Echotopia as an isolated signal, you can select here to output to the virtual audio device and then go on your screencast or streaming app and select the same virtual audio device as input.

You can also use this window to send Echotopia to a secondary sound card because you have a different configuration of speakers there, specialized for soundscape delivery.



Many motherboards offer full 7.1 surround audio outputs and most of the times users also have another card installed on their system. If that is the case, you can expand your setup by using a separate set of speakers dedicated for Echotopia and soundscape playback, and your default set for movies/videogames/casual use. Using the options described in this section, you can direct Echotopia always on the dedicated set and never switch. Doing so gives you the extra ability to mix the two setups together using Echotopia with another app to experiment with multiple applications. For example, you could use Echotopia to generate the ambience and at the same time listen to your favorite podcast. Of course this can be done also using one sound card, but if you have two sound cards and you feel adventurous, creativity is right around the corner.

The settings on this window are not lost. When you close Echotopia you might not see it in the list of apps available here, but when you open Echotopia again, your settings are going to be recalled.



---

# Theory

---

## Sound in storytelling

In entertainment media we use sound to enhance the storytelling and create atmosphere and drama for the audience. The sounds that are used to enhance our storytelling can be categorized in five high-level classes:

- Voices
- Foley
- Special Sound Effects
- Atmospheres (aka Ambience, Atmos, or Background Noise)
- Music

### Voice

Voices contain the voices of the characters in the story and we call that Dialog, but they also can contain non-diegetic material, like the voice of a storyteller that “tells the story from above the scene”, and we call that Narration. On explanatory passages, like in documentaries, the Voice category might include the voice of the main speaker, and we usually call that a Voiceover.

### Foley

Foley are everyday sounds that are added to the material to add realism. The category is named after the famous Jack Foley and it contains sounds like clothing, footsteps, doors, and other everyday sounds of interactions of the characters with the scene’s objects.

### Special Sound Effects

Special Sound Effects are sounds that are created for special events or visuals that happen in the story. Thunderstorms, spells, weapons, spaceship engine sounds, etc., all those belong to that category. Special Sound Effects can also be made for non-diegetic events, a common example is the common whoosh effects that you see in visual-rich video transitions.

### Atmospheres

Atmospheres are also known as ambience, atmos, environment, environmental noise, background noise, and many more names. Atmosphere is the general background sounds that are happening while the rest of the sounds we just listed happen in the foreground. Atmospheres are used to describe the scene that a specific part of the story is happening at the time. From the Atmosphere of a scene we can quickly communicate the state of the surroundings of our story.

### Music

Music is commonly used as a non-diegetic tool to enhance the action and the drama of storytelling. In fact, music is so successfully augmenting the audience's experience of the story that many times the soundtrack album of a movie or videogame title is also a successful product. Music can also be used as a diegetic medium to enhance the story from within the scene.

## Acoustic environments and soundscapes

Echotopia is a soundscape design, production, and performance environment. To understand how Echotopia works, the underlying philosophy that drives its design as an authoring tool, and how a user should use it efficiently, one must first know what soundscapes are.

Soundscapes are easy to define, yet many get it wrong. A common misconception is that soundscapes are background noise or atmos. But they're not.

An easy way to understand what is a soundscape is to first understand what an acoustic environment is.

According to the International Organization for Standardization (ISO), which standardized the definition of Acoustic Environments (ISO 12913-1:2014), the acoustic environment is the combination of all the acoustic resources, natural and artificial, within a given area as modified by the environment.

Let's try a simple example of the definition above. The acoustic environment of a forest is the sounds from birds, wind, rustling of leaves, and water from the river. All those sound sources combined together with the reverberation of the reflection and absorption of the sounds upon the materials of the forest's surfaces, and the occlusion that happens when some sounds pass through some of the materials. All of the above are an acoustic environment. Sounds and acoustics combined as one result.

If you understand the above, it's easy to define the soundscape.

The soundscape is the acoustic environment as perceived by an observer, in context. Meaning that the soundscape is the acoustic environment as perceived through the ears and psychology of the listener in the current state of mind.

This elevates the art of soundscape design from being a simple composition of sound sources and acoustics to include the psychological and cognitive state of the hypothetical listener/viewer (audience).

Soundscapes therefore, are some of the most difficult audio materials to compose. It includes all sound sources from an environment, all the acoustics that apply on those sources, and the directed perception of the audience at any given time. Furthermore, slight changes of the story's state, and the position and state of the observer, should have a big impact on the audio material.

## The problem

As you already understand, soundscapes contain many layers that interact with each other to create the final result. Before Echotopia, the complexity of a

complete soundscape made it very difficult for creators to produce. Also, the technicalities involved with the process kept creators away from the design phase resulting in repetitive material that either lacked imagination or wasn't coherent with the rest of the media or the story itself.

Before Echotopia, hobbyist storytellers like game masters, had to rely on soundscape generators which offered ready-made ambience. Another solution was searching the internet for streaming content. Both solutions cannot solve the problem of sound-to-story consistency and offer low-quality content in locked forms that could not be used in other platforms if needed.

Another sector that was affected from the lack of a soundscape design solutions, before Echotopia, was entertainment media professionals like filmmakers, video game creators and sound designers. Those professionals had to create complex projects and link hundreds of parameters, only to do it again if the design changed. Getting the right content for your composition was also difficult, because content needs to meet specific acoustic and psychoacoustic standards to support higher levels of immersion. For the professional sector, those problems meant long hours rerouting audio, tweaking parameters, and cleaning sounds. All that drove the prices higher for the customers, who got subpar material every time they pushed the professional creators for yet-another project change.

## The solution

Echotopia combines the best from both worlds, using an intuitive map editor that the user can easily define areas and those areas contain special instruments mimicking natural sound behaviors. Echotopia's mixing engine features automatic calculation of the acoustics of how sound travels through air over distance, where the **Observer** is located (the listening object, more later), the reverberation and occlusion between the areas, and many more parameters that would have been hard or even impossible to mimic and tweak using other applications.

The result is a productive soundscape authoring application that handles all the difficult mechanics of producing acoustically-coherent soundscapes, and leaves only the creative decisions for the user to take.

Echotopia's true power is that it's a specialized tool. That means that all its functions and the underlying philosophy are designed with one goal in mind, the democratization of professionally-sounding soundscapes for everybody.

With Echotopia, creative sectors and creative people that needed soundscapes but didn't possessed the knowledge or budget to have them, will now be able to enjoy them in their highest quality.

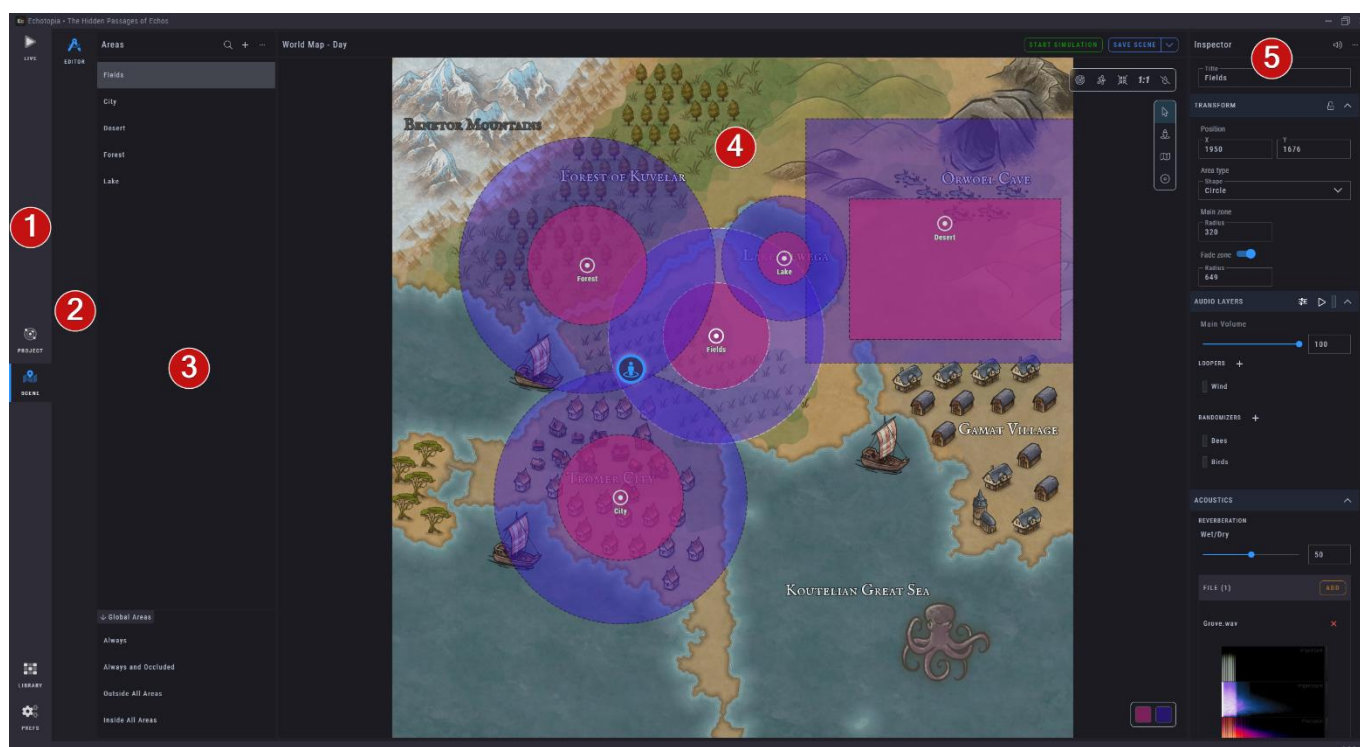
Sure, sound designers, filmmakers, and video game creators can all benefit from Echotopia, but the same also stands for game masters, streamers, and any other kind of storyteller. Furthermore, escape room producers, installation artists, mixed reality experience designers, meditation and relaxation coaches, psychologists, yoga studio owners, interior designers, and many more, will be able to design and produce soundscapes for their projects and spaces.

This is only the beginning...

# Operating principles

## Philosophy

Echotopia has a workspace-based philosophy taken from real life design studios and ateliers, that are made to support highly creative environments for artists and crafters.



Each different workflow has its own tab in Echotopia, those tabs are called **Workspaces** [1], and you can find them on the far left side of the app. Each **Workspace** has different **Workspace Sections** [2] to help you find all the related tools faster. Just like an artisan's workbench.

On the screenshot above we see the **Scene Workspace** and its **Editor Section** open. Their tab icons are highlighted in blue.

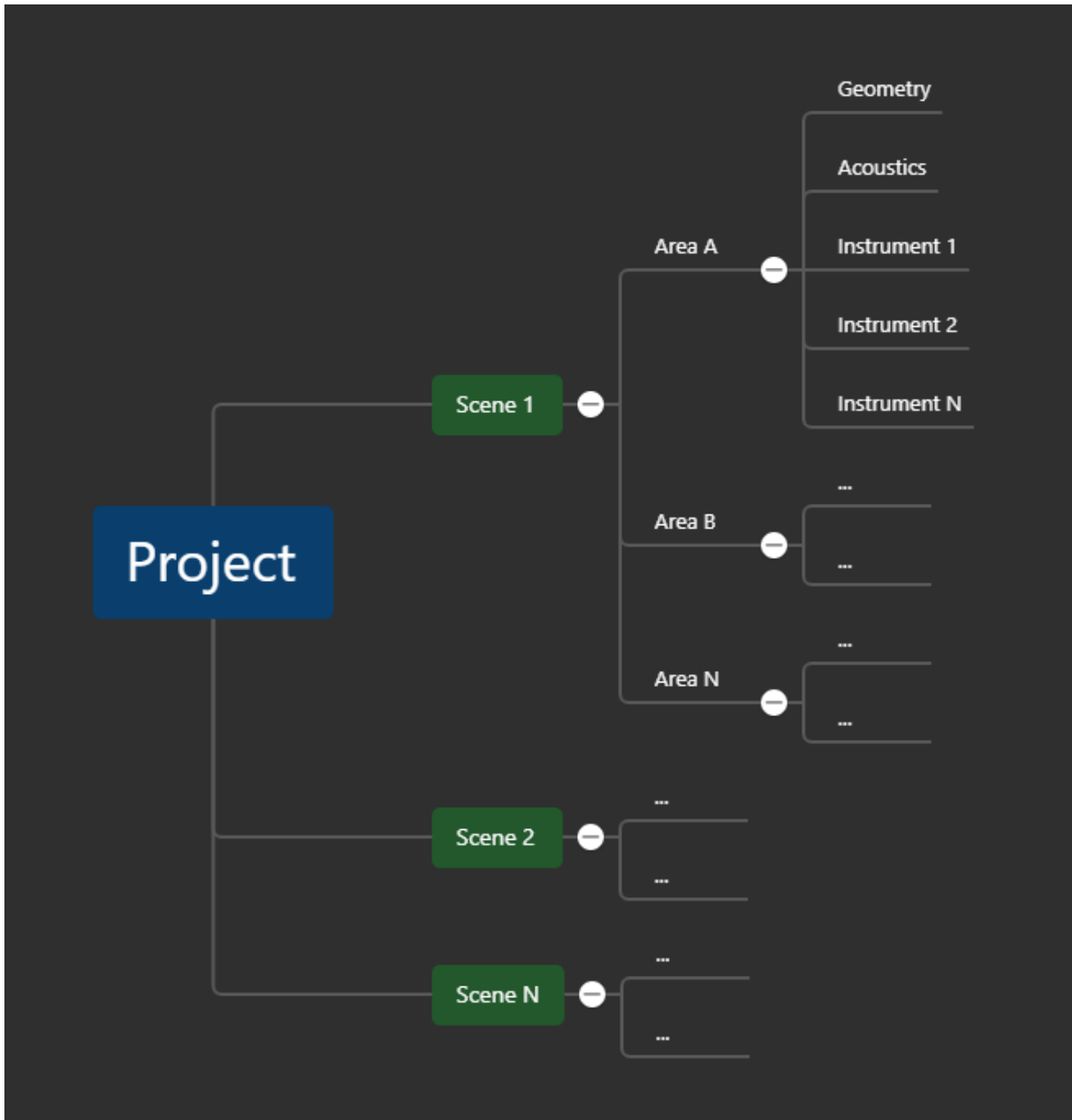
The **Scene Editor** is where you will be doing most of your work in Echotopia and contains three main panes:

- The **Areas** pane [3] where you see a list of all the **Areas** on the **Scene**.
- The **Map** pane [4] where you see a the **Map** of the **Scene**, the **Areas** on top of the **Map**, and the **Observer** which defines from which point on the **Map** Echotopia renders the experience.
- The area **Inspector** pane [5], where you can set the parameters for each **Area**.

But before we explain all the parts of Echotopia in detail, let's see the main concepts. This will help you to better understand how to organize your projects depending on your needs.

## Main concepts

This is Echotopia's **Project** information architecture model. In simple terms, how a **Project** in Echotopia is organized. Let's see each of those parts in detail.



## Projects, Scenes, and Maps

### Projects

Echotopia's highest organization entity is the **Project**. You can create **Projects** that contains everything related with one logical unit. If you are a game master that means the each Campaign can be a different **Project**. If you are a sound designer, you can have everything related with a film you are working on in one **Project**.

## Scenes and Maps

A **Project** can contain as many **Scenes** as you want. Each **Scene** contains one **Map**. A **Map** is an image projected as a background of a **Scene**, on top of which you lay the **Scene's Areas**.

The terms **Map** and **Scene** are used interchangeably throughout our documentation, depending on the context.

A **Scene**, despite of calling it a scene, is not necessarily contain the soundscape of one scene from a film or a level from a videogame. You can be completely free on what a **Scene** means for your **Project**, and it depends mostly on the **Map** that you will use for the **Scene**.

For example, a game master might want to have a **Scene** that contain a macro view of all of the campaign's world, and then different **Scenes** containing smaller parts of the world in more detail. Then, each dungeon can have its one **Scene** as well for even more micro-management on the soundscape experience.

On the same note, a professional sound designer might choose to have all the world that a story takes place in one **Scene/Map** so that different positions of interconnected acoustic environments can be selected and exported to be used as loops in different parts of a movie, put together in post-production. Or, in case more granularity is demanded by the nature of a project, extra **Scenes** can be created for more detailed parts of the story, working together with the concept artists to create conceptual sound designs for approval or the final soundscapes later in the production phase.

For game masters and storytellers, **Maps** can come from image files taken from the world the adventure takes place, real photographs from a tabletop game setup taken from above, or purchased online to complement your story.

For sound designers, **Maps** can come from concept artists working on the design team, from simple sketches made out from scripted descriptions, or just your own simple sketches created from discussions with the design team to help you produce the conceptual sound design, and later use them for the final production.

**Maps** are a significant part of your work with Echotopia, but their creation is out of the scope of this manual.

There are many ways to create maps, from simple to photorealistic 3-dimensional renders, or even real-world aerial photographs.

A little search on the internet can go a long way. Try searching for keywords like "DnD Map", "RPG Map", "Battle Map", "Tabletop Map", "Physical Map Sets" and

you will get a good idea on the kinds of maps you can find online or create by yourself.

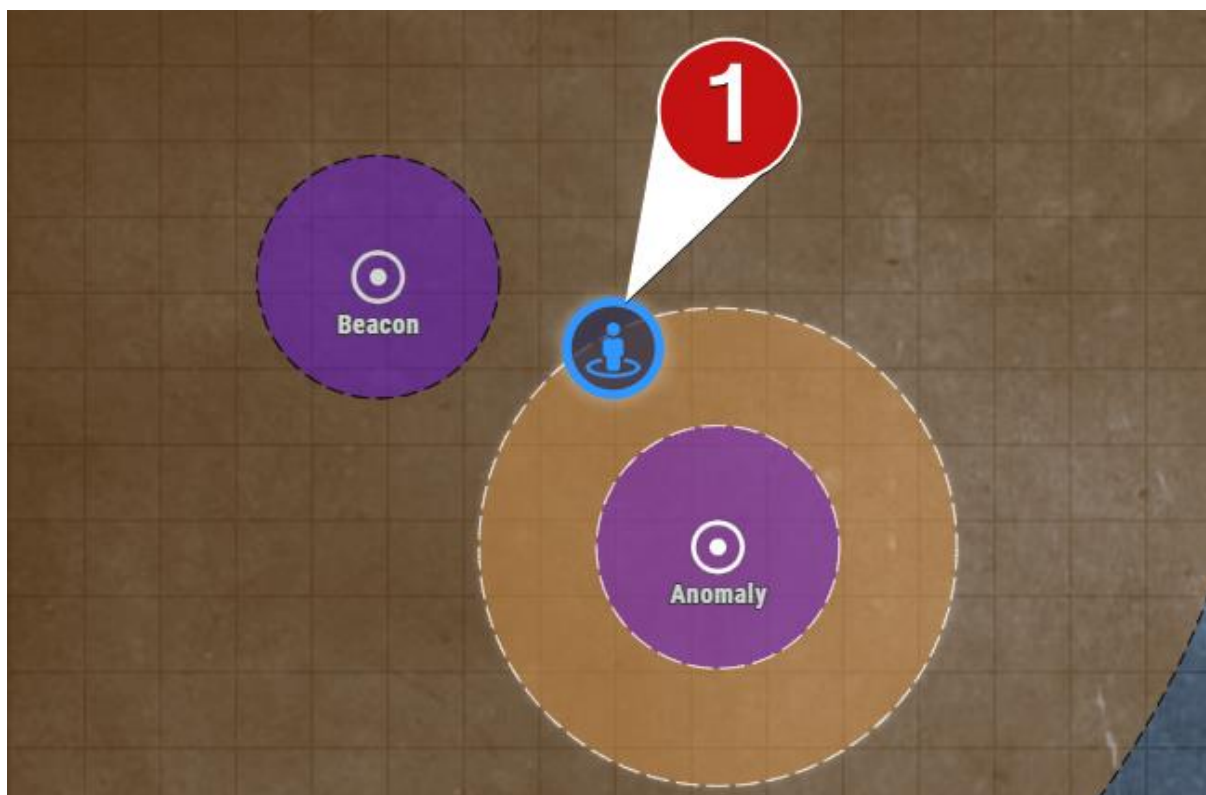
## The Observer

The **Observer** is the most important object in Echotopia. In the context of audio, the **Observer** is actually the listener through which a **Scene's** audio stream is rendered.

You experience the world through the **Observer** and Echotopia's mixing engine takes all its parameters from where the **Observer** is located on a **Map** and the **Observer's** state.

In this document when you read "you are inside the **Area**" or other similar statements, we are referring to the **Observer**. We use the **Observer** and **You** as interchangeable terms meaning the same thing, the **Observer's** location and state in the **Scene**.

You can **Drag and Drop** the **Observer** in any location on the **Map** or you can **Double Left-Click** with your mouse on any location on the **Map** and the **Observer** will get transferred there directly.



The **Observer** widget is the one with the blue ring and the blue person icon inside **[1]**.



## Areas, Area Zones, and Global Areas

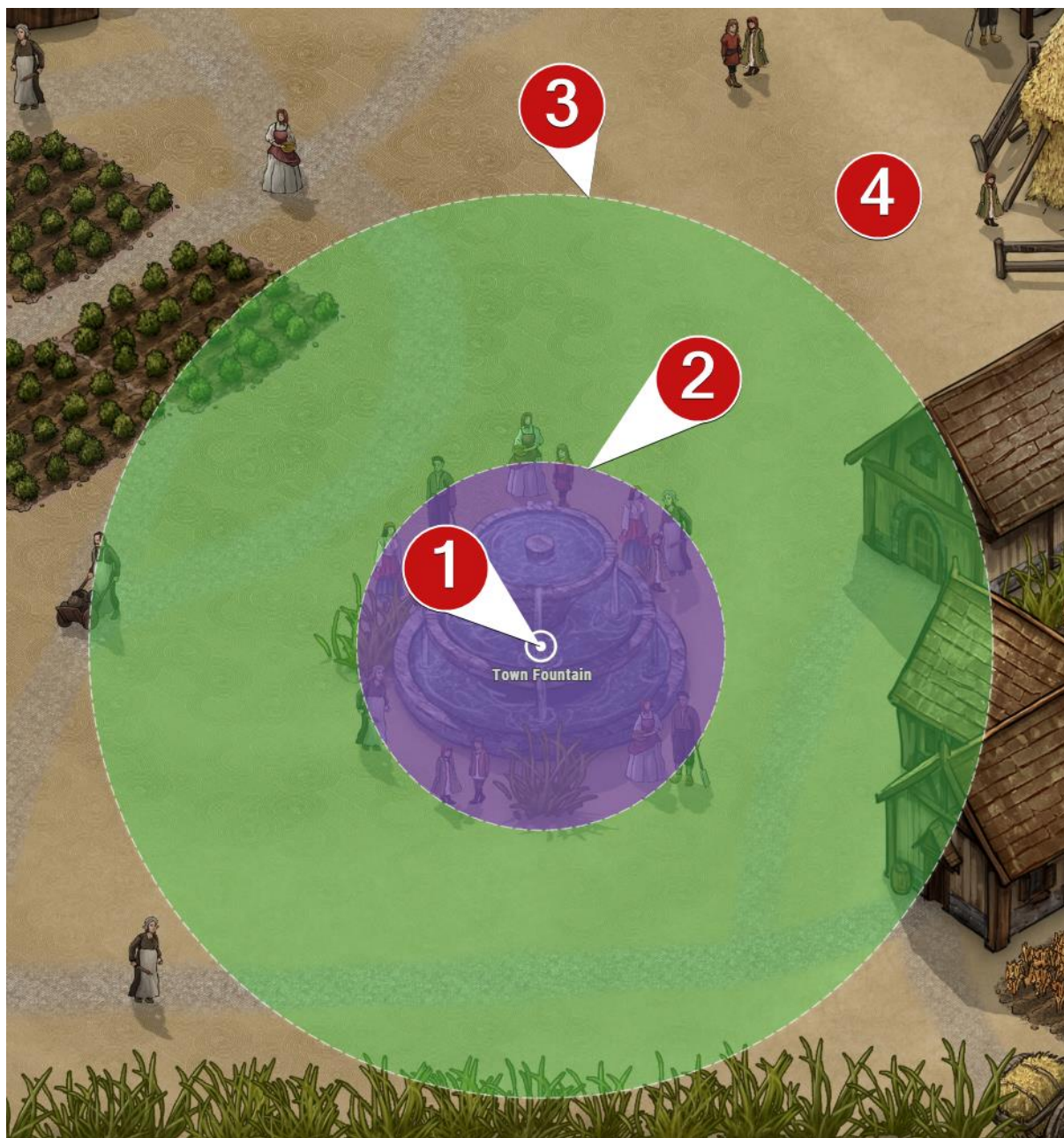
Most of the work of setting up a soundscape in Echotopia is done by mapping **Areas** on top of a **Map** in what is called a **Scene**.

