

# **[Mystical Realms]**

## **Sound Design Document**

23 / 06 / 2023

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## Audio Team

**Composer:** David Varela

**Sound Designer:** David Varela, Diogo Pereira

**Sound Quality Assurance:** David Varela, Diogo Pereira

**FMOD Audio:** David Varela

# About the Game

**Link:** <https://brunogomes30.itch.io/mystical-realms-power-of-the-elements>

**Genre:** Action, Adventure, RPG

**Benchmarks:** Nier Automata, Infamous Series, Forspoken, The Elder Scrolls V: Skyrim, Genshin Impact.

## Target audience:

- **Demographic:** Players of all ages above 16 who enjoy action, adventure, and fantasy games.
- **Interests:** Role-playing games, immersive open-world environments, challenging combat mechanics, and engaging stories with meaningful choices.

# Audio Pillars

In this fantasy game, the use of elemental magic is central to the audio experience. A detailed audio environment that captures the essence of fire, lightning, earth, and air will surround players. Each element's distinctive qualities will be evoked through realistic sound effects, strengthening the player's connection to the fantasy world. The sound design will react in a dynamic manner as players use their elemental powers, reflecting the effectiveness and significance of their spellcasting and interactions. The music will be atmospherically immersive, emotionally stirring, and related to the elements.

# Sound Identity

**Sound Palette:** Magic, Realistic, Intense

## Priorities

- 1) SFX
- 2) Music

## Music

**Style/Genre:** Orchestral, Drone

### Instrumentation:

Full Symphonic Orchestra (Woodwinds, Strings, Brass, Percussion)

Electronic Music (Synth Drones)

**Production:** The game's music production primarily relies on orchestral samplers and synthesizers. Due to the extensive focus on sound effects, the allocation of time for music composition was limited. As a result, the music selection includes one generic battle track, a wind boss theme that didn't make it into the final version, and a main menu music piece.

**Implementation:** The music implementation in the game is designed to be adaptive and responsive to the player's actions. For example, the main battle music features a version with a reverb effect that dynamically switches when the player opens the menu. As the game slows down during menu navigation, the music reflects this change by incorporating a similar reverb effect. Additionally, the unused wind boss battle music includes a stinger to indicate the end of the fight and a transition for a potential second boss phase.

To enhance the gameplay experience, all music tracks are subjected to a low pass filter and applied with reverb. As the player's health drops below 30%, the low pass filter gradually reduces the frequency range from 22kHz to 10Hz, creating a sense of tension and intensity.

Sound effects and music in the game have been organized into mixer groups, facilitating the mixing process. Additionally, two dedicated VCAs have been implemented for adjusting the volume of all sound effects and music through the menu.

## **Sound Effects**

The sound design will incorporate both magical and realistic elements to enhance the gameplay experience. The action takes place in four different areas: Earth, Lightning, Fire and Wind. Each area will feature a dynamic combination of specific ambience sound. The textures evoked by the ambience should align with the elemental themes of each area. Lightning should evoke a sense of electricity and energy, Fire should be intense and fiery, Wind should be calm and peaceful, and Earth should be mysterious and calming. The game will use a combination of simple ambience loops and complex events with multiple assets to create an immersive audio experience.

Wind Village will have a calm ambience, emphasizing the grounded and peaceful nature of the area with birds singing. Normal village sounds will be present, creating a serene atmosphere within the village. As the player ventures into the wilderness, the soundscape will shift to match the corresponding biome.

In Earth Village, there will be calming and mysterious ambience with the presence of birds or hawks singing. A mysterious drone sound will add to the sense of mystery in the area. When venturing into the wilderness, the soundscape will change accordingly to reflect the specific biome, such as the rustling of leaves when approaching trees.

The Fire Village will have intense ambience, reflecting the fiery nature of the village and the presence of the main boss. An intense drone sound will heighten the intensity of the area. Additionally, the ambience will include whispered voices to create a sense of secrecy and tension. When leaving the village and exploring the wilderness, the soundscape will adjust to the surrounding biome.

Lightning Village embodies a fusion of the intense ambience found in Fire Village and the mysterious allure of Earth Village. Whispers intermingle with village sounds, creating an alluring and captivating atmosphere. The presence of an intense drone adds to the heightened tension. When exploring the wilderness, the soundscape dynamically shifts to adapt to the unique characteristics of the surrounding biome.

The magic abilities in the game are the centerpiece of the gameplay mechanics, and they are designed to be intense and highly dynamic. As the player charges their attacks, the sound intensity of the abilities release and impact changes accordingly. This creates a satisfying audio feedback loop that corresponds with the gameplay mechanics. Additionally, the wind ambience adjusts its volume and intensity based on the player's movement speed, adding a layer of responsiveness to the audio experience. To adapt to the player's gameplay style and actions, there are a variety of looped sounds that seamlessly integrate with the magic abilities, ensuring a dynamic and engaging audio environment.

In addition to aligning with the overall aesthetic and style of the game the sound effects were adapted to match the visual effects. All sound effects are also dynamic and programmed in Unity with FMOD. Pre-processing of the sounds was done in FL Studio to ensure high-quality audio asset.

## **Dynamic Range**

In the audio stage, the sound effects take the forefront and play a significant role in creating an intense experience. While the music will still be present and play a crucial role in setting the overall tone and atmosphere, it will be composed to leave space for the impactful sound effects. The sound effects will be abundant and highly dynamic, ensuring that they command attention and contribute to the intensity of the gameplay.