### Areas

The **Area** object defines a region of the **Map** which has **Audio Layers** with **Instruments** that play back sounds using nature-inspired behaviors. This makes it very easy to add layers of sounds together with natural behaviors and compose how an **Area** should sound.

Before we talk about **Audio Layers**, **Instruments**, and **Acoustics**, let's discuss a little more about the features of an Area.

### Area Zones



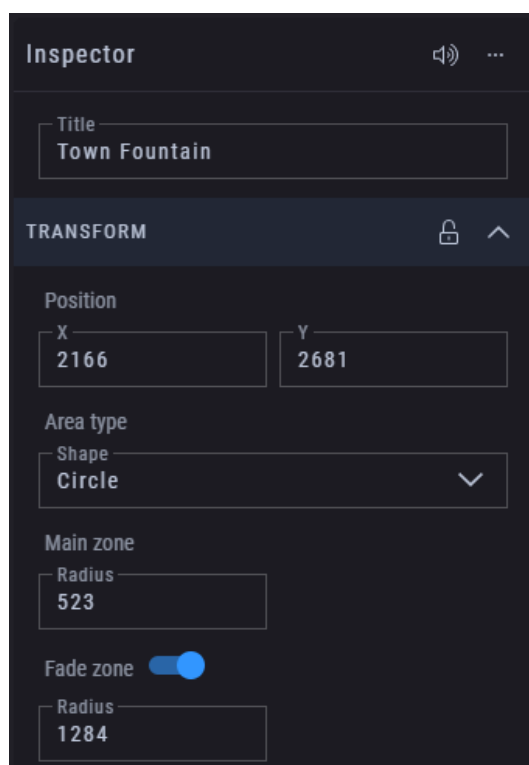


An **Area** is defined by a geometric shape. For now, Echotopia supports circles and rectangles, with more to come. Each Area has four distinct properties (see image above):

1. **Center [1]**: This defines the center of the Area.
2. **Shape**: This defines the shape of the **Area** on the **Map**.
3. **Main Zone**, from the **Center [1]** to the first border line **[2]**: When the **Observer** is in this zone, all the **Instruments** from this **Area** play without any audio level attenuation or filtering from the atmospheric simulation (i.e., sound level attenuation over distance, sound damping from air temperature and humidity). Also, when the **Observer** is inside the **Main Zone**, the **Inward Occlusion** of the **Area** that the **Main Zone** belongs to, affects the sounds coming from other **Areas** that overlap with the position of the **Observer**. That last mechanism makes it easy to define **Areas** that are inside of walls, caves, and other structures, which would naturally affect how sounds that come from outside of them should be heard on the inside (more on that later).
4. **Fade Zone**, from the first border line **[2]** to the second/last borderline **[3]**: When the **Observer** is in this zone, all the **Instruments** from this **Area** play with the audio level attenuation or filtering from the atmospheric simulation (i.e., sound level attenuation over distance, sound damping from air temperature and humidity). Also, as the **Observer** moves away from the **Center** and further out on this zone the **Reverb** effect output of this **Area** is increased to simulate the natural behavior of diffused reflections that we hear from a sound source that is far away in real life.

When the **Observer** is outside of the **Area [4]** nothing related to this Area will play back or affect anything else.

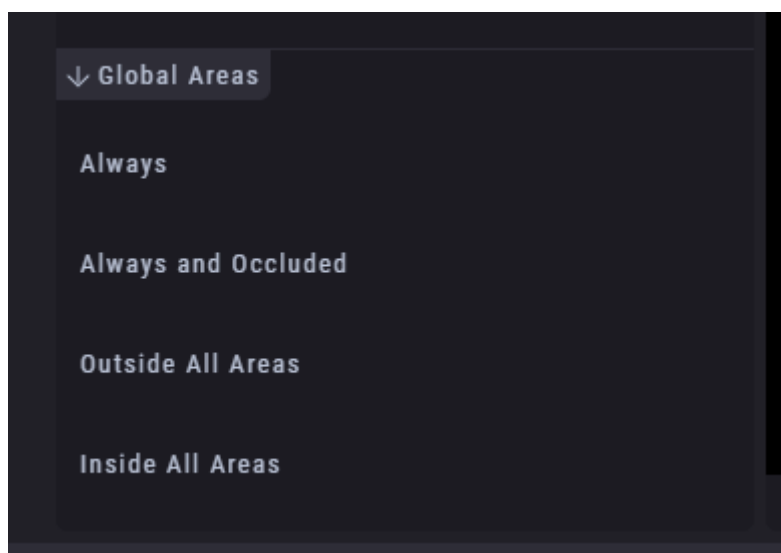
You can change the properties of an **Area** using the **Inspector** pane on the right side of the **Scene Editor**. The **Inspector** always shows the properties of the **Area** you have selected. You can select an **Area** either by selecting in on the **Area List** or by selecting it directly on the **Map**. The selected **Area** will always have its borderlines drawn with white color and rest of the **Areas** that are not selected will have their borderlines drawn with black color. Below you can see the part of the **Area Inspector** with the basic properties.



## Global Areas

In many cases, you might need to define sound behaviors in a **Scene** that span across the complete **Map**. **Global Areas** come to the rescue.

The **Global Areas** section can be found at the bottom of the **Areas List** and can be expanded or contracted using the small **Arrow Icon** on the section's title.



Each **Scene** can have four different **Global Areas**, each one having a specific behavior.

- **Always:** Whatever you set up in this **Global Area**, will play always without affecting or passing through any **Inward Occlusion** from other **Areas** the

**Observer** is located. This is perfect for anything that you like to sound always the same throughout the **Map** no matter where the **Observer** is at the moment.

- **Always and Occluded:** This **Global Area** has the same behavior as **Always**, but the **Inward Occlusion** of the **Areas** that the **Observer** is positioned affects it. That means that the sounds put in this **Global Area** will sound occluded when the **Observer** is located inside an **Area** that has some **Inward Occlusion** set. This one is perfect for weather effects that naturally happen on the outside, so when the **Observer** is in **Areas** with **Inward Occlusion** set, therefore probably indoors, any rain noise or thunder sounds will sound properly occluded by the structure of the **Area**. Of course you can set other sounds there depending on the world you are crafting.
- **Outside All Areas:** This **Global Area** plays when the **Observer** is located outside any regular **Area**. This is great to use when your **Map** contains a lot of surface that emit a specific sound character. For example, if you have a **Map** with a forest and only two or three points that need special sound, you can apply the forest sounds in this **Global Area**, and use regular **Areas** for the specific points. This is the ultimate time-saver, as most of the maps are made like this and it saves you the time it would take to create complicated configurations with multiple **Areas**, just to fill those kinds of **Maps** with sound. Furthermore, if you have a **Scene** that only needs one **Area**, you can use this **Global Area** and achieve the same result and full **Map** coverage with ease.
- **Inside All Areas:** This **Global Area** is self-explanatory. It will play when the **Observer** is inside a regular **Area** and it's not affected by the **Inward Occlusion** of the regular **Area** the **Observer** is in. An example of using this **Global Area** is when you have a **Map** with a texture and/or random oneshots that always need to play when the **Observer** is inside the defined regular **Areas**, like all the dungeon rooms or all the sewer pipes. You can just define regular **Areas** around your **Map** without any content and define their content using only this **Global Area**.

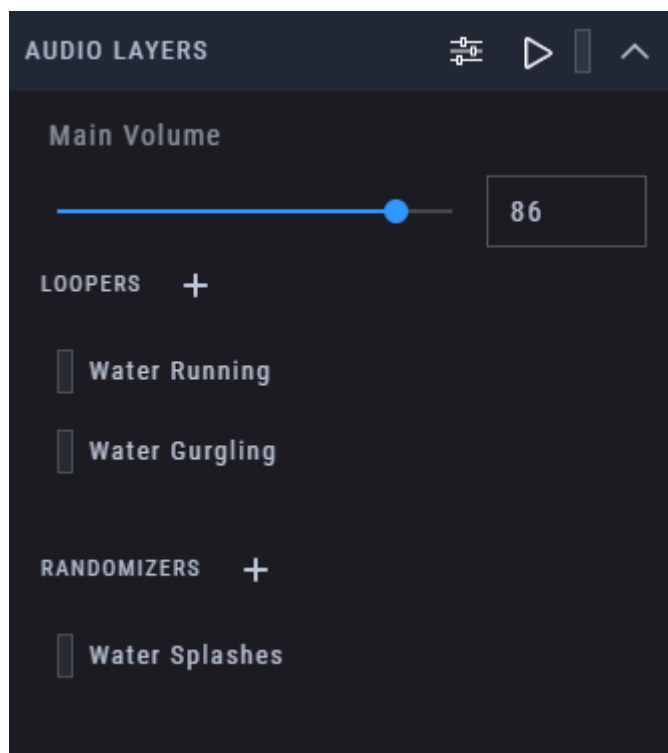
By using combinations of **Global Areas**, you can setup simple **Map** configurations fast by only creating empty regular **Areas** and define their content and behavior through the **Global Areas**. Simple configurations like a dungeon that has specific corridors between the rooms can be made fast by marking the rooms using regular **Areas**, and define the sound of all the corridors using the **Outside All Areas Global Area** and the sound of all the rooms using the **Inside All Areas Global Area**.

## Audio Layers

### Audio Layers

One of the most important aspects of Echotopia's philosophy is that it should be very easy to define what an **Area** sounds like. Echotopia uses the philosophy of **Audio Layers** meaning that each **Area** can have multiple **Layers**, each with its own sounds. Each **Audio Layer** can carry one **Instrument**.

The terms **Audio Layer** and **Instrument** are used interchangeably throughout our documentation, depending on the context.



The **Audio Layers** system works like a **Submixer** that combines all the different **Layers** together to produce the output of an **Area** in combination with the **Observer's** position and the defined **Acoustics**.

On the title ribbon of the **Audio Layers** section (see image above) you can find some useful buttons (from left to right):

- **Submixer:** Opens the **Submixer** for a quick way to set all the **Instrument** output levels in one place.
- **Playback:** Starts playback of only the **Area**, so you can quickly listen how the **Area** sounds.
- **Level Meter:** Shows the signal level of the output from the **Area**.
- **Expand/Contract:** Expands or contracts the **Audio Layers** section. This is just an interface feature, nothing to do with what you hear.

You can start the playback of an **Area** using the button on the title ribbon and then open the **Submixer** to audition how the **Area** sounds and quickly create your **Area's** mix. Below you can see an example of an **Area's Submixer** featuring

two **Loopers** and one **Randomizer**. Notice that the **Randomizer** has a volume range instead of a fixed volume setting.

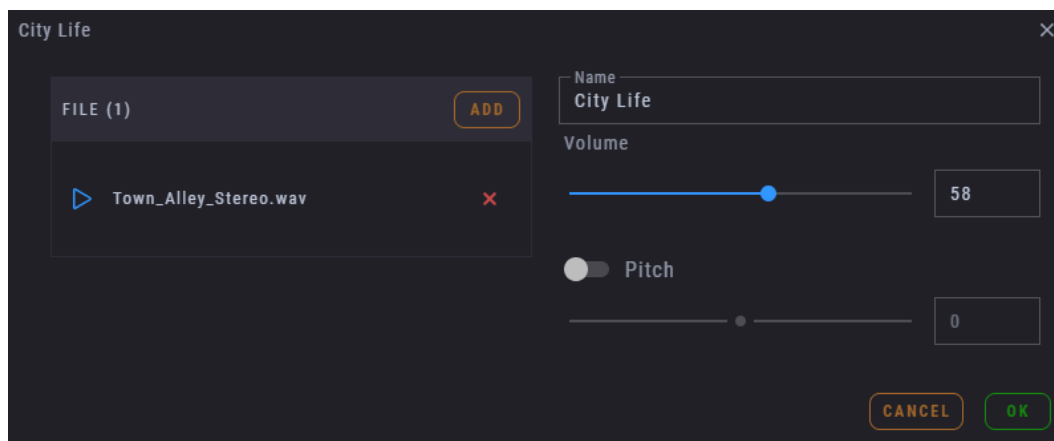


While you're on the **Scene Editor** and playing back audio, i.e., when you use the **Area's Play Button**, some settings of Echotopia might be grayed out. This is because those parameters cannot be changed while the playback simulation runs. If you stumble upon a parameter that's grayed out and you want to change it, first stop the playback and then change it. You can start the playback right after to listen to your changes.

## Instruments

Currently, there are two types of **Instruments** to load on an **Area's Audio Layers**, the **Looper** and the **Randomizer**.

### Looper

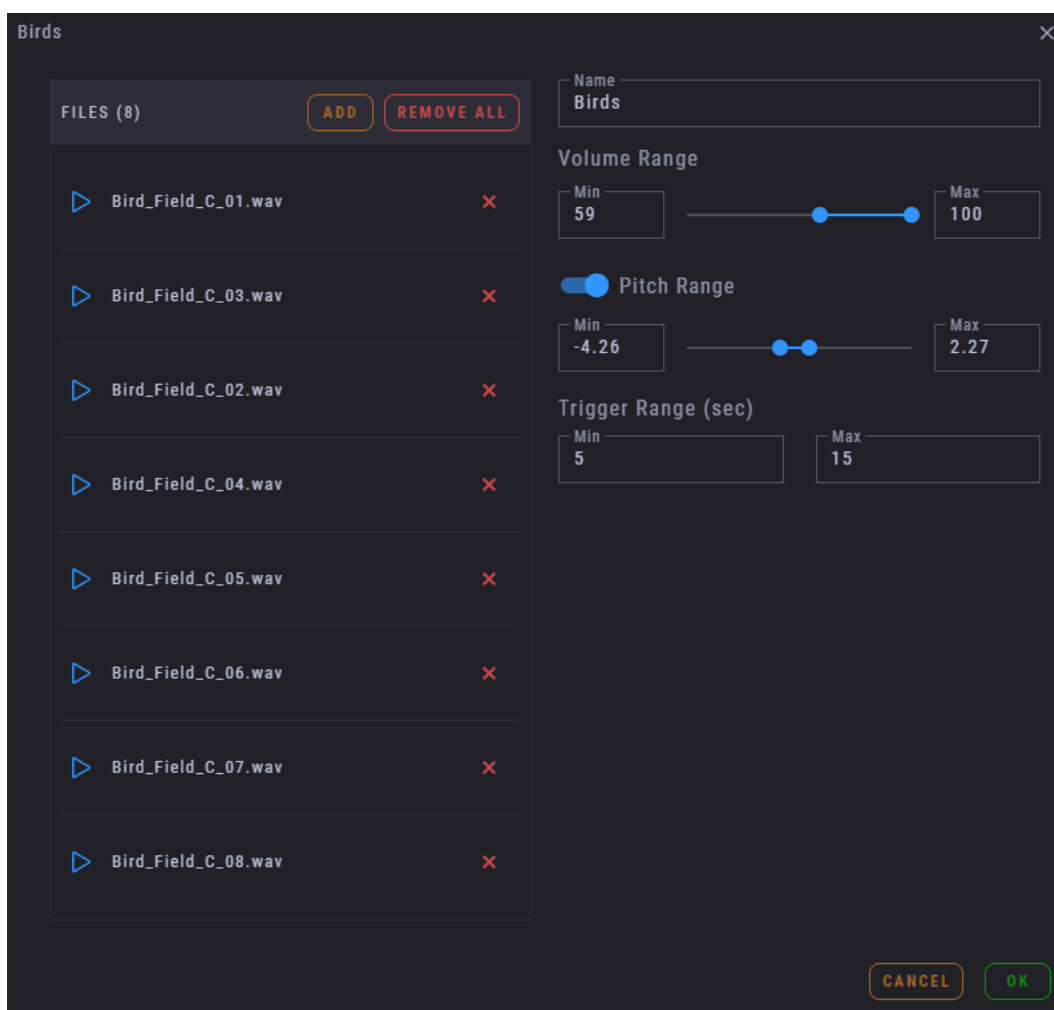


The **Looper Instrument** is mimicking the behavior of continuous sounds that are looping. Those can be background noise textures, machinery and engine sounds, synthetic drones, or any other kind of sound that never stops. It loads one file and you can set the volume and the pitch of the loop.

Any sound you load into the **Looper** will be upmixed or downmixed automatically to match the output of Echotopia and your sound card's channels and speaker configuration.

Automatic upmixing is an awesome feature that makes the life of anyone that wants to create immersive soundscapes very easy. It doesn't matter if you load a monophonic or stereo file, or a quadraphonic or 7.1 surround file into the **Looper**. Echotopia uses an intelligent algorithm to choose how to transform the channels of the file to match the configuration of your sound card. That way you will always have complete envelopment of your audience no matter what channel format sound files you are using. Currently, Echotopia supports loading of files with up to eight channels in the **Looper** and it upmixes or downmixes them automatically. For more details on Echotopia's **Automatic Channel Matching** function, check out the **Main Concepts/Automatic Channel Matching** topic.

## Randomizer



The **Randomizer Instrument** is mimicking the behavior of sound sources that emit sounds one at a time (aka oneshots). Some good examples of that type of sound sources from nature are most of the animals (birds, dogs, etc.). You can find those sound sources in nature and modern life too, with sound sources like thunder, car horns, seashore crushing waves, wind whistling, etc.

In the **Randomizer** you load many sounds. Those are usually short oneshot sound samples. Then, you can set the volume and pitch shifting with a range, and the algorithm will choose a random value from within that range for each time that it triggers one of the sounds from the list.

Choosing which sound file will be played back in each trigger is also random.

The trigger range is a range set in seconds and defines the delay between the triggering of sounds. The algorithm will pick a random value within the defined range, and wait for that amount of time before it triggers the next sound.

If you like to create a stable time trigger, you can set the minimum and maximum values to the same value, this is useful for repetitive oneshots like alarms or mechanical functions. Those are great additions to the **Looper Layers**, when you want to spice your loops up a notch.

Sounds that play back randomly here and there are the best way to create soundscapes that don't have a repeating pattern.

Soundscapes with no repeating patterns are psychoacoustically much more immersive than repetitive soundscapes which the brain can recognize their patterns. Using the sound libraries that come together\* with Echotopia, you can easily add randomized oneshots to all your **Areas**, creating soundscapes that never repeat and, as a result, the most immersive audio experience possible.

\*Storyteller, Editor, and Producer editions only.

Any sound file that you will load into the **Randomizer** is going to be automatically downmixed to a mono (monophonic) signal and each time it get triggered it will play back from a different position around the **Observer**, adding to the envelopment effect and realism of the current soundscape rendering.

## Acoustics

**Acoustics** play one of the most significant roles on recognizing a specific space or environment. Our brain analyses the sound reflections from the surface materials around to make sense of the surroundings. We call that phenomenon **Reverberation**, and the effect reverb.

Apart from **Reverberation**, another significant phenomenon of the **Acoustics** of an **Area** is the **Inward Occlusion**. **Inward Occlusion** happens when the sounds coming from outside of a structure (room, cave, etc.) get filtered from the structure itself and transferred inside the space altered.

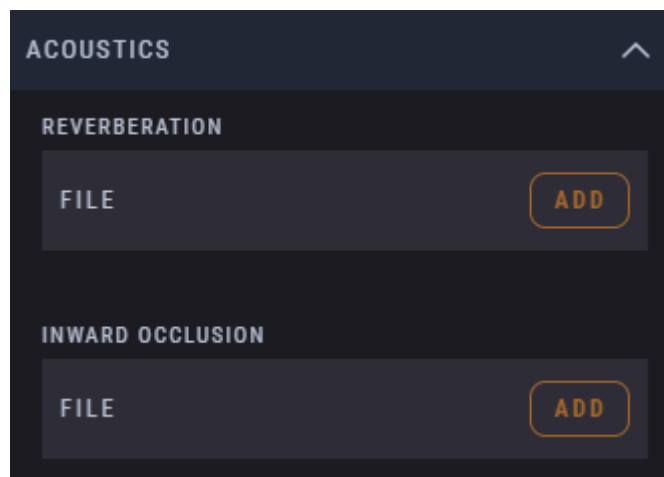
Using **Acoustics** you can create completely different **Areas** even if you use the same **Instruments** and audio material. A group of lurking zombies sounds very differently outside on a meadow from the same group of zombies inside an underground sewers tunnel. Respectively, a thunderstorm sounds very differently when you are experiencing it out in the open or from inside a house.

Echotopia uses the open format of **Impulse Responses** (abbreviated **IR** for singular and **IRs** for plural) with a process called **Convolution** for both the **Reverberation** and the **Inward Occlusion** components of an **Area**.

Multichannel convolution is a heavy process. In Echotopia the process is optimized so you will be able to run a lot of convolvers in a **Scene** using a moderate power computer. You are also free to load very long **IR** files (usually difficult in convolution). To not limit creativity, the Echotopia **Acoustics** modules will allow you to load any file as **IR**, no matter its duration. Please be careful, as loading very long files might affect your system's performance and stability.



Depending on your system resources, experiment and find out the best combination of **IR** resolution/duration versus playback stability.



At the **Acoustics** section of the **Area Inspector**, you can load **IR** files and set the level of effect for each one.

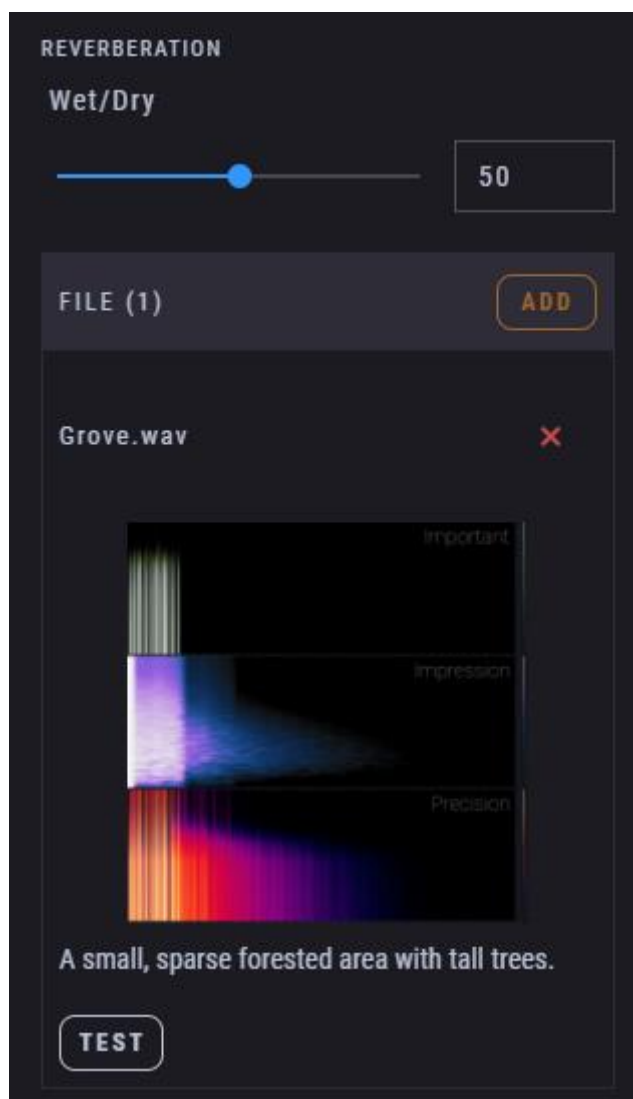
Echotopia can load up **IR** files with up to four channels. Depending on your sound card's channel configuration, Echotopia's engine will automatically upmix or downmix the **IR** files so that channel differences between your setup and the **IR** are handled and a correct mix is delivered at the output using Echotopia's automatic **Channel Matching** algorithm. For more details on Echotopia's **Automatic Channel Matching** function, check out the **Main Concepts/Automatic Channel Matching** topic.

Echotopia comes together\* with many **IR** files for both **Reverberation** and **Inward Occlusion** to allow for a plethora of spaces to be simulated with accuracy.

\*Storyteller, Editor, and Producer editions only.

There are many places on the internet to find free **IRs**, especially **Reverberation IRs** which are easier to produce. Some of them are captured from very interesting places that might fit your story perfectly. Old castles, temples, tunnels, huge canyons, vast valleys, and the highest mountaintops. Just do a search for the term "free impulse responses" and you will be amazed on what this can do for your soundscapes. The [OpenAIR Project](#) is a great place to start. Finding **IRs** for **Inward Occlusion** is somewhat more difficult, but the users of Echotopia's Storyteller, Creator, and Producer editions have access to our library of **Occlusion IRs** which features a variety of materials to choose from. Using the **Wet/Dry** controls of the **Inward Occlusion** module you can simulate any kind of **Occlusion** material you need.

## Reverberation



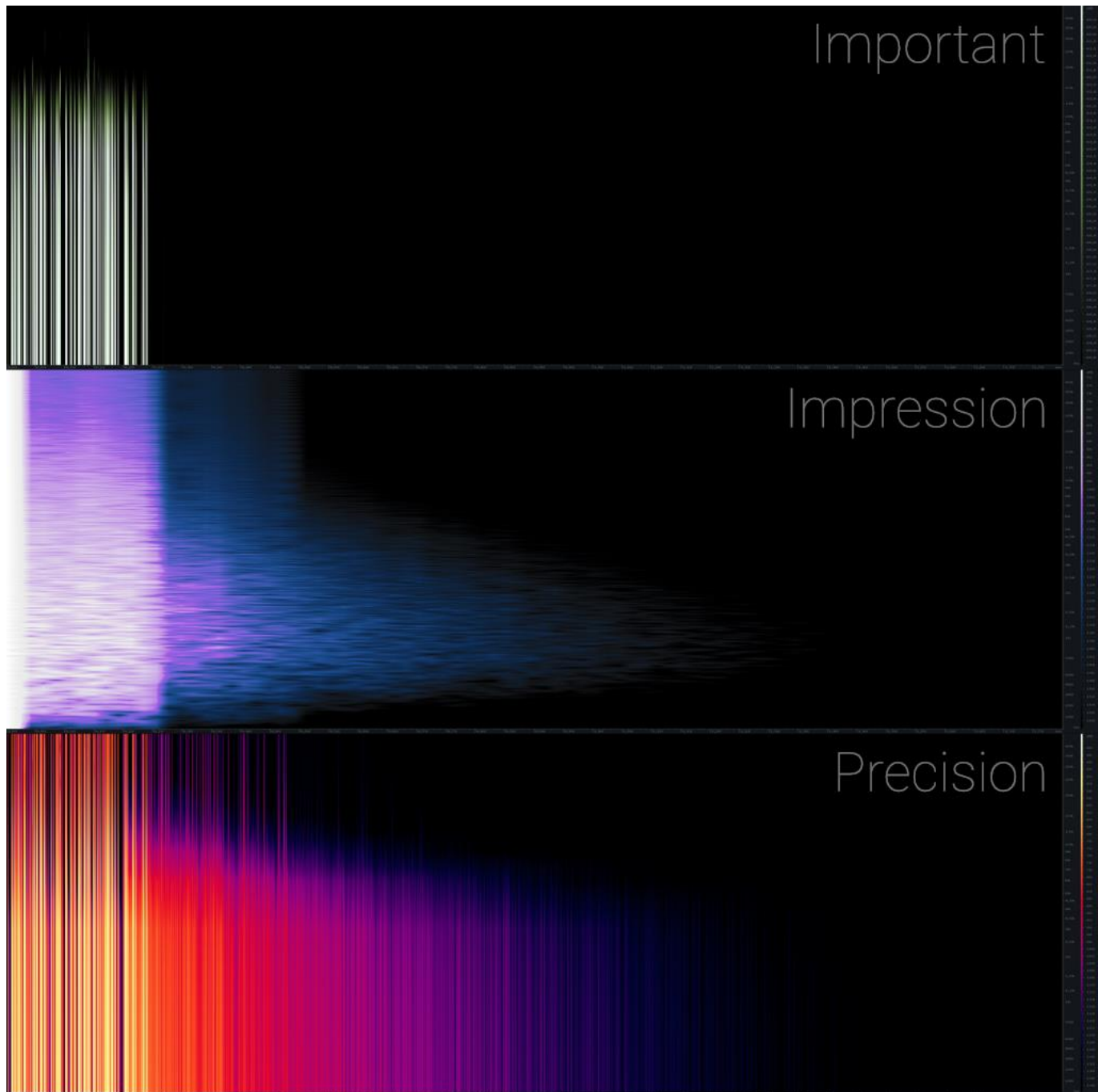
The **Reverberation** module offers a **Wet/Dry** control to set the level of effect of the **Convolution** process into the signal. Setting this control to various levels controls how much of the **Area's** signal is sent to the **Reverberation** module.

The **IR** file gives the “character” of the space, but the **Wet/Dry** controls give you the power to set the “reflectivity” of that space. Setting the **Wet/Dry** to medium levels will give you a more realistic result, depending of course on the way the **IR** was designed. Setting the **Wet/Dry** to very high values will give you a more surreal effect, again, depending on the **IR**.

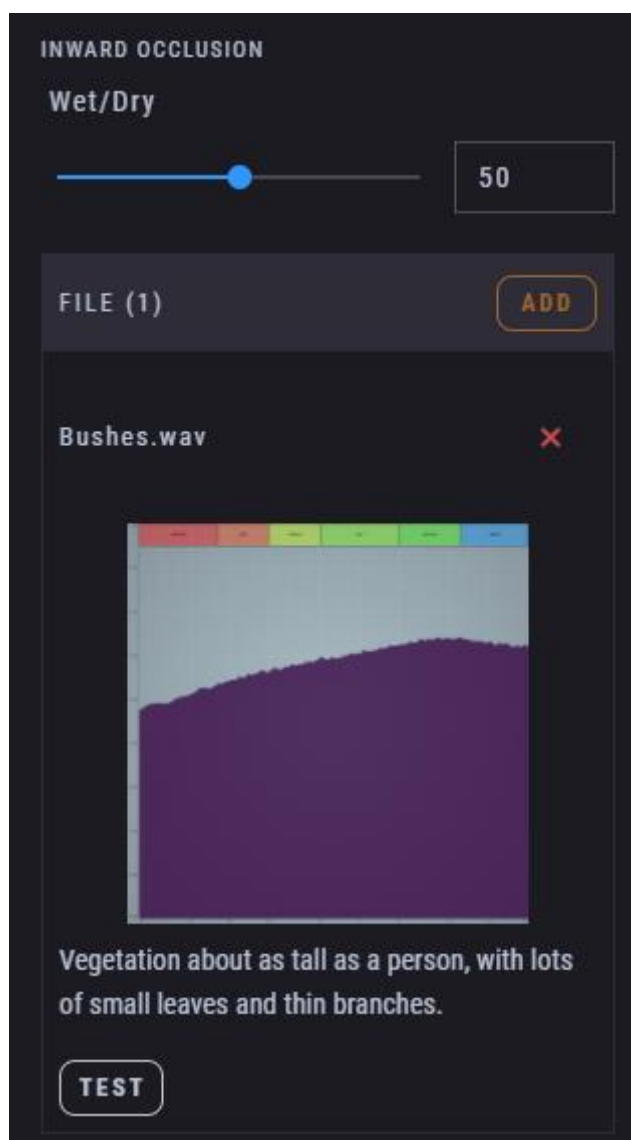
The **Test** button plays back a sonar-like test tone so you can audition the effect.

If there is an image file (png, jpg) and a text file (txt) with the same name as the **IR** file in the same folder, the **Reverberation** module will load them and display them as image and description beneath the file slot (as shown on the image above). Usually **IR** files are accompanied with images from the location they represent and text files containing more details.

The **IRs** produced by SoundFellas are accompanied with a visual representation of the space behavior, showing the Important reflections, the Impression that the **IR** leaves you with, and the Precise spectral analysis of the file, as seen below:



**Inward Occlusion**



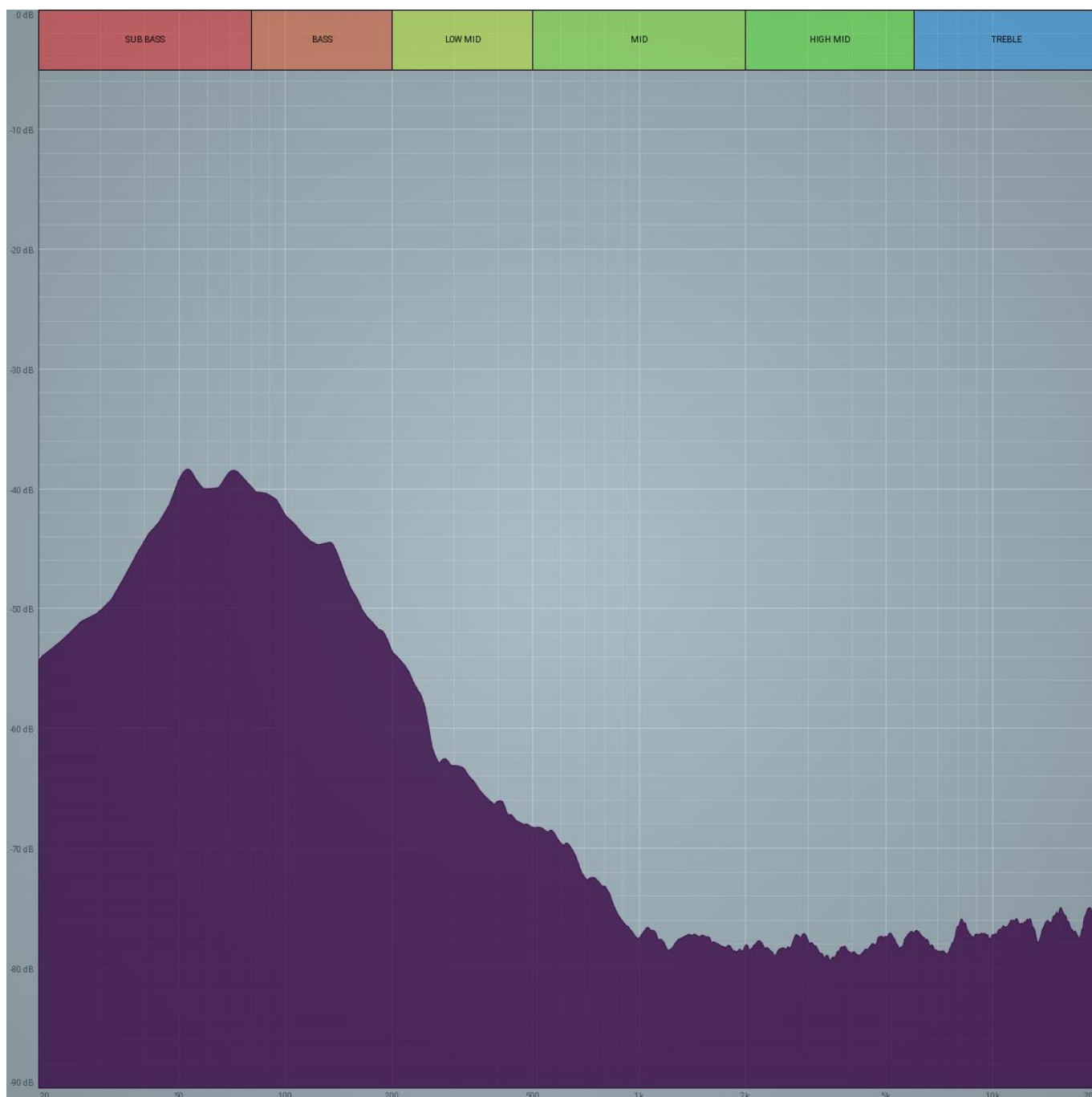
The **Inward Occlusion** module offers a **Wet/Dry** control to set the level of effect of the **Convolution** process into the signal. Setting this control to various levels controls how much the occlusion will affect the incoming (hence the “inwards”) signal from other areas.

The **Test** button plays back a short sample of noise so you can audition how the effect transforms the signal.

The **Inward Occlusion** module only affect the sound that come from all the other **Areas** than the **Area** that is set. This is an easy way to simulate that your **Area** has surrounding walls or similar structure that affects the incoming sound.

If there is an image file (png, jpg) and a text file (txt) with the same name as the **IR** file in the same folder, the **Inward Occlusion** module will load them and display them as image and description beneath the file slot (as shown on the image above). Usually **IR** files are accompanied with images from the material they represent and text files containing more details.

The **Occlusion IRs** produced by SoundFellas are accompanied with a visual representation of the material's sound filtering behavior, showing the Frequency Response of the material, as seen below:



### A creative note on convolution

**Convolution** is a very interesting mathematical operation, not only used in audio but also heavily used in statistics, engineering, physics, and computer vision, to name a few.

In simple terms, what **Convolution** does in the digital domain is taking one sample of one thing and multiplying it with all the samples of another thing,

before it moves to the next sample of the first thing and do the same all over again, combining the results in its output as it goes along its way.

It is a perfect way to simulate **Acoustics** as it allows for perfect transferability between platforms and creative environments, because the results you will get using the same **IR** will be the same. This is very different from using an algorithmic reverb (not convolution), because when you transfer your creation to another platform or application, you need to set the acoustics on the new algorithmic reverb on that platform from the beginning. In algorithmic reverbs the settings and their underlying mechanics are never the same, by using **Impulse Responses** with **Convolution** you ensure that an experience designed in the studio is delivered exactly the same to the audience.

Echotopia offers creative freedom by using **Convolution** with **IRs**. For example, if you use Echotopia to create the prototype for the sound of all the levels for a video game, and later you move into production using a game engine, you can just load the same **IR** files into the convolver of the game audio middleware and voilà, you have the same acoustics as you designed in your prototype without any further tweaking. Almost all game audio solutions have a convolution module available and those who doesn't can be retrofitted using available extensions. For post-production facilities that use DAWs (Digital Audio Workstations) to deliver the final soundtrack of films, using **Convolution** and **IRs** is even easier, as quality convolver plugins are easy to find and some of them are even free.

On a more experimental note, **IR** files are audio files carrying the identity of the thing they captured. You can use the **Acoustics** modules with files that was not designated to be used as **IR** files. Any audio file can be loaded into the **Reverberation** or the **Inward Occlusion** modules, but note that files longer than 10-20 seconds might overload your system's RAM, depending on the resources of your machine. Please experiment with shorter files first.

Using files for **Convolution** that wasn't designated to be used in **Convolution** is a very creative concept. For example, what an **Area** will sound like if a water drop sound is loaded to the **Reverberation** module? Or, what atmosphere it will create if the sound of a knock on a door is loaded to the **Inward Occlusion** module that processes only the incoming sounds from other **Areas**?

You can even try to create your own **IR** files by clapping your hand on an interesting space you've found and recording the sound with your mobile phone. This is not optimal or professional in any way, but it's highly creative.

Here are some resources to learn more about convolution:

- [Convolution on Wikipedia](#)
- [Convolution Reverb on Wikipedia](#)
- [3D Audio Effect on Wikipedia](#)
- [Head-Related Transfer Function on Wikipedia](#)

---

# Asset management

---

In this chapter we will go through the way Echotopia works with various **Assets**. **Assets** are the audio, image, text, and other kinds of files you will use to create a project. In this chapter we will also talk about the use of the **Library** and the **Add File** dialogs you will open to add files into your **Project**, and how those two are connected.

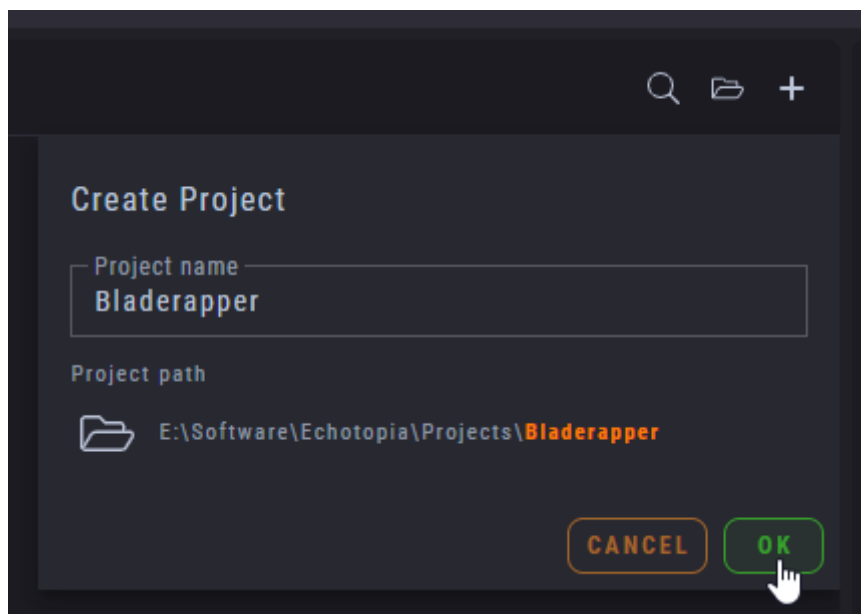
## Main concepts

### Projects

A **Project** in Echotopia is actually a folder. Just like in a game engine or other media authoring applications.

#### Creating a Project

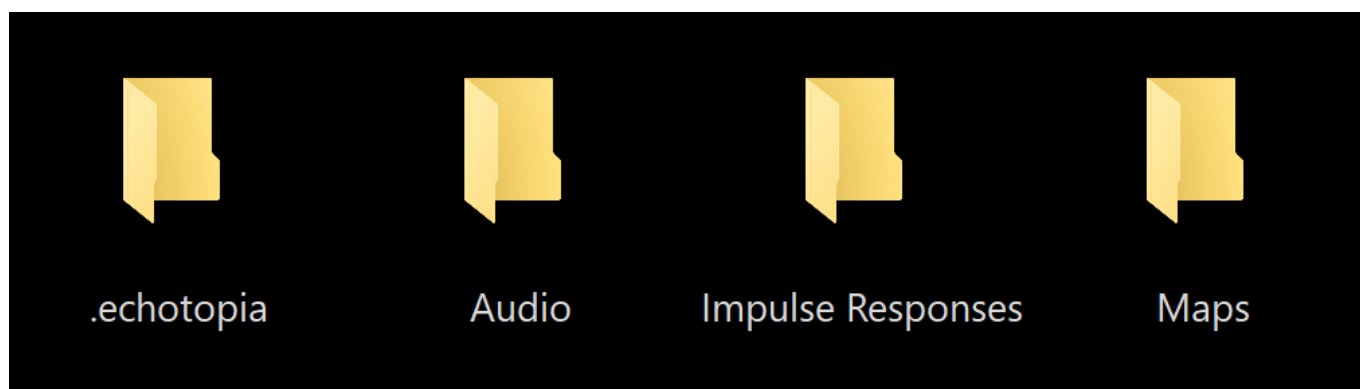
When you first create a **Project** you will be presented with the option to define where to save that folder. Choose the root folder in which the **Project's** folder will be created. When you confirm your choices, Echotopia will create a folder with the same name as your **Project** and put it inside the root folder you pointed in the previews step.



#### Project folder's default organization

Echotopia creates and uses specific subfolders inside a **Project** folder, below we will describe each one of them.

Here are the contents of a newly created **Project's** folder:



- **.echotopia**: This folder holds the configuration of the **Project**, it's settings and everything that you created. This can be considered the actual "project file" if you like.
- **Audio**: This folder is designated to hold all the sounds of your **Project**, except **Impulse Response** files, those although audio files are stored inside another folder.
- **Impulse Responses**: All **Impulse Responses** go here, both for **Reverberation** and **Inward Occlusion**.
- **Maps**: This folder holds the images of the **Maps** the **Project** uses in its **Scenes**.

**Impulse Responses** are, as you may know, audio files, and can be also stored inside the **Audio** folder and nothing really bad will happen, but it is advised to keep them separately inside the **Impulse Responses** folder, because some tools inside Echotopia use this certainty to provide the user with extra tools for **Impulse Responses**, and in the future this philosophy will be developed more.

## Assets

Echotopia can work with the following file types.

### Audio files

Echotopia can load and play back all common formats which are: WAV, MP3, OGG, and FLAC. The files can have Any standard sampling resolution up to 96 kHz and any bit depth up to 32-bit IEEE Floating Point.

Echotopia is capable of combining various formats without any issues. You can freely load wave file at 44.1 kHz/16-bit resolution, together with an Ogg file at 48 kHz, and a FLAC file at 96 kHz/24-bits, even in the same **Instrument**. Echotopia's audio engine will take care of mixing all those files correctly using its high-fidelity



96 kHz/32-bit Floating Point precision processing. Focus on creativity, Echotopia will take care of the rest.

### Image files

Echotopia can load and display all common formats which are: JPG, JPEG, PNG, GIF, and BMP. For **Impulse Response** images it can load and display JPG, JPEG, and PNG.

### Text files

Echotopia currently uses text files to display descriptions for the **Impulse Response** files the user loads in the **Acoustics Convolution** modules. Those are common TXT files.

## Portable vs Linked Assets

In any authoring application, there are two main philosophies when it comes to importing **Assets** (files) inside a **Project**, **Portable** (embedded) or **Linked** (external).

Echotopia can work with any of those two ways and also combine them in a hybrid working model if that is what the user wants, offering the best of both worlds. The users should make the decision of how they want to work, depending on their needs.

Let's take a look at the different philosophies.

### Linked

The first one is the **Linked** approach. The logic here is that the **Project** file is a separate entity and each **Asset** that is imported into the **Project** is also a separate entity, in the sense that everything can exist at any place in the storage system of a computer or network.

This means that you can have your **Project** file(s) in one place and import **Assets** from any other place and those **Assets** are not copied inside the **Project's** folder but are only **Linked** externally.

The **Linked** files approach main advantages are:

- **Lightweight:** Your **Project** doesn't contain any external media so its file size is only determined by the setting that are saved within it.
- **Fast prototyping:** It's faster to start using files in your **Projects** without having to copy them into the **Project's** folder.
- **Less housekeeping:** By just using **Linked** files you save yourself from the junk files that otherwise would be copied in your **Project's** folder while you were testing things.

The **Linked** files approach main disadvantages are:

- **Difficult to monitor changes:** When you link to external files there is always the possibility that those files might change and then your **Project** will have different files with uncontrollable results. That lead us to the next disadvantage.
- **Easy to destroy:** External files can be deleted or moved to another location. If that happens then any **Project** that used those files is effectively destroyed.
- **Difficult to backup or share:** For the reasons mentioned above, it's also very difficult or impossible in many cases to back up your complete **Project**, move it to another location, or share it with third parties.

Use the **Linked** philosophy when you are sure that your **Asset** repository (where you store the files you import) is stable and it will never change, and you don't care of moving or sharing your **Project** with third parties.

## Portable

The second approach is the **Portable** approach. The logic here is that the **Project** file or folder contains all the **Assets** inside it.

This means that when you want to use an **Asset** inside your **Project** you will have to first copy it inside the **Project's** folder.

The **Portable** files approach main advantages are:

- **Easy to monitor changes:** Having all the **Assets** under your **Project's** folder makes it very easy to follow any changes without fear of breaking your **Project** and losing work.
- **Difficult to destroy accidentally:**
- Changing anything outside the **Project's** folder does not affect any **Assets** inside your **Project's** folder. So, if you change a hard drive, rename the folder you keep your original materials, or do anything that affects things outside your **Project's** folder, your **Projects** remain safe.
- **Can work destructively on Assets:** By actually using copies of your original files that you copied inside the **Project's** folder, you make unique instances of them, and that allows you to edit them in creative ways that serve only this **Project**. The changes you make to them (filtering, distortion, reverse audio, etc.) will not affect any other **Projects** or your original files.
- **Easy to back up and share:** A **Portable Project** is a standalone entity. You can copy it or move it anywhere and it will continue to work.

The **Portable** files approach main disadvantages are:

**Large Project size:** As you keep on adding files inside your **Project's** folder, you increase its size. For media creators that wouldn't be an issue, but for more casual users the issue of free storage space is usually a consideration.

**Slower Asset implementation:** To import a file that way, you need to first copy the file inside the **Project's** designated folders (more on that later in this chapter), and then load it into the **Project**. Sometimes, especially when you brainstorm or experiment, this can get in the way of creative thinking. It needs some getting used to, but it pays in the long run.

**More housekeeping:** If you are not careful, you can quickly fill the **Project's** folder with files you ended up not using inside the **Project**. Cleaning the **Project's** directory can be a tedious process if you let all the work pile up. The best practice here is to maintain an active housekeeping mentality, and keep your **Project** tidy during the whole process of creating it, from start to finish.

Use the **Portable** philosophy when you need your **Project** to be standalone and to work on its **Assets** destructively without fear of breaking other **Projects**. This is also the perfect philosophy to work with, if you like to share your **Project** with third parties or sell it.

## Hybrid

In Echotopia you can also use both philosophies. You can copy **Assets** inside the **Project's** folder and then load them inside your **Project** in Echotopia, and those will maintain the relationship with the **Project** in a portable way. And you can also use external files directly as **Linked**.

If you have a plan and you know what you're doing, combining **Linked** files and working on them destructively, might be dangerous but it can also be a big productivity booster.

For example, if you have any files that you want to change and those changes to affect a couple of your **Projects**, you can create an extra folder somewhere and put those files there. Then, use those files as **Linked** files in specific **Projects**, and all the rest files as **Portable**.

Now, any change you make on those **Linked** files will be reflected on the specific **Projects** that you **Linked** them.

This is an advanced workflow that professional sound designers use, when they work with many **Projects** for a specific work.