# Technology

**Engine:** Unity

**Middleware:** FMOD

**File Format:** .WAV

**Platform:** PC

**Data budget for audio:** Unlimited

**Spatialization needs:** Simple 3D.

Som	Tipo	Processamento	Origem	Formato	Progresso	Comentários
Abilities	Abilities	Abilities	Abilities	Abilities	Abilities	Abilities
Tornado Charge	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Tornado Idle	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	Loop
Tornado Release	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	6 layers for dynamic intensity
Tornado Flying	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Tornado Impact	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Wind Shockwave	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Charged Fire Ball Charge	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Charged Fire Ball Idle	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Charged Fire Ball Dynamic Release	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	4 layers for dynamic intensity
Charged Fire Ball Flying	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Charged Fire Ball Impact	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	Highpass filter mapped to speed
Fire Ball Release	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Fire Ball Impact	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Flamethrower Trigger	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Flamethrower On	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	Loop
Flamethrower Off	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Charged Fire Ball Charge	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	



Charged Fire Ball Idle	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Lightning Bolt	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Lightning Ray	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Coil Trap Placement	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	Loop
Coil Trap Activate	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Coil trap Idle	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	2 layers for number of connections
Small Stone Shot	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Small Stone Hit	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Big Stone Shot	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Big Stone Impact	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Fmod	
Big Stone Rebound	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	5 layers for variation
Big Stone Destroy	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Earth Wall Create	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Earth Wall Fall	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Fire Charge Hotspot	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Fire Charge Start	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Fire Charge Idle	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	Loop
Fire Charge Complete	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	

Lightning Charge Hotspot	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Lightning Charge Start	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Lightning Charge Idle	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	Loop
Lightning Charge Complete	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Earth Charge Hotspot	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Earth Charge Start	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Earth Charge Idle	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	Loop
Earth Charge Complete	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Wind Charge Hotspot	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Wind Charge Start	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Wind Charge Idle	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	Loop
Wind Charge Complete	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Boss Level Up	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	

Damage Overlay	Damage Overlay	Damage Overlay	Damage Overlay	Damage Overlay	Damage Overlay	Damage Overlay
Fire Soft	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Lightning Soft	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Earth Soft	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Wind Soft	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Fire Intense	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Lightning Intense	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Earth Intense	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Wind Intense	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Melee	Melee	Melee	Melee	Melee	Melee	Melee
Melee Throw	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	2 sounds for variation
Melee Miss	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Melee Hit	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	6 sounds for variation
Fire Melee Layer	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	2 sounds for variation
Lightning Melee Layer	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	2 sounds for variation
Earth Melee Layer	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	2 sounds for variation

Wind Melee Layer	Stereo 3D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	2 sounds for variation
<b>Movement</b>	<b>Movement</b>	<b>Movement</b>	<b>Movement</b>	<b>Movement</b>	<b>Movement</b>	<b>Movement</b>
Fire Dash	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Lightning Dash	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Earth Dash	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Wind Dash	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Sky Walk	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Basic Hover	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	2 sounds for intensity mapping to speed
Fire Hover Layer	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Lightning Hover Layer	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Running	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	Soft wind plays while running
Footsteps Stone	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	17 sounds for variation
Footsteps Dirt	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	17 sounds for variation
Footsteps Grass	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	17 sounds for variation
Footsteps Wood	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	24 sounds for variation

Jump Woosh	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	
Jump Cloth Layer	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	2 sounds for variations
Landing Dynamic Impact	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	Hipass filter mapped to speed
Land Cloth Layer	Stereo 2D	Pitch, EQ, Reverb, Volume ADSR	Sampling	Wav	Implementado	2 sounds for variation
<b>Dynamic Ambience</b>	<b>Dynamic Ambience</b>	<b>Dynamic Ambience</b>	<b>Dynamic Ambience</b>	<b>Dynamic Ambience</b>	<b>Dynamic Ambience</b>	<b>Dynamic Ambience</b>
Birds	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	2 sounds for variation
Crows	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Hawks	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Village Sounds	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Whisper	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Wind	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Dark Wind	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Desert Wind	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
<b>UI</b>	<b>UI</b>	<b>UI</b>	<b>UI</b>	<b>UI</b>	<b>UI</b>	<b>UI</b>
Menu Neutral	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Fmod	
Menu Positive	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	

Menu Select	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Fmod	
Book	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Buy	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Inventory Move	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Mission Complete	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Objective complete	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Pickup	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	Generic sound
Potion	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Rune	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Rune Break	Stereo 3D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Ability Menu Hover	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Ability Menu Close	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
Ability Menu Open	Stereo 2D	Pitch, EQ, Reverb	Sampling	Wav	Implementado	
<b>Drones</b>	<b>Drones</b>	<b>Drones</b>	<b>Drones</b>	<b>Drones</b>	<b>Drones</b>	<b>Drones</b>
Earth Drone	Stereo 2D	EQ, Reverb	Spitfire Labs	Wav	Implementado	
Fire Drone	Stereo 2D	EQ, Reverb	Spitfire Labs	Wav	Implementado	

Music	Music	Music	Music	Music	Music	Music
Generic Battle Music	Stereo 2D	EQ, Reverb, Saturation	Spitfire Albion One	Wav	Implementado	
Wind Battle Music	Stereo 2D	EQ, Reverb, Saturation	Spitfire Middle East	Wav	Fmod	
Menu Music	Stereo 2D	EQ, Reverb	Spitfire Labs	Wav	Fmod	