Let's say you want to create various **Projects** for a client that wants soundscapes for three different audiobooks. Each **Project** will hold the **Scenes** of one audiobook. But you need to be able to change the sounds dragons make throughout all audiobooks. You can create an external folder somewhere, call it "Trilogy X Common Assets", and inside it make a folder called "Dragon sounds". You can copy there all the audio files that you will use for the dragons in your Echotopia **Projects** and import them as **Linked** in all three **Projects**. Then, if the client says "I want them to sound more aggressive", you can just open the files with an editor and add distortion effects to all of them. Then, when you open your Echotopia **Projects** and render the **Scenes** to audio files, all the dragons will have a new more aggressive sound, just as the client requested.

Working with a Hybrid approach is a very clever way for professionals that want maximum agility, and want to create iterations according to the client's needs with minimal time and effort.

## Automatic channel matching

Creating immersive audio, even in simple mono or stereo, is not an easy thing to do during a creative process. It requires to constantly selecting option to match the incoming file's channel configuration with the sound card settings and your speakers' configuration and position around your room.

On top of that, a simple change of creative decision or the need to playback your project on another setup, requires you to set everything from the start again.

Echotopia features an **Automatic Channel Matching** function that kicks in only when it's needed, in various positions of the audio engine, to ensure that your project will always sound correct using files of any channel format and playing them back at any sound card and speaker setup you like.

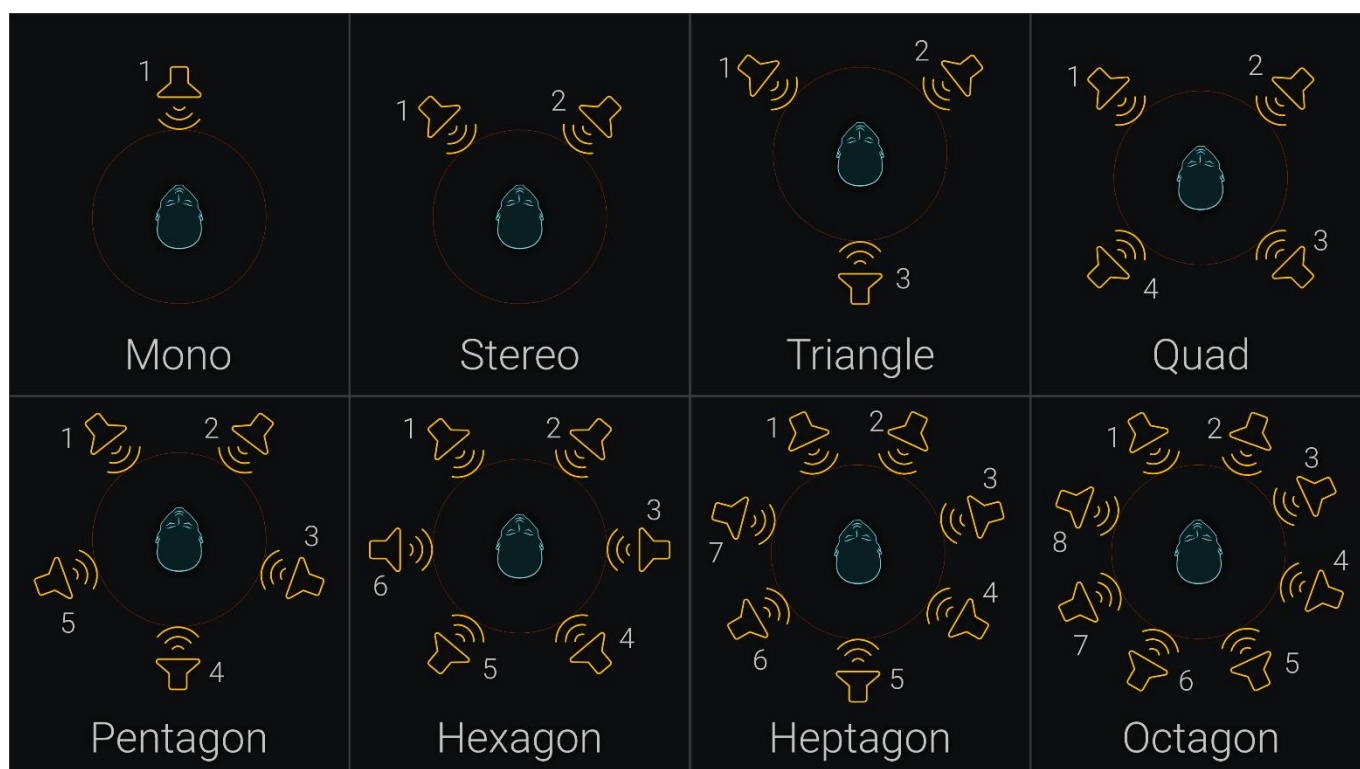
Check the **Setting Up Your System** chapter to learn the best practices on how to configure your system's audio pipeline for optimum immersion at any case.

## Audio Channels in Echotopia

**Audio channels in Echotopia are used as a series of speakers with full range frequency response positioned clockwise around the listener/audience,** because Echotopia's function is to produce soundscapes and not final films or games.

Soundscapes, as a standardized material, are usually not using the "Center" or "LFE" speakers of a typical display-based surround setup. According to the [Recommendations for Surround Sound Productions](#) from the National Academy of Recording Arts and Sciences, those channels are reserved for the dialog and low-frequency enhancement respectively. The same philosophy is valid when you create games, podcasts or other media products featuring immersive audio and surround sound.

Here's how Echotopia maps its channels to the speakers, and what speaker positions it assumes:



So, as an example, if you have a 5.1 surround system, setup for viewing movies in your living room, and you would like to use it with Echotopia to provide ambience for a tabletop RPG game session, you should do the following:

1. Before your tabletop session and before launching Echotopia, set up your sound card as Quadraphonic.
2. Launch Echotopia. Echotopia will use the “Quad” configuration automatically.
3. The sound will play through the four speakers surrounding your listening area. Everything will play back correctly.
4. After the end of your tabletop session, and after closing Echotopia, set up your sound card as 5.1 surround again.
5. Now your audio system is returned to display-based media type again.

You should also check out the **Setting Up Your System** chapter, to learn more about how to set up your sound card settings for optimum immersion.

### Downmixing

**Downmixing** is when your **Assets** (input) have more channels than your operating system’s sound card configuration (output).

Echotopia downmixes your Assets when they need to be downmixed (i.e., **Looper**), by summing the appropriate channels into the available ones, compensating for the adding of energy to each channel.

This technique ensures that no information is lost and your content's energy distribution remains balanced through different configuration changes.

This is all done automatically, using the best practices for common channel configurations, meaning you don't have to do anything and you get perfect channel matching every time.

Downmixing with automatic information distribution and energy summing compensation, means your projects will always sound the same, even if you play them through different systems.

## Upmixing

**Upmixing** is a much needed process in contemporary immersive audio practices, as most of the available ambience loops are offered in stereo format.

Furthermore, even surround recordings are some times done in smaller channel counts than the available speakers. For example, you may have a 5.1 sound file but your living room has a 7.1 sound system.

Echotopia uses an automated function to try to upscale your **Asset's** channels to the ones your system's configuration has available.

Echotopia follows a "Best Practices" philosophy to ensure that – in the process – it keeps a balanced energy distribution around the listening area.

Here's the logic series that Echotopia's **Automatic Channel Matching** function uses during **Upmixing**:

1. Echotopia assumes that the **Assets** you are using are following the industry's recommendations. That means that any sound file containing an odd number of channels is assumed to contain a "Center" or an "LFE" channel that contain dialog or low-frequency enhancement respectively. If Echotopia needs to **Upmix** those **Assets**, it omits those channels.
2. The channels containing dialog and low-frequency enhancement are always assumed to be channels number 3 and 4. This logic follows the [Microsoft Channel Mapping](#) standard as it's commonly used in audio content production, therefore any multichannel **Assets** you find have a high probability of using it.
3. Echotopia uses the remaining even number of channels as clones for the extra speakers that need to be covered.
4. If your speaker configuration uses an odd number of channels, Echotopia takes the signal of the last channel of the **Asset** and combines it with material from the first channel of the **Asset**, to create the material of the new (and final) channel in the chain of a clockwise speaker arrangement. Thus, maintaining the final spatial image of the **Asset** relatively intact. It works exactly like adding another chain link between the last and the first links of a circular chain, following a clockwise arrangement (see the diagram above).

To avoid strange behavior or unpredictable spatial image transformations, if your Assets are using a different channel format, you should first edit them and make them compatible with the [Microsoft Channel Mapping](#) standard, using an audio editor capable of managing the different channels of an audio file, and then use them in your projects.

## Importing Assets

### Image files for Maps

The image files that are going to be used as **Maps** in your **Scenes** must be store in the **Maps** folder inside the **Project's** folder. This is because **Maps** are very important **Assets** for a **Project**, and image files are not as large and as many as audio files. So, for **Map** images there is no **Linked** method in order to keep them external (out of the **Project's** folder), they will always be associated with your **Project** using the **Portable** philosophy.

You must first copy an image file into your **Project's Maps** folder, before you create the **Scene** that will use it.

#### Portable import using the OS

You can just copy the image files inside the **Maps** folder using the standard operating system tools. Just create a **Project**, and then browse into the **Project's** folder using your standard file explorer and copy any image files inside the **Project's Maps** folder.

If you don't see the new copied files in Echotopia's file lists then try reloading the lists. In almost all of Echotopia's **Asset** lists there is a kebab menu at the top right corner of the tool's top bar, and if you click it, the option to **Reload** the list will appear for you. If you still can't see the new copied files, try quitting and launching Echotopia and loading the **Project**. This should solve any visibility issues with new files because Echotopia will be forced to freshly load the complete **Project**.

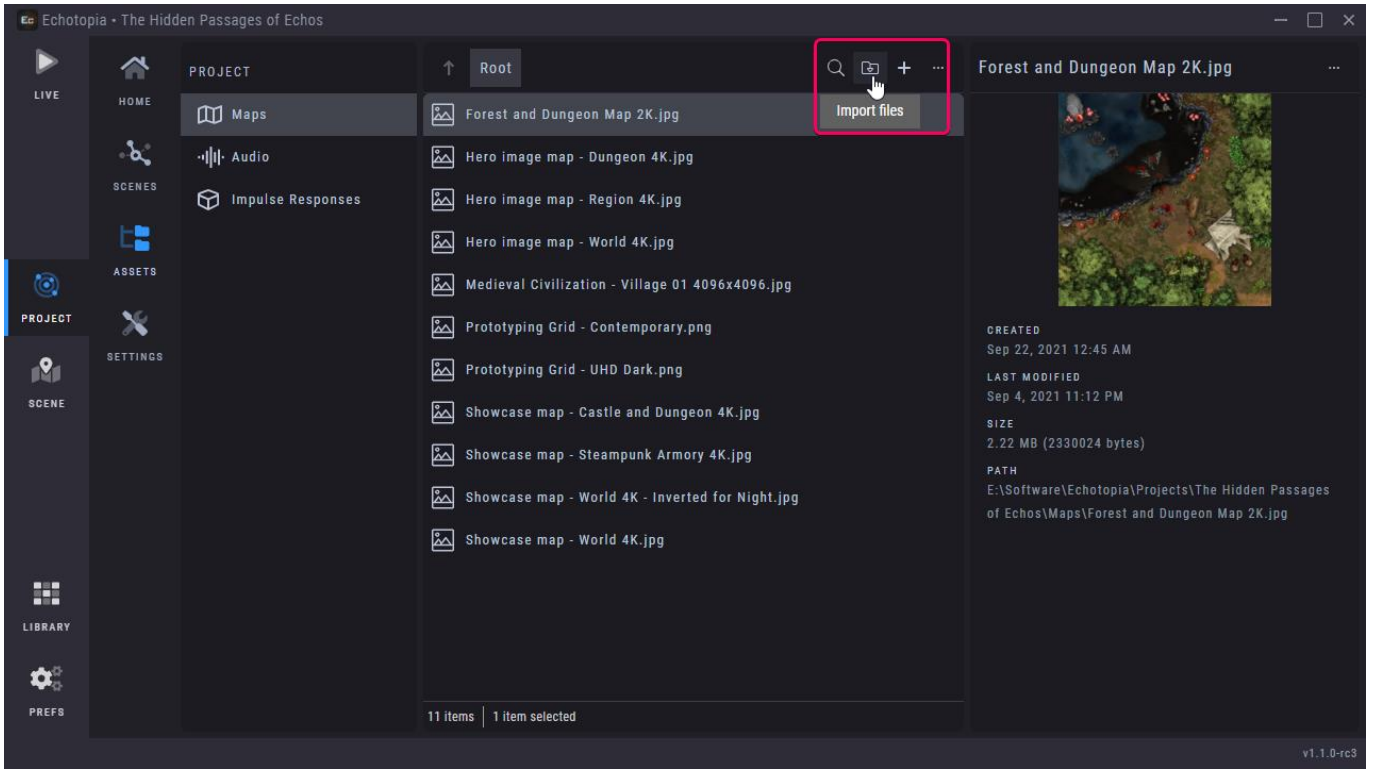
#### Portable import using Echotopia's tools

You can manage your **Project's Assets** directly from within Echotopia, and this is recommended as you help Echotopia to keep a cleaner **Project** file that way.

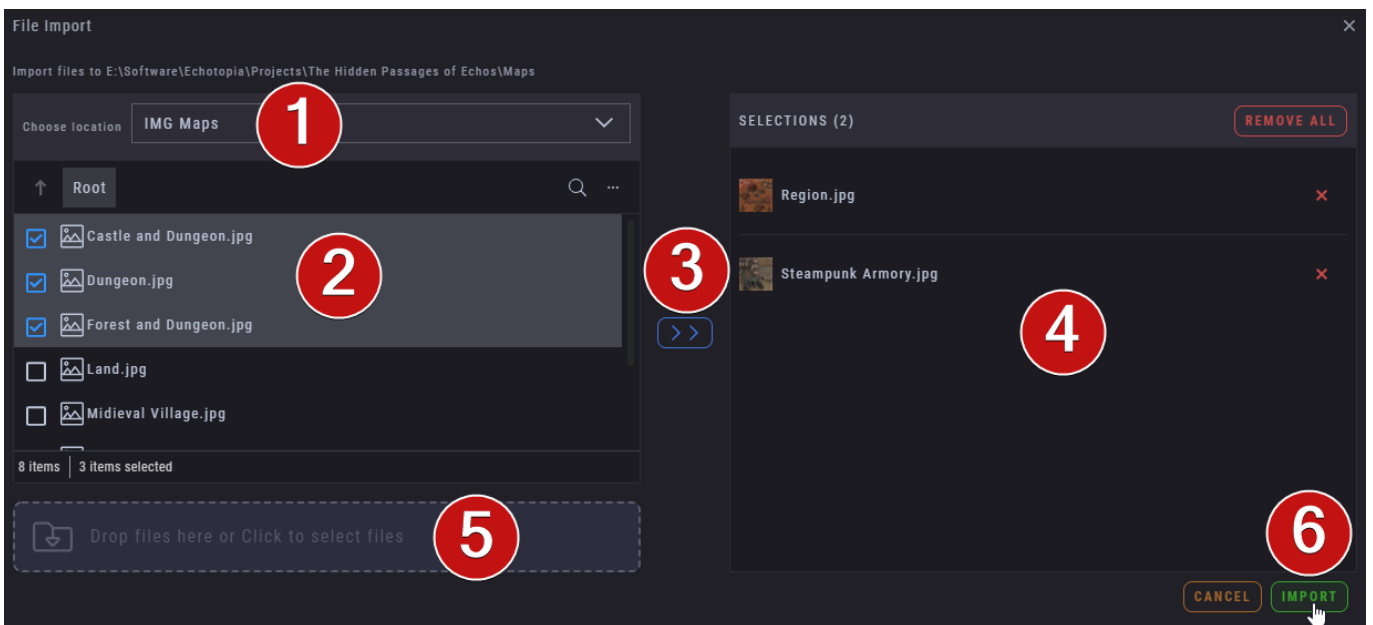
To copy images files inside the Maps folder, so then you can use them to create new **Scenes**, first you have to open the **Project's Assets** management workspace.



Do that by navigating to **Project > Assets > Maps > Import Files Button**, as you see below:



When you click on the **Import Files** button, the **File Import** window will appear. This is a centralized tool that you will always use when you have to choose files in Echotopia. Here's what it looks like:



Let's take a moment to describe what we see.



1. **Location Chooser:** In the **Location Chooser** you will find a drop-down list of both the standard subfolders in your **Project's** directory, and all the **Locations** that you created in Echotopia's **Library** workspace (more on that later).
2. **Location's contents list:** This is the directory listing together with some extra tools to **Search** and **Reload** the list, and a **Navigation Bar** with **Breadcrumbs**. When you can choose many files, each file will have a checkbox besides it. Use the checkbox to select many files together. If you don't see a multiple selection checkbox, then the action you are trying to do it's for the choice of a single file only.
3. **Add to selected button:** This adds your selection to the right column, which lists all the items you have selected so far. Please note, this action does not import or links anything yet. You have to press **Import** or **Choose [6]** depending on the case, in order to confirm your selection and **Import** or **Choose** the files.
4. **Selections list:** This list shows what you have selected so far. You can delete items if you don't want them in your final choice.
5. **Drop Files or Open OS's File Browser area:** Apart from choosing from your **Library** defined **Locations**, you can also choose to **Import** files from any other place in your storage. You can drag and drop files in this area or click on it and your operating system's file browser will open for you to choose the files to **Import**.
6. **Import button:** Clicking here confirms your selection and **Imports** the chosen **Assets** into the relevant place.

Remember, first you have to copy the image files inside the **Maps** folder of your **Project**, so later you will be able to create **Scenes** and use them.

## Audio files for Audio and Impulse Responses

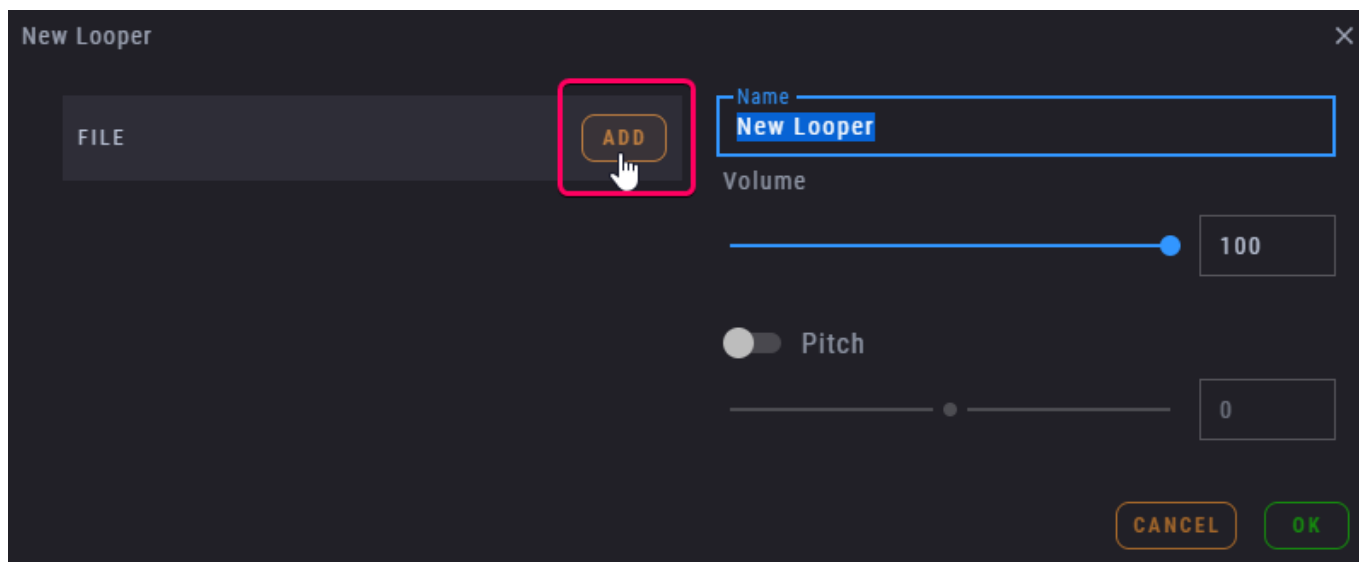
### Portable

You can use the same procedures as with the image files for **Maps**, to transfer/copy audio files inside the **Audio** and **Impulse Responses** folders. Both methods described above, using the operating system or using Echotopia's tools, will work the same.

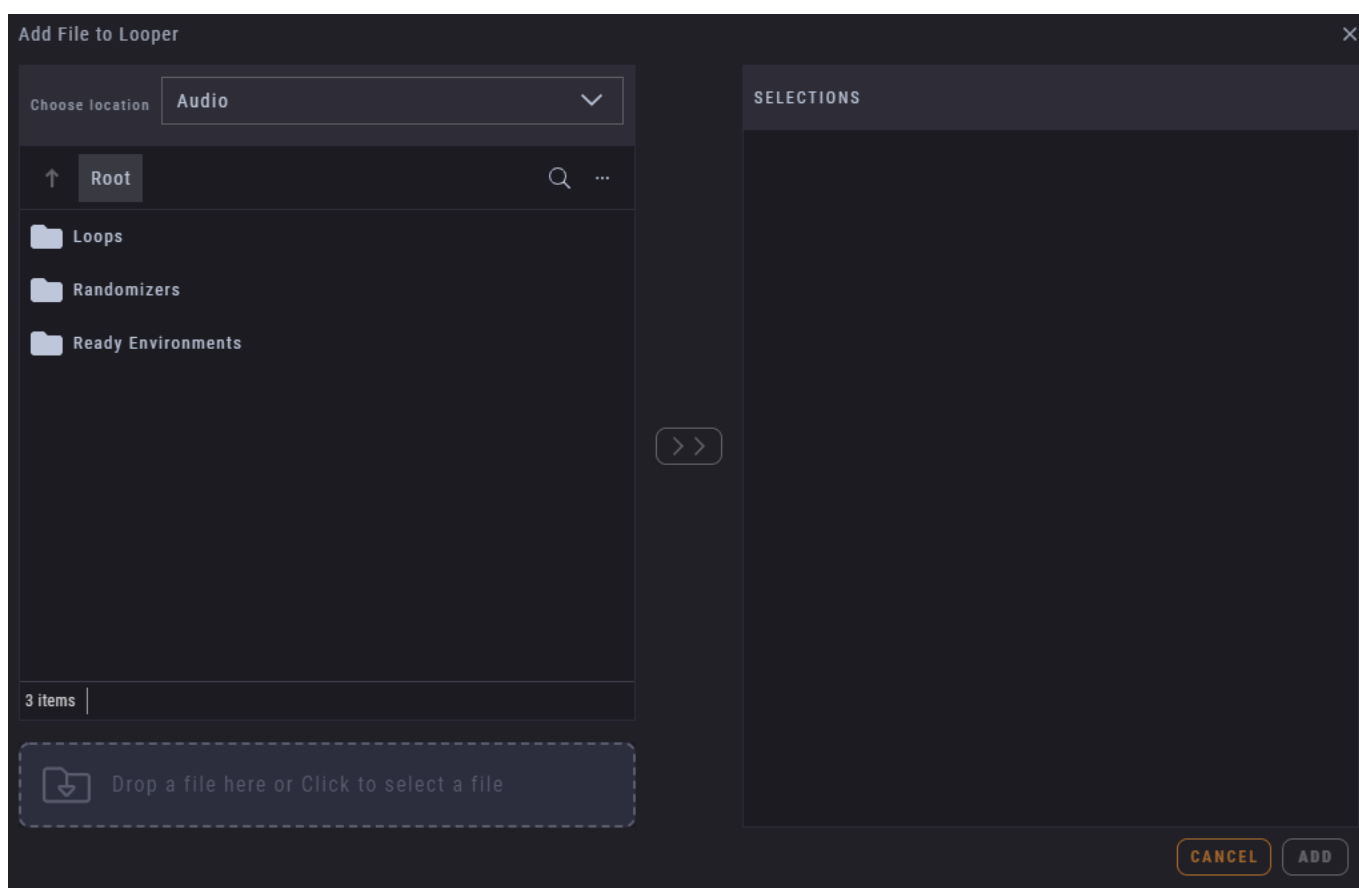
### Linked

To use audio files in your **Projects** but keep them in their original **Locations** outside of the **Project** folder, you need to directly load them in your **Scenes**. This is done through the **Instruments** or the **Acoustics Modules** directly.

In this example we will use a new **Looper Instrument**. When you open the **Looper** you will find the button to **Add** files, as it's shown on the image below:

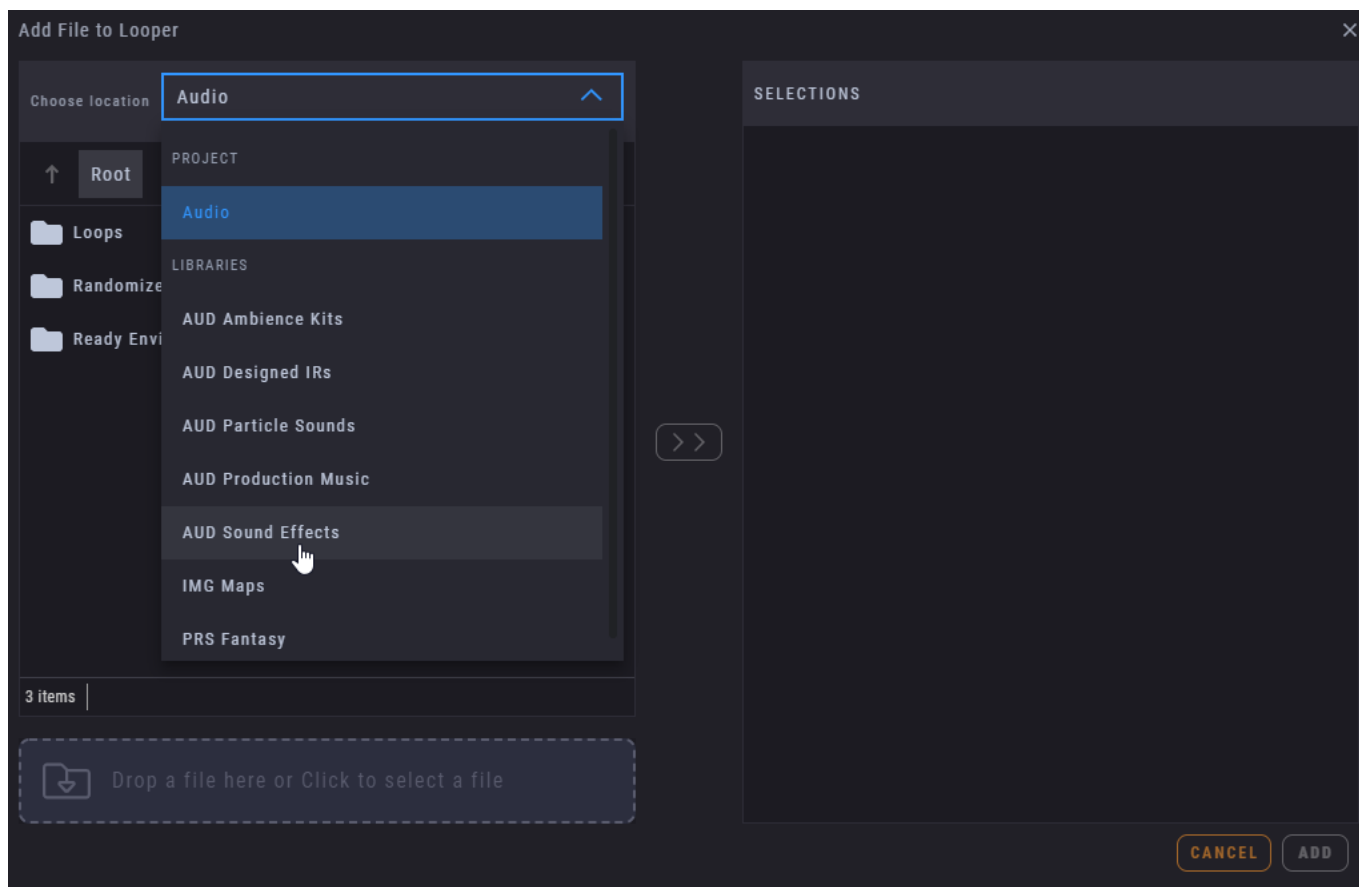


When you click Add, the **Add File** window will open.



This window has the same configuration as the **File Import** window you use when you import **Assets** from the **Project Assets** managing workspace.

If you click on the "Choose location" drop-down list, you can select various folders to open on the file list below it. The drop-down list contains any related standard subfolders within your **Project's** folder, and all the **Locations** you set up in the **Library** workspace (more on that later). Below you can see how it looks like on a computer that has some **Library Locations** already set.



The **Add File** procedure works in the same way as the **Import File** procedure that was described in the previous section regarding importing image files as **Maps**. You choose various **Locations** and you add then on the **Selections** list to the right, then you confirm your selection by selecting **Add** and you're done. The only difference is that by using this procedure you don't copy any files into the **Project** folder, you only **Link** the files with the **Project's Instruments** and **Acoustics Modules**, this is the **Linked** method described in the beginning of this chapter.

The Add File window can be accessed directly from when you need it, when you Add files to **Loopers**, **Randomizers**, **Reverberation**, **Inward Occlusion**, and similar application modules.

## Best practices

### Working safely with Assets

It's easy to focus your attention on creativity and dive in directly on creating worlds and soundscapes without planning your **Project's** scope or organizing your **Assets**. Even professionals forget those things, only to discover later that something very bad happened as a result of bad **Asset** management. Losing work and time is not fun for anybody, and doing a little housekeeping here and there is your best friend.

Some basic rules can save you a lot of trouble. Those are the same rules we follow internally at SoundFellas to ensure maximum productivity and the safety of our resources and work. We provide them here as friendly advice.

1. **Use a Main Repo:** Keep your original **Assets** on a place you can always access so you don't lose time connecting storage devices when the creative juices are flowing. This is your main repository (or repo in short).
2. **Always back up:** Make another copy of your original **Assets** as a safety backup in case your main repository malfunctions, or you delete any **Assets** by mistake.
3. **Use Intermediate Folders for destructive work:** If you know that you will load some **Assets** as **Linked** inside your **Project** (or inside many **Projects** that will share those **Assets**), and you plan on doing destructive processes on them (i.e. distortion, filtering, reverse, etc.), create a folder somewhere related with the **Project** and copy them there. That way, you can change those files once and all the **Projects** that share them will get the change. If something goes wrong, you can always go to your main repo and get fresh copies to start over.
4. **Use Portable Projects when needed:** If you're a professional and you want to make sure that your **Projects** will load correctly even after years, you should use the **Portable** method for all the **Assets** you use in your **Projects**.
5. **Plan before doing:** Do yourself a favor and plan what you want to achieve before you create a new **Project**. Also, listen to your **Assets** collection, the more you know your resources the better you can plan and execute any **Project**.

### Choosing audio file formats

Depending on the purpose of a **Project**, you can use different audio file resolution and formats, so your **Projects** will perform their purpose well. There are three major scenarios of use, you should choose which one is the best for a **Project** before you create the **Project**.

- **Live Performance:** When you are creating a **Project** to be used in a tabletop RPG campaign, a theatrical play, an online streaming session, to accompany your storytelling in real time, or similar uses, you are actually preparing a **Project** that will be used in live performance. The best resolution to use for your **Assets** on a live performance is 44.1 kHz or 48 kHz at 16-bit or 24-bit at the most. You can also use compressed formats to allow easier portability. Ogg can serve you well and FLAC is there if you need a lossless compressed format.
- **Production for media:** When you produce soundscapes for use in games, film, virtual reality experiences and other similar works, you are producing soundscapes for media. The standard resolutions for media production range between 48 kHz and 96 kHz, usually at 24-bit. But, because Echotopia uses many elements to compose one **Scene**, you can use lower resolution formats and even lossy encodings, and still get adequate results. This happens because isolated elements encoded in

lossy formats tend to lose less fidelity than final material encoded in lossy formats, so their final composition has higher quality than its lossy parts. It's like using many small JPG files (lossy) to compose a larger file which then you save in PNG format (lossless). The final image can have better perceived quality than its parts if done correctly.

- **High-resolution production and archival:** If you produce soundscapes to create sound libraries, you want to archive your soundscapes for future use, or you want the highest resolution for them, you need to produce in high-resolution. High-resolution production has a standard of using lossless wave files of 96 kHz at 24-bit or even 32-bit FP (Floating Point) depth.

---

# Factory Content

---

Echotopia's Storyteller, Creator, and Producer editions come with a vast collection of curated sound libraries. All provided libraries are of professional quality and produced exclusively by SoundFellas using next-generation asset standards.

The Echotopia Editor edition contains the fully-featured Echotopia application without any extra factory content, and it's designed for user who have their own content and only need the editor application.

You can explore all the sound libraries that are included with the content-powered editions of Echotopia by visiting our [Sound Libraries Catalog](#).

## Sound library categories

Our sound libraries are organized using different categories depending on their intended use.

You can use the content as you like, many time creativity comes from exploring an asset's alternative use as opposed for the suggested one. Our organization is designed to boost productivity, but you can experiment freely.

Let's explore the different sound library categories, their common use cases, and their content.

## Ambience Kits

**Ambience Kits** are modular sound collections with ready-made 3D soundscapes, isolated elements, and all the assets you need to create dynamic and unique acoustic environments, that perfectly match the style of any project.

You can use the ready-made scenes as a fast way to create an **Area** or a complete **Scene**, but also, each library has all the elements you need to create custom made thematic **Areas**.

Each **Ambience Kit** includes:

- **Scenes:** Those are ready-made 3D soundscape loops.
- **Noiseprints:** Extracted noise textures (aka roomtones) from scenes and other useful loops.
- **Elements:** Isolated oneshots and loops that can be used as extra layers with scenes and noiseprints or standalone using randomized playback
- **Space IRs:** Impulse responses created to simulate specific spaces.
- **Occlusion IRs:** Impulse responses created to simulate occlusion through materials.

Some representative libraries are: [Medieval Towns and Villages](#), [Factory Plants and Industrial Machines](#), [Avenues, Highways, Streets, and Traffic](#), and [Engine Rooms and Machine Support Systems](#).

You can learn more about the features and browse all the libraries of this category at the [Ambience Kits main page](#).

## Sound Effects

**Sound Effects** are impactful optimized special sound effects and Foley, featuring all possible states of each event, several types of each performance, and several variations for each sound, so you can create your unique designs.

**Sound Effects** are perfect for using as sweeteners in **Loopers** and of course their main use is with the **Randomizers**.

Some representative libraries are: [Fictional Doors and Portals](#), [Laboratory Equipment](#), [Bone Breaks and Flesh Tears](#), and [Cinematic Low-Frequency Effects](#).

You can learn more about the features and browse all the libraries of this category at the [Sound Effects main page](#).

## Production Music

**Production Music** are thematic collections of music tracks mixed in full 3D sound space for the perfect immersive soundtrack. The tracks are mastered for film post and games to easily blend with voice, sound effects and ambience.

Music is the perfect way to add drama and action as a non-diegetic elements, and in special cases as a diegetic element. **Production Music** libraries contain superior music tracks that loop perfectly to accompany your story with a great soundtrack.

Some representative libraries are: [Dark Nightmares](#), [Sounds Of Nebula](#), [Melodious Flakes](#), and [Laid-Back](#).

You can learn more about the features and browse all the libraries of this category at the [Production Music main page](#).

## Particle Sounds

**Particle Sounds** are collections of micro-sounds perfectly trimmed and mastered to be used in physics simulations and particle sound emissions. Including many variations for each event and auxiliary assets for building dynamic sound systems.

**Particle Sounds** are designed to be used with Echotopia's **Randomizers** but can also be used with similar instruments from other applications and also with collision events from graphics particle systems.

Our first **Particle Sounds** libraries are almost ready and will be released soon. You can stay informed by [subscribing to our newsletter](#) or by bookmarking and following the [Particle Sounds main page](#).

## Designed IRs

Designed IRs are collections of acoustic and psychoacoustic **Impulse Responses** that perfectly mimic the behavior of acoustic spaces, physics phenomena, or psychoacoustic illusions of hearing and perception.

Those **IRs** are perfect for use with the **Acoustics** modules of **Areas**, the **Reverberation** and **Inward Occlusion**.

Our first **Designed IRs** libraries are almost ready and will be released soon. You can stay informed by [subscribing to our newsletter](#) or by bookmarking and following the [Designed IRs main page](#).

## Downloading and installing the Factory Content

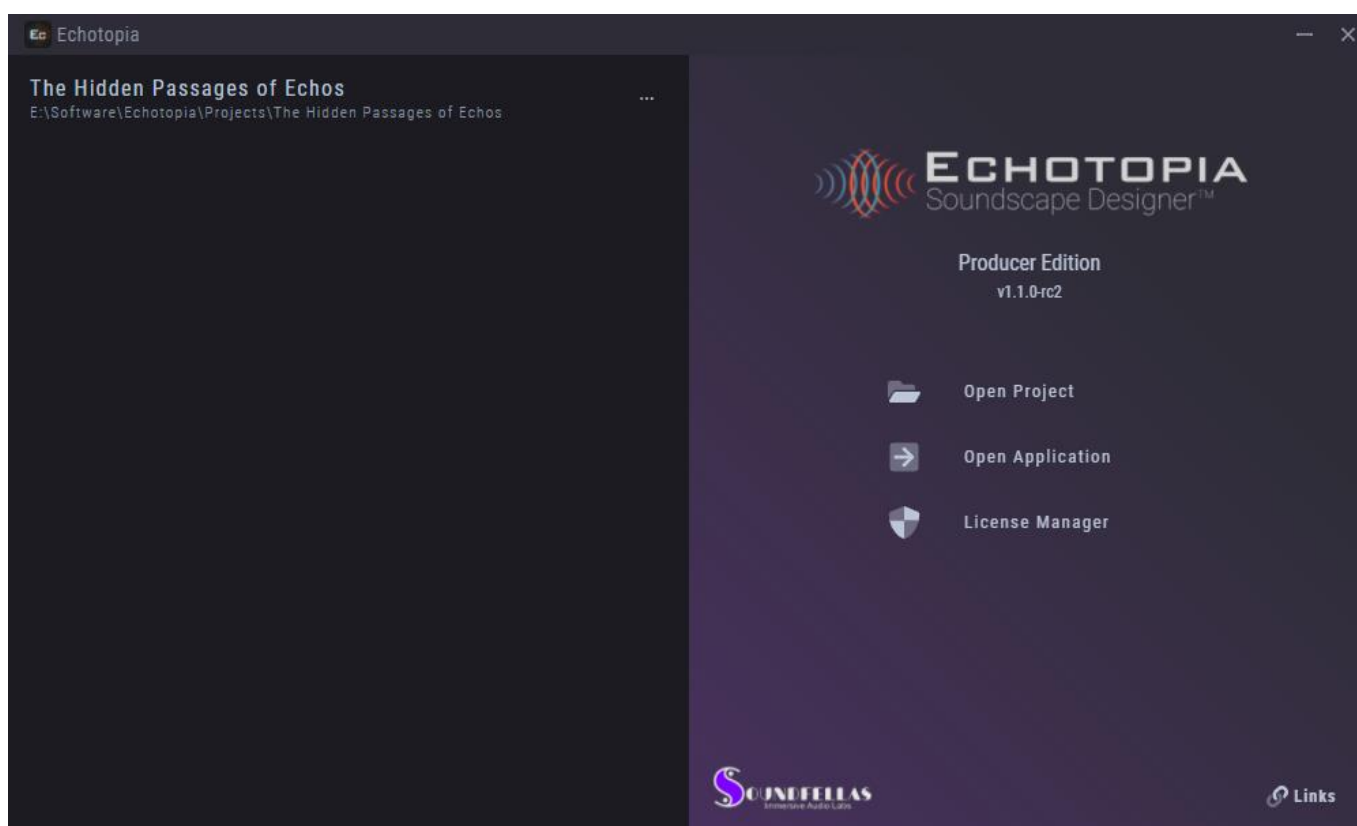
To download and install the **Factory Content**, you can follow [this guide](#).



# Interface reference

In the previous chapter we saw how to work on **Maps** using the **Scene Editor**, which is the place that most of the work in Echotopia is done. We also described various creative ways to use the **Scene Editor's** various tools. In this chapter you will find a full catalog of all of Echotopia's **Workspaces**, **Tools**, and **Widgets** for reference.

## Launcher



The **Launcher** is the first thing you will see when you open Echotopia.

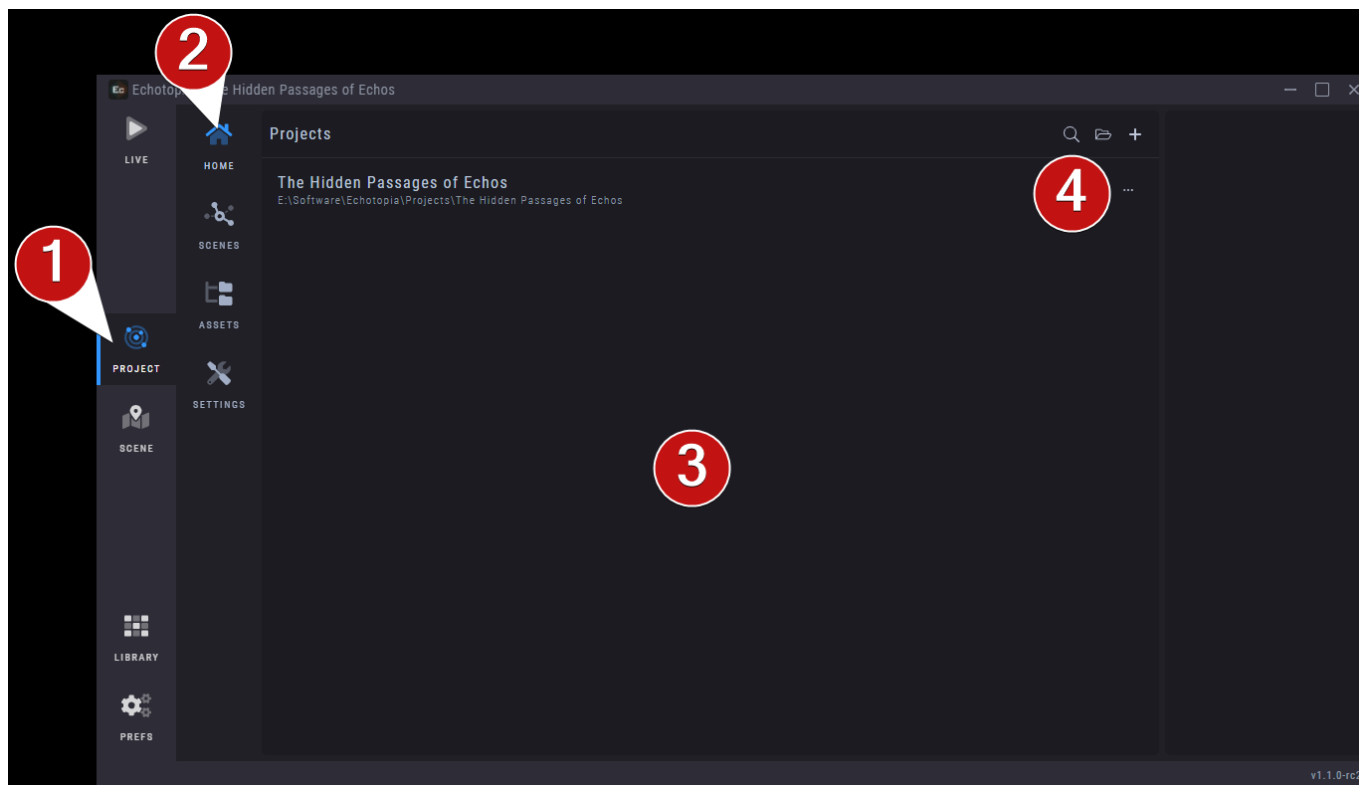
On the left side you have a list of the **Projects** you opened recently. On the right-end of each **Project** item there is a kebab menu (aka three dots menu or three vertical dots menu) with more option to manage the respective **Project**.

On the right side you have (from top to bottom):

1. Application title
2. Application's edition you own
3. Application's version
4. Open a **Project** from the hard drive
5. Just open Echotopia without loading any **Project**
6. Manage your license and activations

7. SoundFellas logo which opens the SoundFellas website
8. Useful links list

## Project workspace

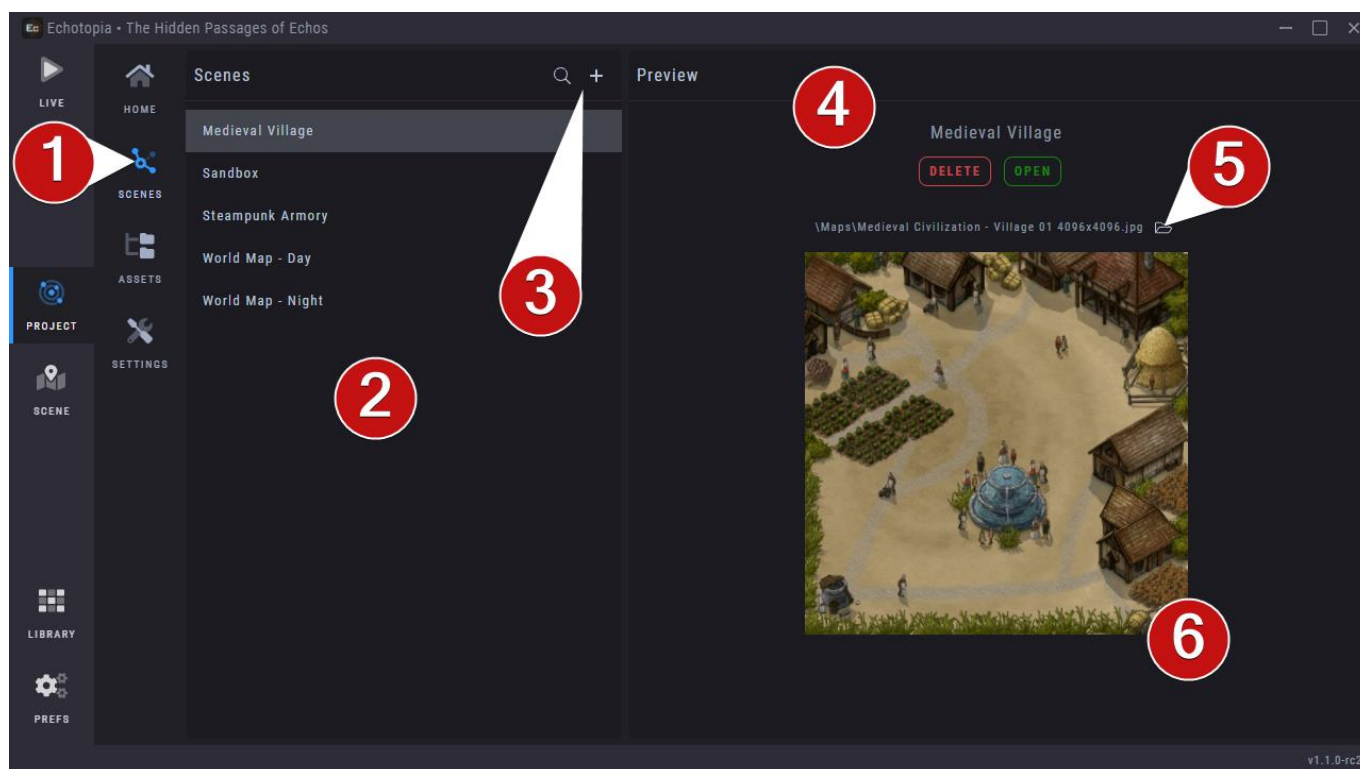


1. **Project** workspace. Through this tab you access all the **Project** workspace's sections.

## Home section

2. **Home** is the main workspace section. You use this section to manage your **Projects**.
3. A list of the **Projects** you opened recently, the same that you can find in the **Launcher**.
4. Various buttons to manage the list, open a **Project**, or create a new **Project**.

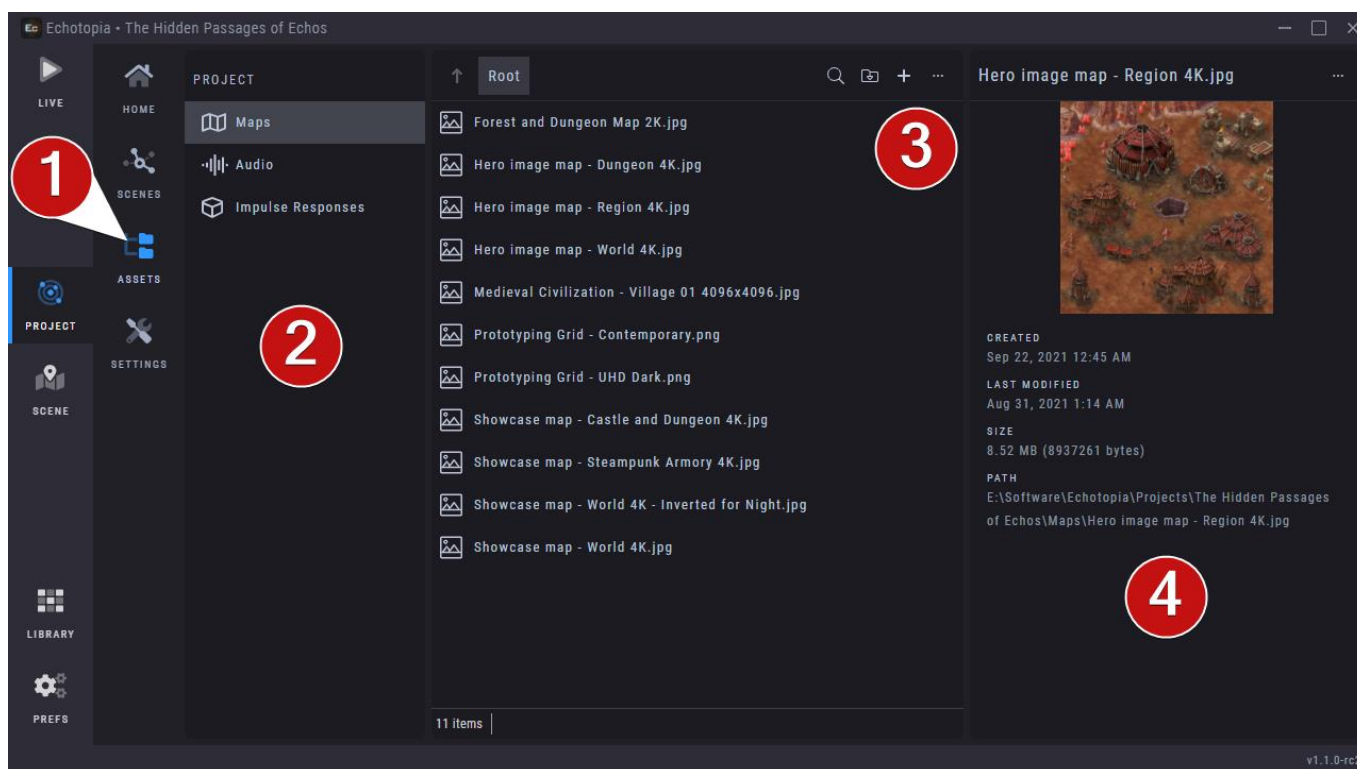
## Scenes section



1. The **Scenes** section, has everything you need to manage the open **Project's Scenes**.
2. List of all the **Scenes** in the **Project**.
3. **Search** and **Add New Scene** buttons.
4. Preview pane of the selected **Scene** from the list. Here you can **Delete** a **Scene** or **Open** a **Scene** for editing in the **Scene Editor**.
5. **Select** another **Map** for the selected **Scene**.
6. Preview of the **Map** the selected **Scene** is using.

Attention, **Deleting** a **Scene** cannot be undone.

## Assets section

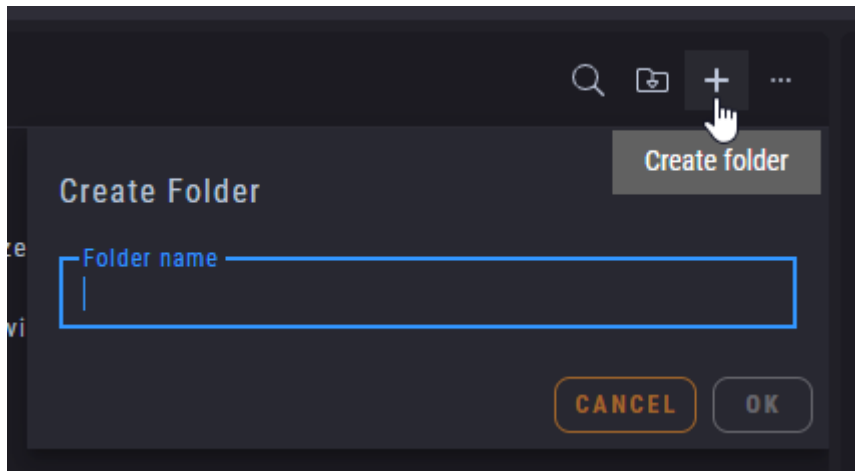


1. The **Assets** section contains everything you need to manage the **Assets** of your **Project**. Those are the **Assets** that are inside your **Project's** folder. **Assets** that are located outside of your **Project's** folder cannot be managed here. More on the **Asset Management** chapter.
2. List of the default subfolders inside the **Project's** folder. Echotopia uses a standardized organization of files for the **Assets** that are stored inside the **Project's** folder. That way, if you like your **Project** to be portable (move it easily between machines), you can work with all your **Assets** under those standardized subfolders and transfer or share your **Project** easily. Currently there are three standard subfolders (you can have more folders inside those subfolders to organize your **Project's Assets** better):
  - a. **Maps**, which hold the images used as **Maps** on the **Scenes**.
  - b. **Audio**, which hold the audio files.
  - c. **Impulse Responses**, which hold the **IR** files.
3. List of the **Assets** inside the selected subfolder, together with **Move Up One Folder**, **Breadcrumbs**, and buttons for **Search**, **Import Files**, **Create Folder**, and **More Options** kebab menu on the top bar of the list.
4. Preview and information of the selected **Asset**. Together with **More Options** kebab menu.

You can use this section to Add Assets in your Project, but you can also Add Assets by simply copying files into the Project's subfolders from the operating system's native file browser.

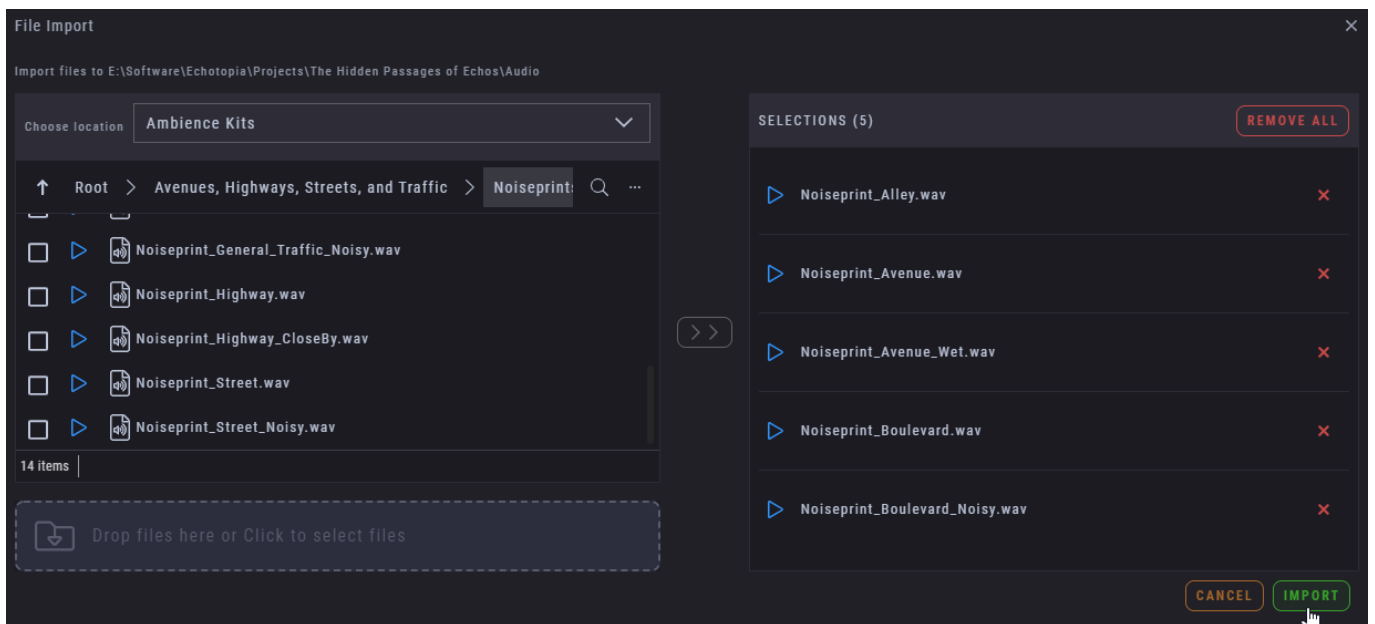
### Create Folder dialog

When you click on the **Create Folder** icon on the top bar of the **Assets** list of the **Assets** section, a dialog will appear to help you create the new folder.

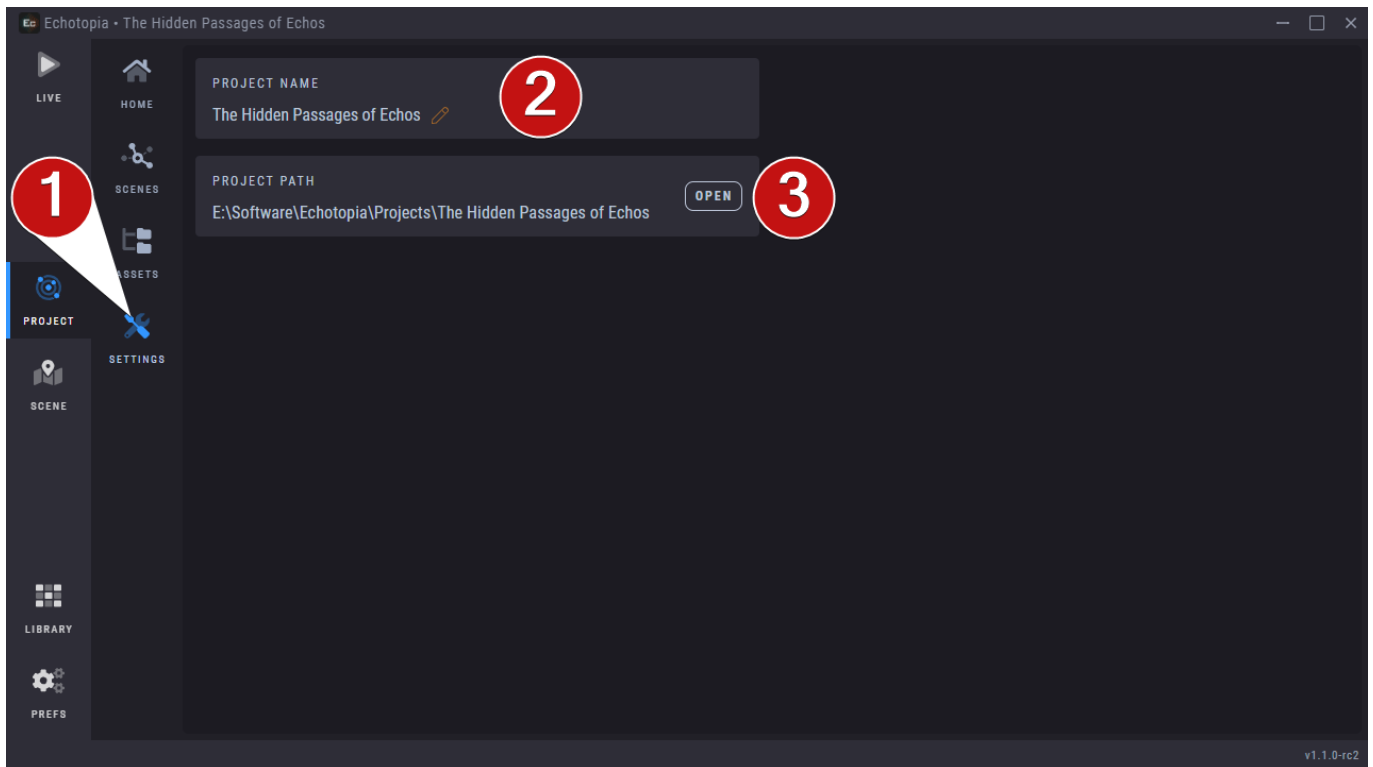


### Import Files dialog

When you click on the **Import Files** icon on the top bar of the **Assets** list of the **Assets** section, a dialog will appear to help you import **Assets**. More on this on the **Asset Management** chapter.

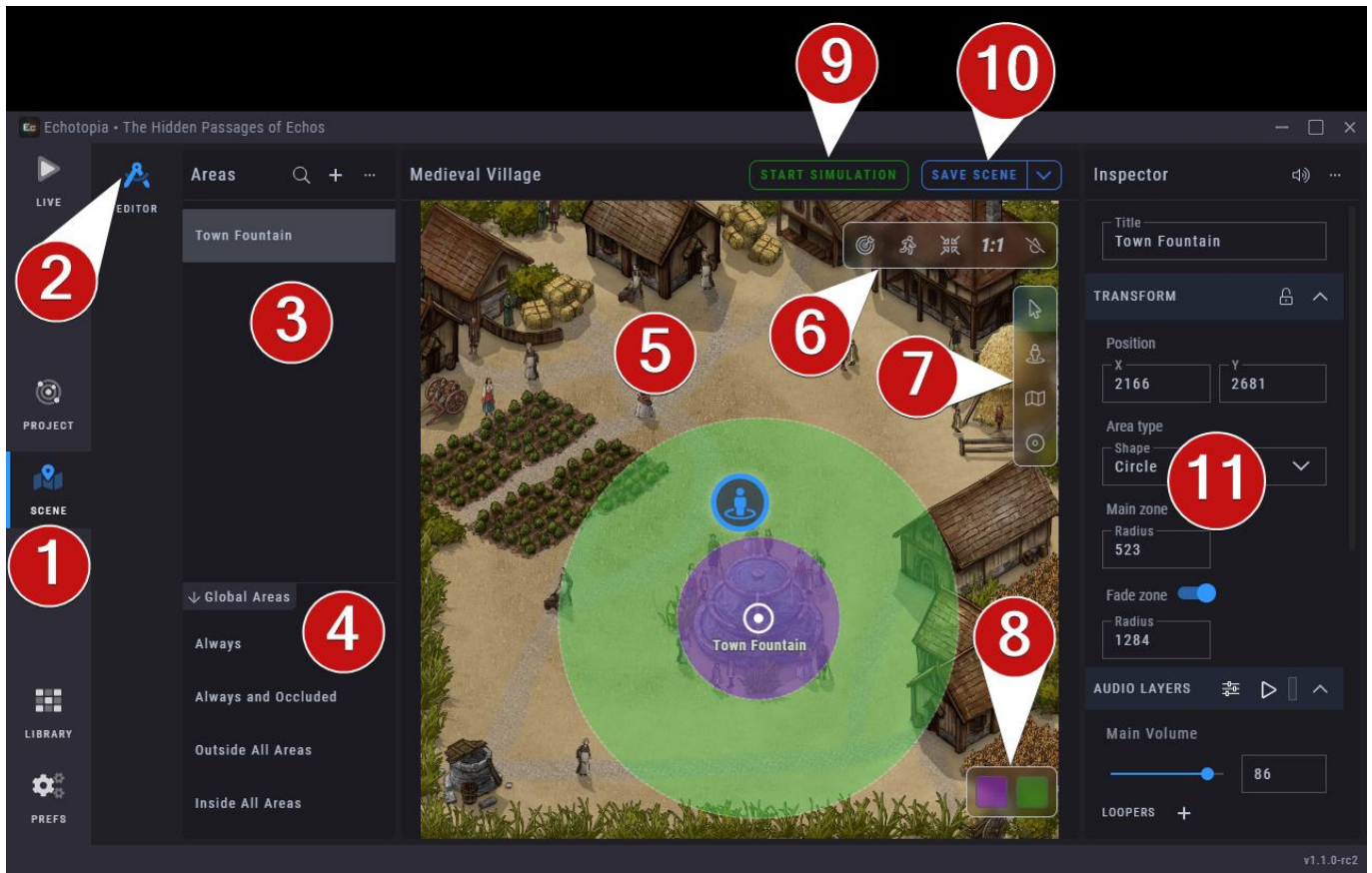


## Settings section



1. The **Settings** section contains the general **Settings** of the **Project**.
2. Here you can see and change the **Project's** name. Changing the **Project's** name here doesn't change the **Project's** folder's filename which was set when you first created the **Project**.
3. Here you can see and **Open** the path that the **Project** has on your storage device.

## Scene workspace



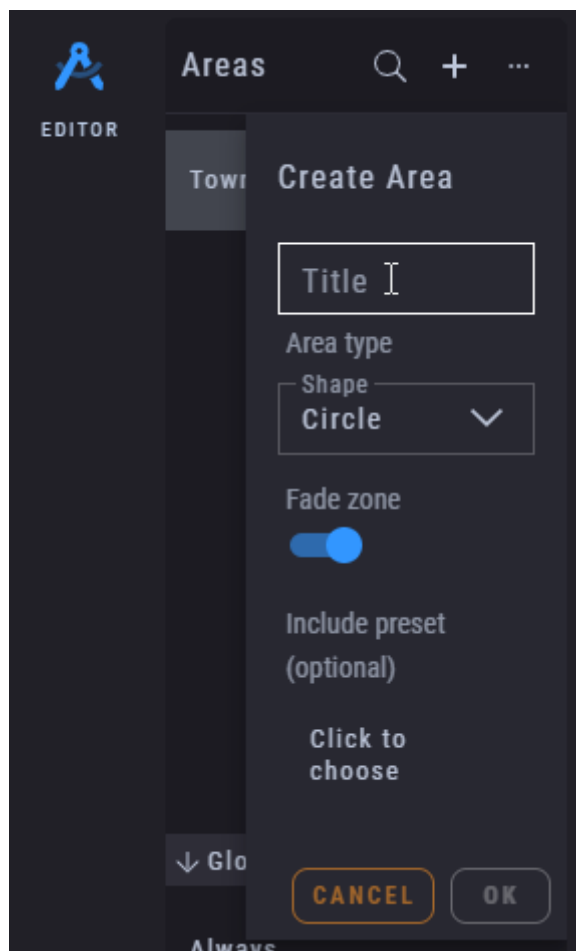
1. The **Scene** workspace contains all the sections used to manage and edit a **Scene**. This needs a **Scene** to be opened in order to function, so if you see a blank page here, just head on to the **Project Workspace > Scene Section > Select a Scene > Open the Scene**. Then you can navigate back to this section and work with the opened **Scene**.

## Editor section

2. The **Editor** section is the main **Scene/Map** editor. Currently, there are no other sections in this workspace.
3. **Areas List**. Create and manage **Areas** using this list and the tools on its top-bar. The top-bar has the tools to **Search**, **Create Area**, and a **More Options** kebab menu.
4. **Global Areas** list. From here you can select which **Global Area** to edit in the **Inspector** [11]. You can expand/collapse the **Global Areas** list using the small arrow icon at the left of the tabs title.
5. **Map Editor**.
6. **Map Toolbox**. Explained later.
7. **Selector Toolbox**. Explained later.
8. **Areas Overlay Color Pickers**. Explained later.
9. **Start Simulation**. Explained later.
10. **Scene Actions Menu**. Explained later.
11. **Inspector**. Currently used only to configure the parameters of an **Area**. This is explained in great detail in the **Operating Principles** chapter.

## Create Area dialog

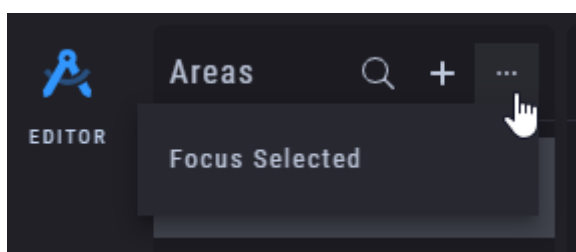
When you click the **Create Area** icon at the top-bar of the **Areas List**, a dialog will appear to help you **Create** a new **Area**.



Using this dialog you can define the **Area's Title**, the **Shape**, if it will have a **Fade Zone** or not, and include the predefined **Area Content** (predefined **Instruments** and **Acoustics**, not the **Transform**) from a **Preset** (more on **Area Content Presets** later).

## Focus Selected option

The **Focus Selected** option can be found when you click the **More Options** kebab menu at the top-bar of the **Areas List**.

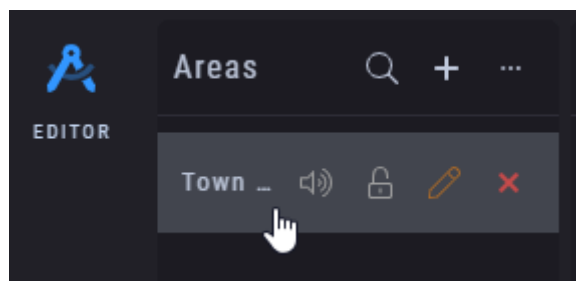




When you activate this option, every time you click and select an **Area** from the list, this **Area** will be focused at the center of the **Map Editor**.

### List items hover options

When you hover above an item from the **Area's List**, extra options for this item will be revealed.



Those are, from left to right:

1. **Disable Area:** When switched off, the **Area** doesn't appear on the **Map**, doesn't produce any audio, and doesn't affect the **Acoustics** engine.
2. **Lock Transform:** When switched on, it prevents changing the **Transform** parameters of this **Area**.
3. **Rename Area.**
4. **Remove Area.** Attention, this action is permanent and cannot be undone.

### Map Toolbox

The **Map Toolbox** contains various utilities to help you edit your **Map**.



Those are, from left to right:

1. **Go to Center:** Will center the **Map** in the **Viewport**.
2. **Go to Observer:** Will center the **Viewport** to the **Observer**.
3. **Fit to Viewport:** Will zoom the **Map** so it fits the **Viewport**.
4. **Actual Size:** Will show the **Map** in its real pixel size.
5. **Grayscale:** Will apply a grayscale filter on the **Map** image, to help you see any **Map Overlays** (**Areas**, **Observer**, etc.) better. This is very useful when you use **Map** images that are colorful with vibrant colors, making any editable elements difficult to stand out.

### Selector Toolbox

The **Selector Toolbox** contains various utilities to help you while selecting various elements to edit. This is useful when editing **Maps** with dense elements.

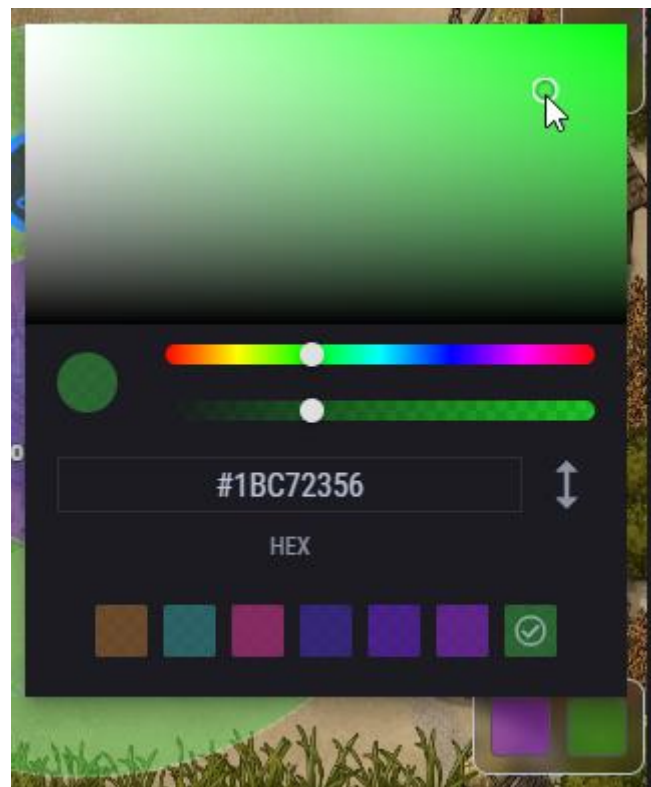


Those are, from top to bottom:

1. **Select Everything:** You select and drag any object.
2. **Select Observer:** You can only select and drag the **Observer**.
3. **Select Map:** You can only drag the **Map** around.
4. **Select Areas:** You can only select and drag the **Areas**.

### Areas Overlay Color Pickers

The **Areas Overlay Color Pickers** give you the option to change the color and opacity of the **Area Zones** that are drawn above the **Map**.



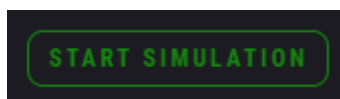
The first **Color Picker** is for the **Main Zone** and the second **Color Picker** is for the **Fade Zone**.

You can use the **Color Box** to select the **Saturation** and **Lightness** and using the **Sliders** below the **Color Box** you can choose the **Hue** and **Opacity** values.

On the **Field(s)** below you can **Copy/Paste** values according to the **Color Model** selected using the vertical double-headed arrow on the right.

At the bottom of the **Color Picker**, you will find a list of the last 16 colors you use in your **Project**. Those are saved separately with each **Project** and it's an easy way to set the same colors between the **Scenes** of the same **Project**.

### Start Simulation button



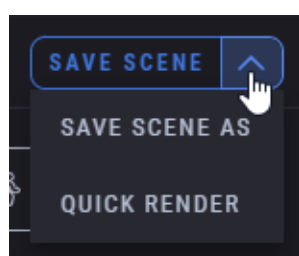
The **Start Simulation** button is very important because it starts the audio engine for the **Scene** inside the **Scene Editor**. This is very useful while you work on a **Scene** and you want to audition how the **Scene** will sound in **Live Mode**.

Like in every other **Scene** playback scenario, what you hear is rendered through the **Observer**.

When you're on the **Scene Editor** and press Start Simulation, some settings of Echotopia might be grayed out. This is because those parameters cannot be changed while the simulation runs. If you stumble upon a parameter that's grayed out and you want to change it, first stop the simulation and then change it. You can start the simulation right after to listen to your changes.

### Scene Actions menu

The **Scene Actions Menu** contains important action related with the open **Scene**.

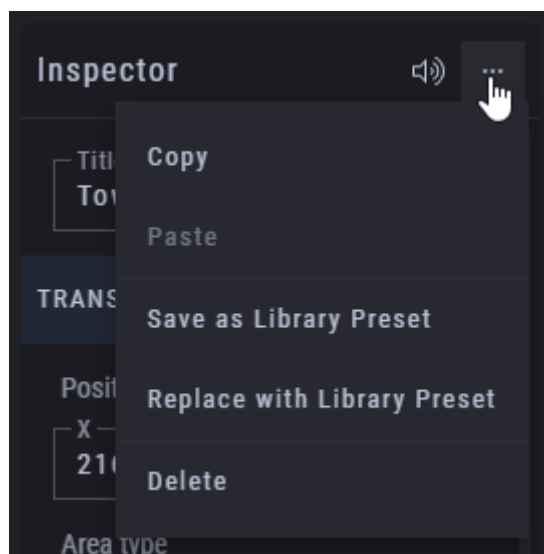


Those are, from top to bottom:

1. **Save Scene**: Saves all changes you have made in the **Scene** from the last time you saved. Attention, **Scenes** are not saved automatically, if you didn't saved your **Scene**, you will lose any changes you made.
2. **Save Scene As**: Saves the current **Scene** as a **New Scene**.
3. **Quick Render**: Opens up the **Quick Render** tool which allows you to export an audio file of what the **Observer** is listening at its current position (learn more in the **Quick Render** section of this document).

### Inspector's top bar

At the **Inspector's** top bar you will find some extra tools to help your manage your **Areas**.



The first icon is the **Disable Area** switch which serves the same functionality as the **Disable Area** switch from the item's hover options in the **Areas List**. When switched off, the **Area** doesn't appear on the **Map**, doesn't produce any audio, and doesn't affect the **Acoustics** engine.

Then we have a **More Options** kebab menu with the following items from top to bottom:

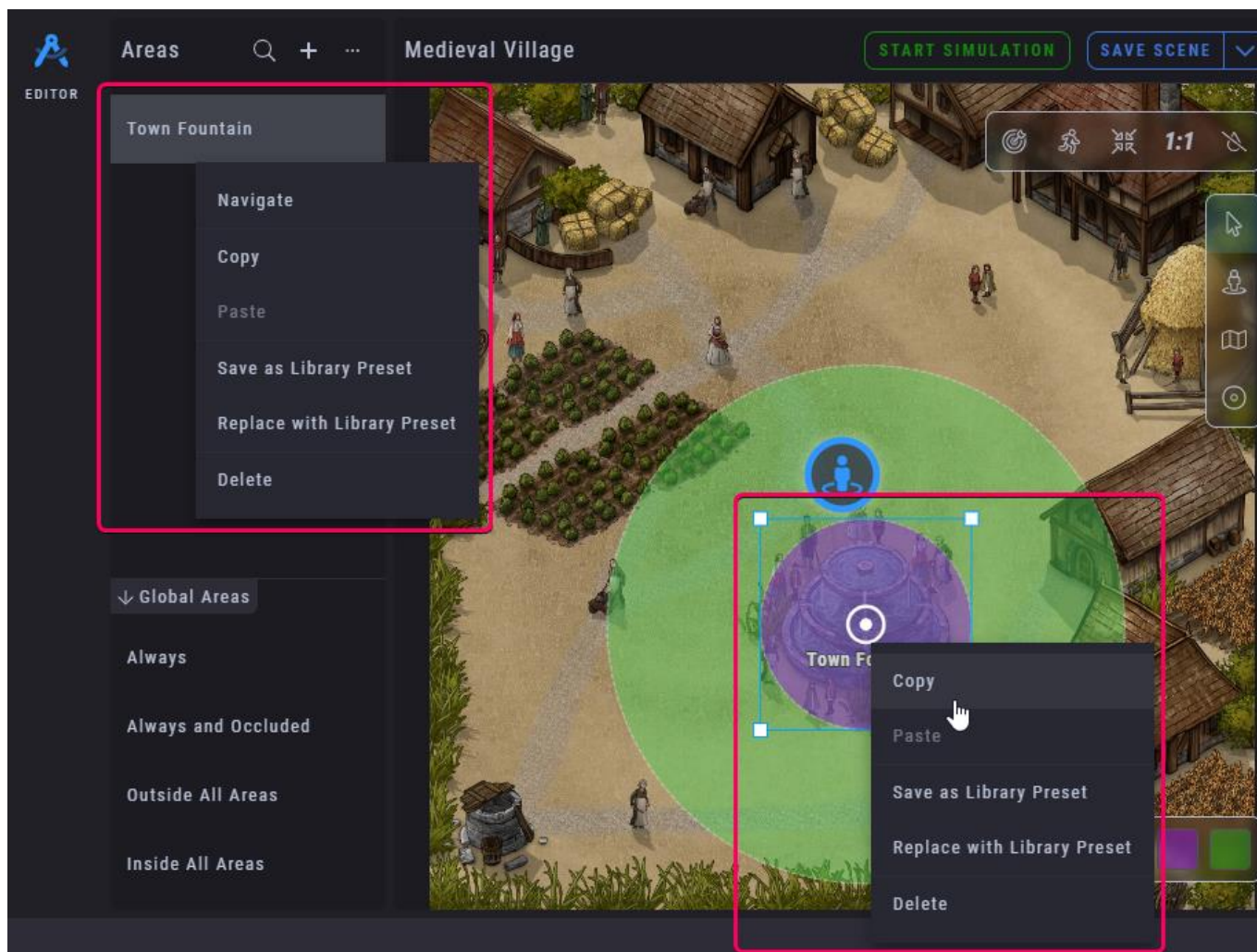
1. **Copy**: Copies the **Area Contents (Instruments and Acoustics, not the Transform)**, so you can paste them into another **Area**.
2. **Paste**: Pastes (and replaces) the current **Area Contents** with the **Area Contents** you last copied.
3. **Save as Library Preset**: Saves the Area Contents as a **Preset** at the **Library** (more on **Library** and **Presets** later).
4. **Replace with Library Preset**: Replaces the current **Area Contents** with the **Area Contents** from an **Area Contents Preset**.
5. **Delete**: Deletes the **Area**. Attention, this action is permanent and cannot be undone.

### Right-clicking on Area List item or Area widget

When you **Right-Click** on an **Area** item in the **Areas List** or on an **Area** on the **Map**, a menu with extra options appears in each case.

Those menus are identical and the options in those menus are the same with the options in the **Inspector's** top bar, with the exception of the **Navigate** option on the menu of the **Areas List** item. **Navigate** will center the **Viewport** to the center of the chosen **Area**, and it's a quick way to find an **Area** on the **Map** from the **Areas List**.

You can see that on the image below, in which both menus are open at the same time for the same **Area**.



## Live Mode (aka Live workspace)

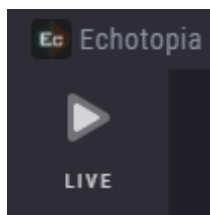
The **Live Mode**, also known as **Live workspace** is a special mode for Echotopia created for use in live performances. Echotopia is made for use in live performances, so the **Live Mode** it's one of the most used mode for the app.

By live performances we mean any scenario that Echotopia is used live, those can include but are not limited to:

- During a session of a tabletop role playing game.
- During a session of live action role-playing (LARP).
- During a theatrical play.
- Setting the mood for a yoga studio.
- Controlled by a game master to set the mood of an escape room session.
- Controlled by a storyteller to set the mood during book reading.
- Just playing back relaxing soundscapes to help you relax at home or at the office.
- Playing spooky sounds during a Halloween party.
- Demonstrating all the soundscapes in a fantasy world to a group of video game designers.
- ...and many more, you get the idea.



To enter **Live Mode** you only need to click on the big Live button on the workspaces bar.



This will engage Echotopia's **Live Mode** and you will be presented with an uncluttered interface containing only the tools you need and nothing more.



Here's what you need to know about this screen:

1. You only move the **Observer** to change how you experience the virtual world (what you hear).

When you first launch **Live Mode** the **Observer** will not be placed on the **Map** to give you the control of where you would like to start your journey. That means that you will not hear any sound. You need to **Double-Click** with your mouse on the **Map** at the position you want to put the **Observer**, at which point the audio will start rendering through the **Observer** and coming out the speakers.

2. You can use the **Quick Scene Switcher** at the top of the **Viewport** to quickly switch between **Scenes**.

Each time you switch to another **Scene** the **Observer** will not be placed on the **Map** to give you the control of where you would like to start your journey. That means that you will not hear any sound. You need to **Double-Click** with your mouse on the **Map** at the position you want to put the **Observer**, at which point the audio will start rendering through the **Observer** and coming out the speakers.

3. The **Map Toolbox** is also present in case you need extra utilities to help you navigate the **Map**.
4. By clicking the **Stop** button you will exit **Live Mode** and return to the **Scene Editor**.

**Live Mode** is a powerful mode and we plan on adding more tools and features in the future, empowering live performers or adding clever automation for set-it-and-forget-it situations.

## Quick Render

Echotopia is great for live performance, for game masters to enhance their game rooms with ambience during tabletop sessions, but also for sound designers and any media producer (games, film, virtual reality, sound librarian) to prototype and produce realistic soundscapes with ease.

By using the **Quick Render** tool, anyone can export the soundscape through the **Observer's** position on a **Map** or export an **Area Preset** from the **Library**, in a wave file of up to 8 channels of surround sound.

This is useful for tabletop game masters as well, because that way, they can use the exported file in their favorite VTT (Virtual Table Top) platform or as ambience on an online streaming session.

Let's see how all this works.

You can invoke the Quick Render tool through two different places, serving different purposes.

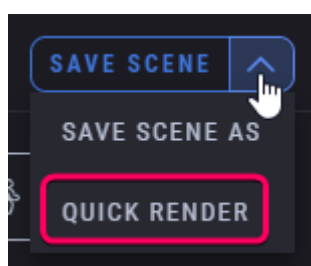
### Quick Render the Observer

Rendering the **Observer** through its position on a **Map** is a great way to export the perspectives you want to use in other applications. For example, if you're working on a game and want to provide the background ambience for the game's levels, you can prototype how the complete game's world will sound in Echotopia, and then render different positions of the **Observer** to files and use them as background ambience by importing them into your levels in the game engine (Unity, Unreal, CryEngine, Godot, etc.) or game audio middleware (Fmod, Wwise, etc.).

The same use case applies for filmmakers and videographers too. You can prototype and create your acoustic world in Echotopia and then export your soundscapes and import them in your non-linear editor (Premiere Pro, DaVinci Resolve, Avid Composer, etc.). By using Echotopia to create your project's background ambience, you can easily export a different acoustic perspective in case something changes in the direction of a movie sequence.

For game masters this is self-explanatory. If you use other applications (i.e., VTTs) for your sessions, or you are creating a video to publish online, you can export any position of your **Maps** as sound files to use in any of those cases.

To **Quick Render** the **Observer**, while you're on the **Scene/Editor** workspace, find the **Save Scene** button and click to expand its submenu. There you will find the **Quick Render** option.



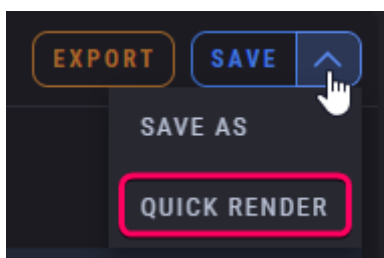
Read below on the **Quick Render Dialog** section to learn more about the options you have when rendering an audio file.

## Quick Render an Area Preset

Echotopia offers you the option of **Quick Render** for the **Area Presets** found at your **Library**.

The difference between rendering the **Observer** or an **Area Preset** to a file, is that when you render the **Observer** you get the sound of your **Scene** simulated using the **Acoustics** simulation and all of Echotopia's real-time engine, at the exact position of the **Observer** at the time of the render, taking into account all the **Areas** that overlap with the **Observer**. On the other hand, when you render an **Area Preset** via the menu on the **Library**, you get the sound of how this **Area Preset** would sound if it was used on an **Area** on a **Map** without other **Areas** overlapping and the **Observer** positioned at the center of the **Area's Main Zone**.

To **Quick Render** an **Area Preset**, while you're on the **Library/Presets** workspace, select a **Preset** from the **Presets List**, and then click to expand the **Save** button and choose the option **Quick Render**.

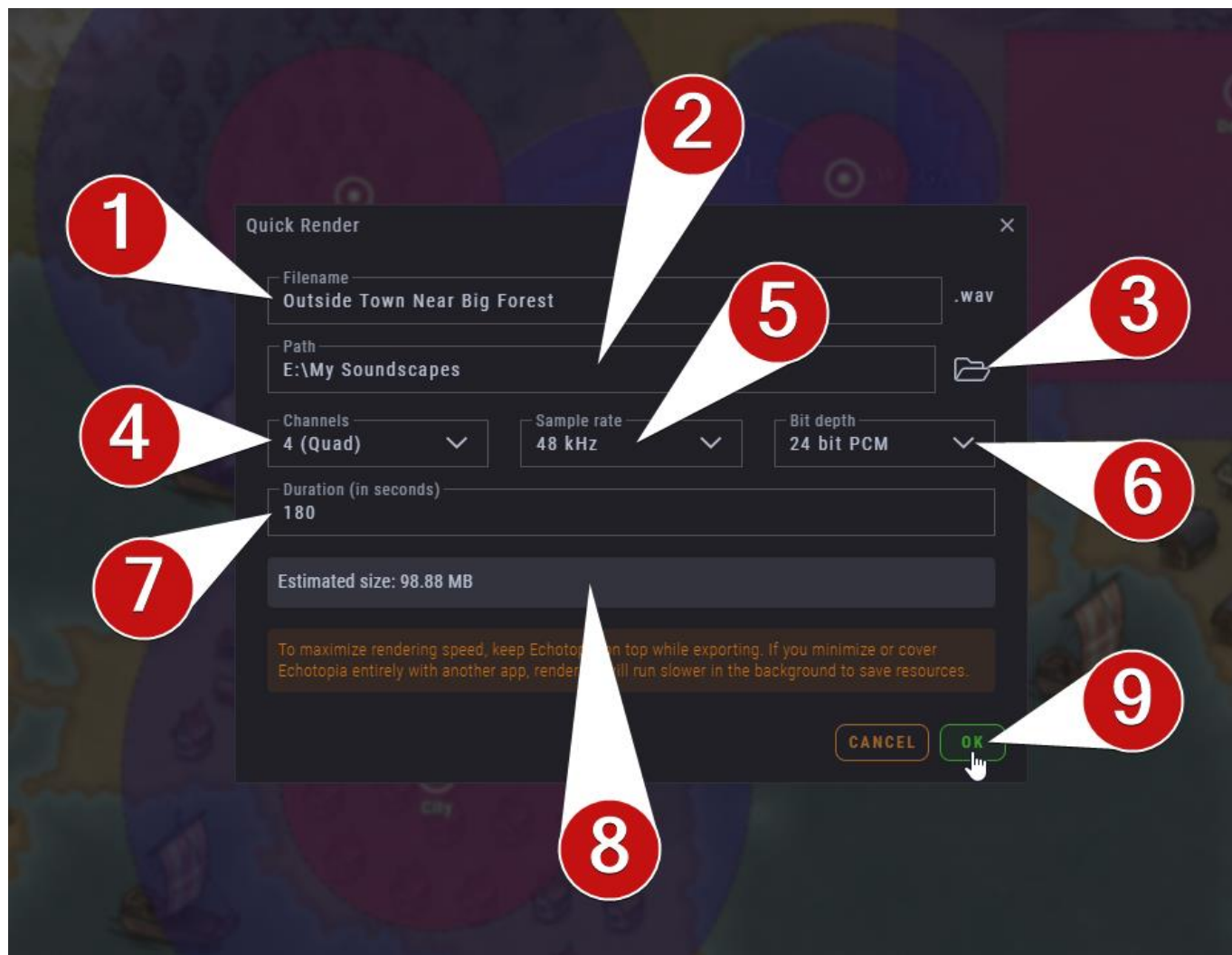




Read below on the **Quick Render Dialog** section to learn more about the options you have when rendering an audio file.

## Quick Render Dialog

When you select **Quick Render**, the **Quick Render Dialog** opens up to set the specifications of the exported file.



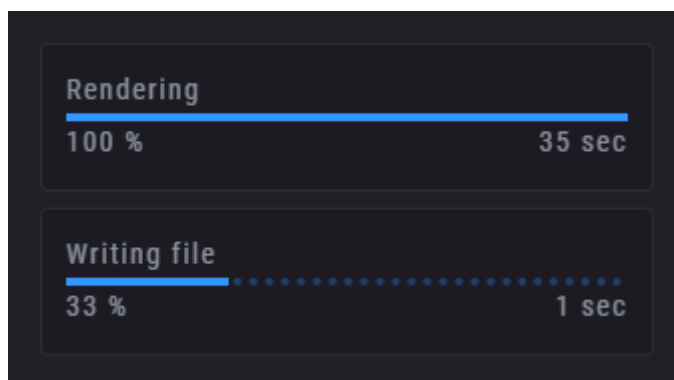
In this dialog box you can set the below:

1. **Filename:** The filename of your exported file. You don't need to include the file extension, the wave file (.wav) file extension is assumed automatically.
2. **Path:** The location you want your file to be saved. This location is saved with the **Project**, so next time you open your **Project** and you want to export audio, it will be easy to remember your working path for this particular **Project**.
3. **Folder Button:** Click this to choose the path that the file will be exported to.
4. **Channels:** Here you can set the channel configuration of your audio file. The supported channel formats are:
  - a. 1 (Mono)

- b. 2 (Stereo)
  - c. 3 (Triangle)
  - d. 4 (Quad)
  - e. 5 (Pentagon)
  - f. 6 (Hexagon)
  - g. 7 (Heptagon)
  - h. 8 (Octagon)
5. **Sample Rate:** Choose the sample rate (resolution in time) of the exported file. The supported sample rates are:
- a. 8 kHz
  - b. 11.025 kHz
  - c. 16 kHz
  - d. 22.5 kHz
  - e. 32 kHz
  - f. 44.1 kHz
  - g. 48 kHz
  - h. 88.2 kHz
  - i. 96 kHz
6. **Bit Depth:** Choose the bit depth (resolution in dynamic range) of the exported file. The supported bit depths are:
- a. 16 bit PCM
  - b. 24 bit PCM
  - c. 32 bit PCM
  - d. 32 bit FP
7. **Duration:** Set the duration of the exported file in seconds.
8. **Information:** Some basic information regarding the resulting file. Here you will also see any error messages or alerts related to your settings.
9. **Confirm:** Click **OK** to start exporting the file.

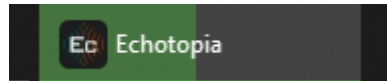
When you click **OK** the offline rendering process will start, this is not real-time and usually takes less than the duration of the resulting file. The speed of this process depends on the complexity of your material, the resolution of the assets you use, the resolution and the duration of the exported files you set, and the speed of your hard drive.

During the process an estimation algorithm will show you the progress:

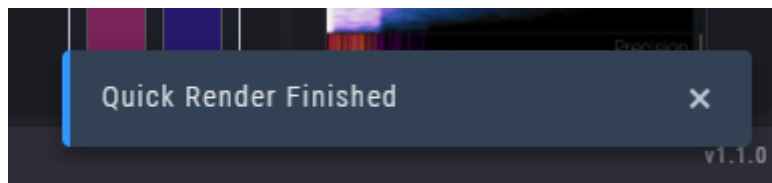


To maximize rendering speed, keep Echotopia on top while exporting. If you minimize or cover Echotopia entirely with another app, rendering will run slower in the background to save resources.

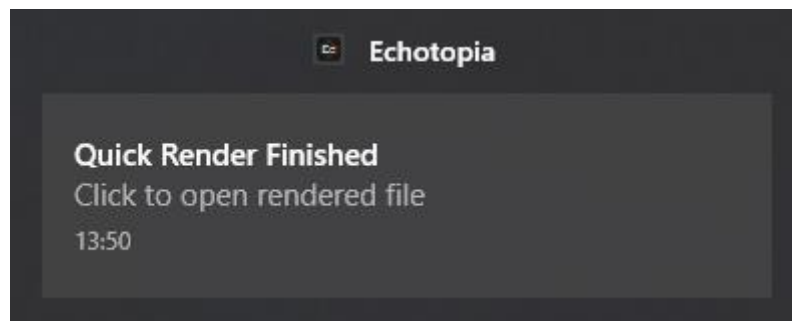
Echotopia is compatible with the **Windows Taskbar Progress Notification** system. This means that while exporting you can monitor the progress on your system's taskbar:



When the exporting is finished a notification will appear within Echotopia:

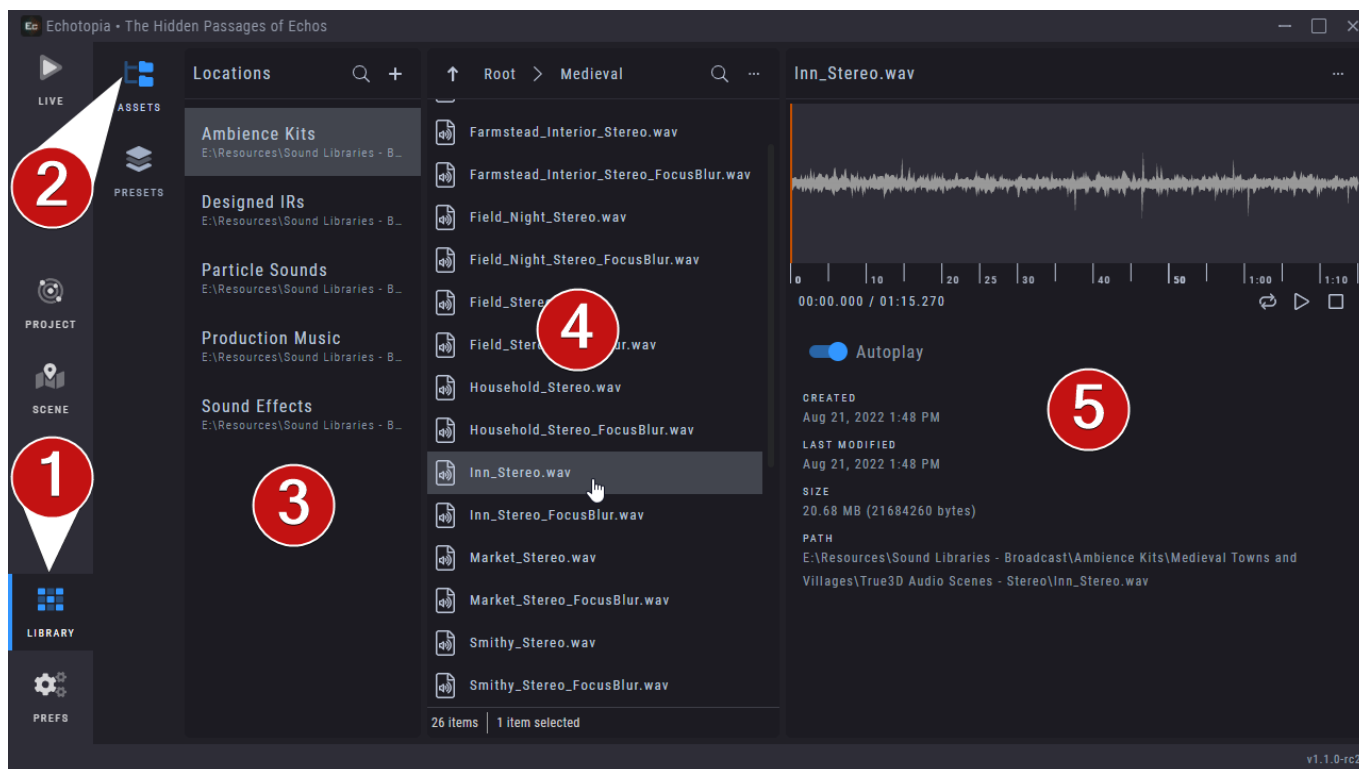


A notification of the finished exporting will also appear on your system's notification area:



If you click on that notification, the exported file will be opened with the application set as default on your operating system's settings.

## Library workspace



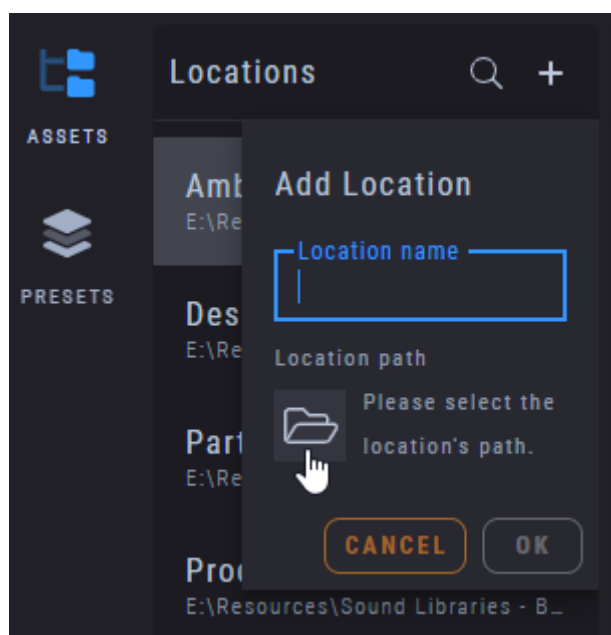
1. The **Library** workspace contains everything you need to manage any content you like to have available easily while working with Echotopia. Right now it contains the **Assets Manager** [2] and the **Presets Manager**.

## Assets Manager section

2. Using the **Assets Manager** you can add various locations (folders) from your storage so that those appear on file pickers in various places in Echotopia, i.e., when you add sounds to **Instruments**. So, think of **Locations** like “Favorite Folders”.
3. The **Locations List** is where you add, remove, and manage **Locations**.
4. This is the directory listing of the currently selected Location. Whatever Location you will choose on [3], its contents will appear here. There is also a **More Options** kebab menu at the top bar of this pane.
5. This is the **Preview** pane. Compatible files chosen on [4] will have their contents and information shown here.

### Adding Locations dialog

When you click on the **Plus Sign** on top of the **Locations List**, a dialog will appear that you can use to add new **Locations** to the list.



The actions you need to take in this dialog from top to bottom are:

1. Give a name to your **Location**. Choose a name that makes it easy for you to remember what this **Location** contains.
2. Choose the path to the **Location** in your storage.
3. Press **OK**. That's it.

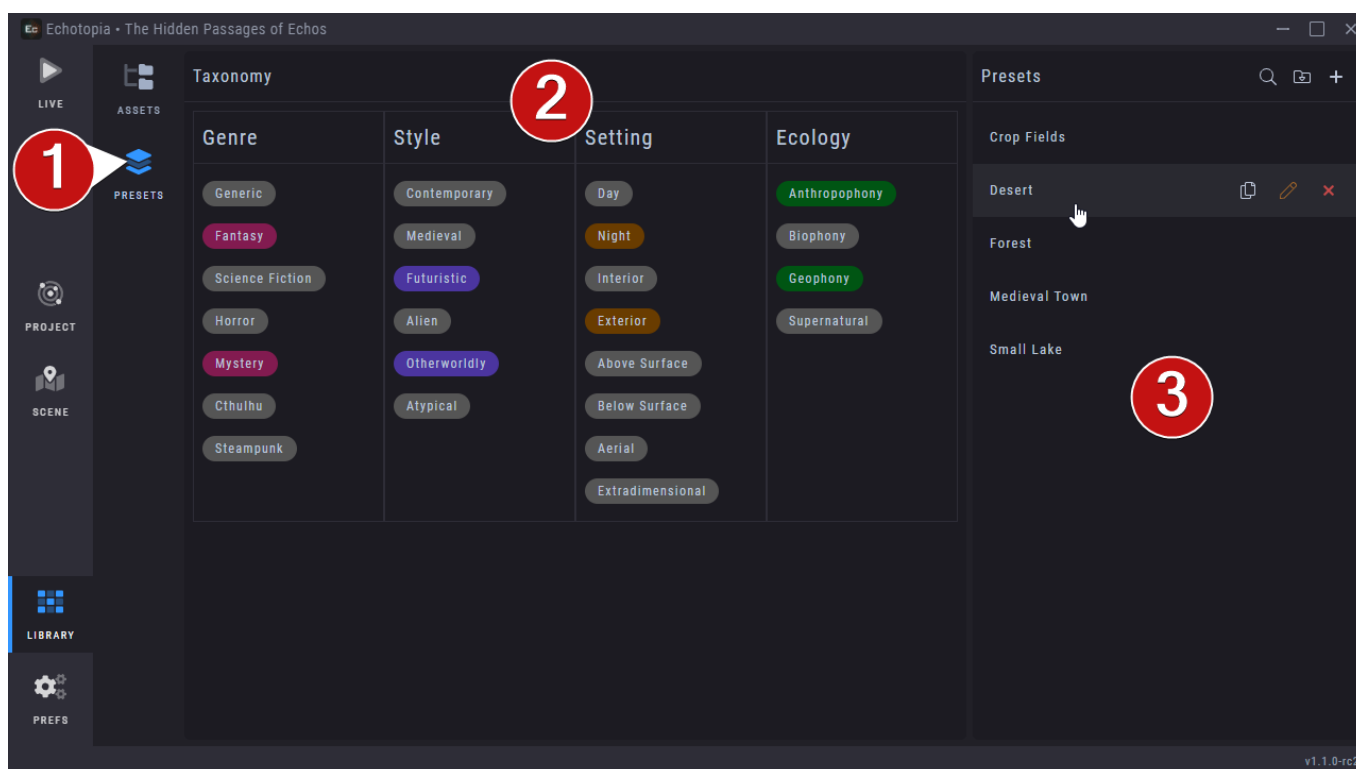
## Area Presets section

In the **Area Presets** section you will find all the tools you need to manage your **Area Presets**.

**Area Presets** or **Area Content Presets** (those terms can be used interchangeably), are saved configurations of **Areas** for instant use in your **Projects**. When you save an **Area Preset**, all the settings and contents of an **Area** are saved, except the **Shape** and **Transform** properties.

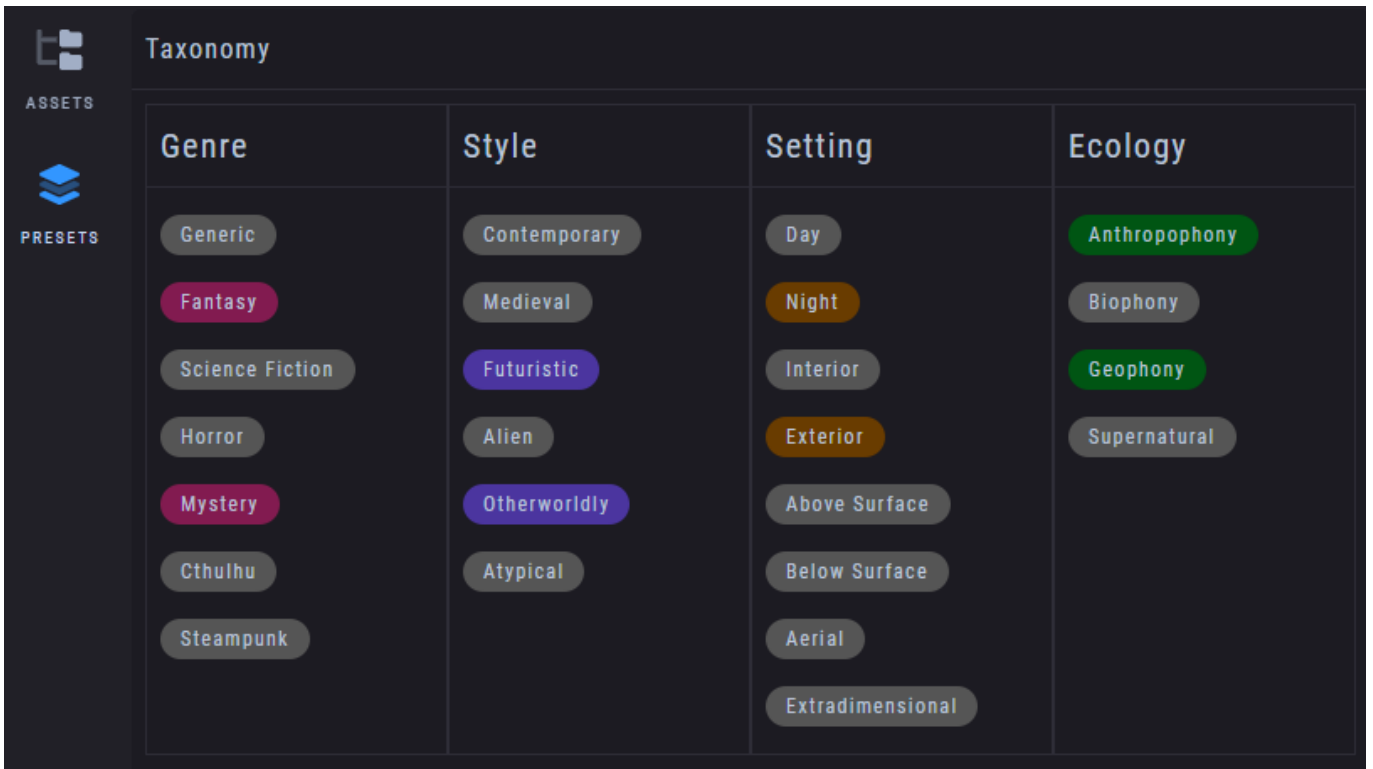
You can save an **Area Presets** directly from an **Area** on a **Map** in the **Scene Editor** and you will find it here. Alternatively, you can create an **Area Preset** here and later import it into an **Area** on the **Map** in the **Scene Editor**.

The most usual scenario of using **Area Presets** is when you have specific **Areas** that you created and you will going to use in many places in your **Scenes** and **Projects**. There is no need to create the same **Area** over and over again. You just have to save the **Area** once as an **Area Preset** and then add it to your **Scenes** when you need to.



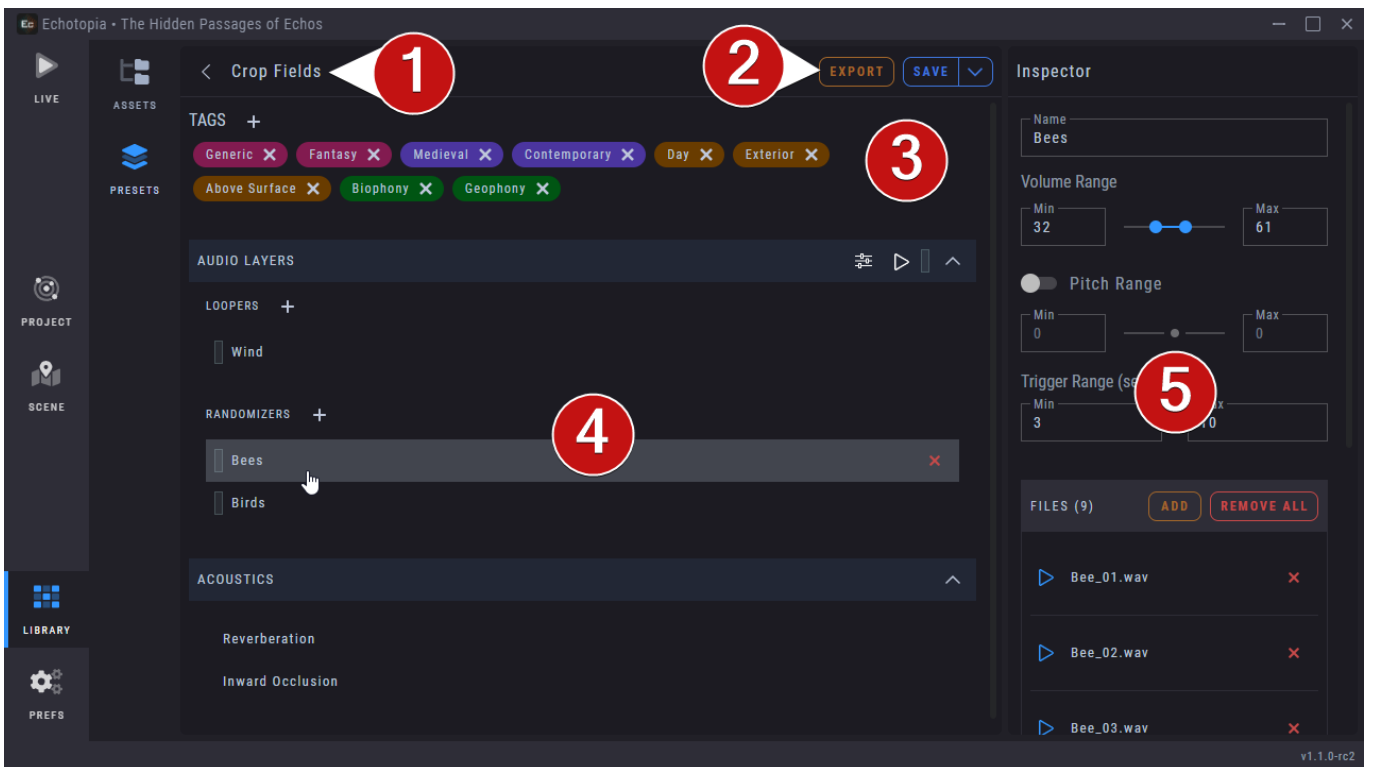
1. This is the tab of the **Area Preset Manager** section of the **Library** workspace.
2. **Taxonomy**. This is a list of **Tags** you can add to a **Preset**. This can help you filter **Presets** later. The **Taxonomy Families** and **Tags** are pre-determined and based on high-level abstraction of the acoustic environment types that are used in storytelling. Activating the **Tags** (by clicking on them) will filter the **Presets List** [3]. There are four families of **Labels**: **Genre**, **Style**, **Setting**, and **Ecology**.
3. The **Presets List** is the place that you will find all your **Area Presets**. It contains various tools and options to help you manage the **Area Presets**. Most notably, you can **Duplicate**, **Rename**, and **Delete** a **Preset**. The icons at the top bar can be used to **Search**, **Import**, and **Create** a **Preset**. Clicking on a **Preset** as show here will open the **Preset Editor** (more later).

Here's a close up of the **Taxonomy** filters. You can see the different **Families** of Echotopia's classification of **Acoustic Areas** and the **Tags** that belong to each **Family**.



### Area Preset Editor

When you click on a **Preset** from the **Preset List** on the **Area Preset Manager**, the **Preset Editor** opens up.



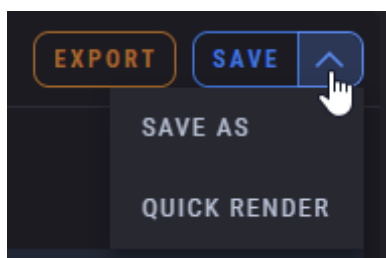
Using this screen you can edit an already saved **Preset** or create a new one.

1. This is the **Preset's** title and the **Arrow icon** at the left side of the title will close the **Preset Editor**.
2. You can **Export** a **Preset** to share it with friends and community or even sell it online, standalone or together with other assets. When you **Export** a **Preset**, you will be presented by a dialog to choose where to save the **Preset** together with any **Assets** it uses. Next to the **Export** button you will find the **Save** button and menu, more on that later.

When you share **Presets** and **Assets** with your friends, colleagues, the community, or you sell them or giving them away, you have to own the rights to do so. Respect the intellectual property of others and the work they've done for you to have those **Assets**. A good safety rule is, when you don't know if you have the right to do something, you probably don't. Echotopia (specific editions) comes with a vast collection of sound libraries, those are licensed to the user and only the user for the creation of material that can be used in compositions of music, included in video games and film, and other similar cases. You cannot share or sell this content with others in any way. Please our [End User License Agreement](#). If you have any question regarding how you can use the content that comes together with Echotopia please send us your questions through our [Customer Support Portal](#).

3. **Add** and **Remove Tags** to this **Preset**. Those are used by the **Taxonomy Filters** of the **Area Presets Manager**.
4. Here you can edit the content of the **Area**. Everything you click here will open its properties on the **Inspector** pane [5]. On the **Audio Layers** title bar you can also find the familiar controls found at the same title bar on the **Scene Editor**. Those are from left to right: **Area Submixer**, **Start/Stop Simulation** for the **Area**, the **Area's Audio Level Meter**, and a contract/expand button.
5. The **Inspector** shows the properties of the parts you select from the **Audio Layers** and **Acoustics** sections on [4]. You can edit the properties of the **Preset** directly from here.

### Save, Save As, and Quick Render options



The menu on the right of the **Export** button has some more options, those are, from top to bottom:

1. **Save**: Saves your changes.

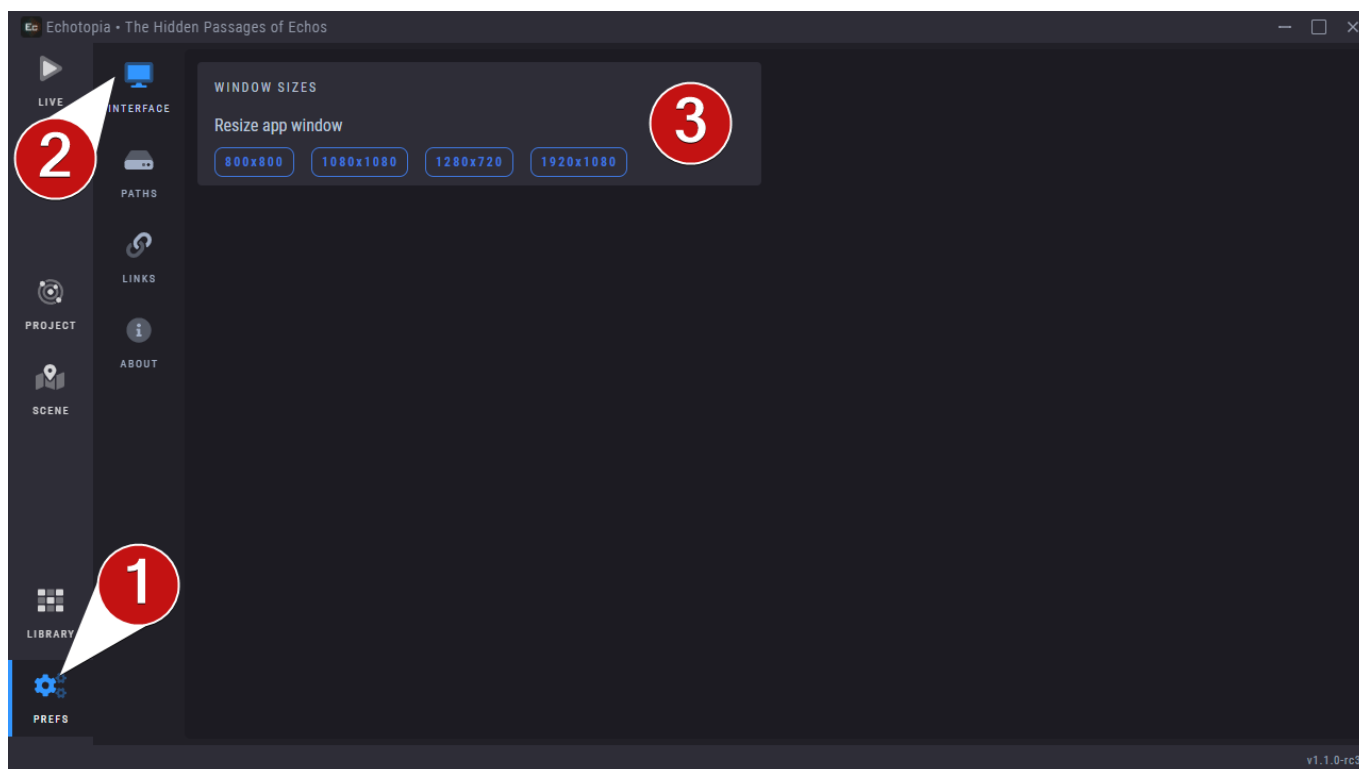


2. **Save As**: Saves everything as a new **Preset**, leaving the old **Preset** as it was before its last **Save**.
3. **Quick Render**: Opens up the **Quick Render** tool which allows you to export an audio file of how the **Preset** would sound if the **Observer** was positioned at the center of an **Area** containing this **Preset** (learn more in the **Quick Render** section of this document).

## Preferences workspace

Using the **Preferences** aka **Prefs** workspace you can change various settings of the app to your liking. Also, some useful functions and links can be found there.

### Interface section



1. This opens the **Prefs** workspace.

### Interface section

2. The **Interface** section contains any setting related with the application's interface.
3. The **Window Sizes** options here provide you with a fast way to set the application's main window size. This is useful if you are creating a video or screenshots for tutorials, demos, or you want to capture screencasts in specific sizes.

## Paths section

In this section you will find all application-wide related paths. This section is useful if you want to quickly open the folder that Echotopia saves its configuration files or other similar places.

## Links section

In this section you will find useful online links.

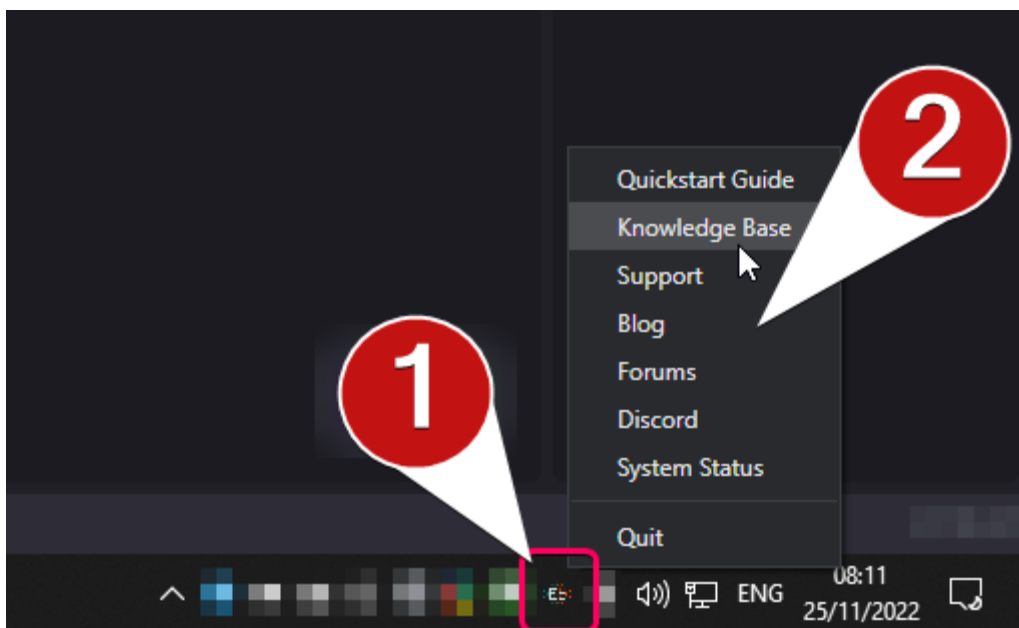
## About section

In this section you will find general information and credits for Echotopia and its included content.

## System Tray Utility

While Echotopia is running you will notice that there is also an Echotopia icon present at your **System Tray**. This is the Echotopia **System Tray Utility**.

If you can't see the icon, you might have to expand the tray by clicking on the white upward arrow at the left of the list, and then move Echotopia's icon on the visible area of the tray. Doing the opposite will hide the icon under the expansion button.



1. Right-click on the icon and a menu.
2. A menu with useful options will pop up.

We plan on adding extra functionality in the tray tool in the future, for users that want to control Echotopia while minimized.

---

# Where to go from here

---

## Online resources

### Public Roadmap

Be an active voice in the future development of Echotopia by visiting and voting for your favorite features at the [Echotopia's Public Roadmap](#).

### Request Features

If you have a suggestion for a feature request for Echotopia or a sound library that you would like to see, share your ideas in our [Forums](#) and/or through our [Customer Support Portal](#).

### Changelog

See all version changes of Echotopia by visiting the online [Changelog](#).

### Quickstart Guide

Echotopia operates using some innovative concepts, so we advise anyone to read this User Manual first and then start using the application. But, if you want to dive in right away, you can visit our [Quickstart Guide](#).

### Knowledge Base

Read about the latest changes of Echotopia on the Changelog, seek troubleshooting articles, check out tips and tricks, all organized in our [Knowledge Base](#).

### Customer Support Portal

Get direct support by creating a request on our [Customer Support Portal](#).

### Forum

Connect with our community and our team at our [Forums](#).

### Discord

Chat with our community and our team at our [Discord Server](#).

## Learn Soundscape Design

SoundFellas, together with the inventor of Echotopia - Pan Athen, are currently working on **Learning Resources** that will cover the topic of **Soundscape Design**

**and Production.** You can subscribe to get any related updates at [SoundFellas Learn](#).

Have fun creating immersive soundscapes using Echotopia and its vast content!  
The SoundFellas Team