Sound Stasis

A User Guide

1. Introduction

Sound Stasis is an innovative iOS app that transforms the way sound is generated, using your device's touch screen and gyroscope to create complex, evolving sonic textures. Unlike traditional synthesizers that use oscillators and keyboards, Sound Stasis synthesizes sound through fast Fourier transform (FFT) data activated by touch. This approach shifts the concept from playing notes to constructing spectral textures by layering partials. Performances can be recorded and saved as audio files, stored in a dedicated folder within the Files app, where they can be easily accessed and imported into other audio applications for further use in your music or audio projects.
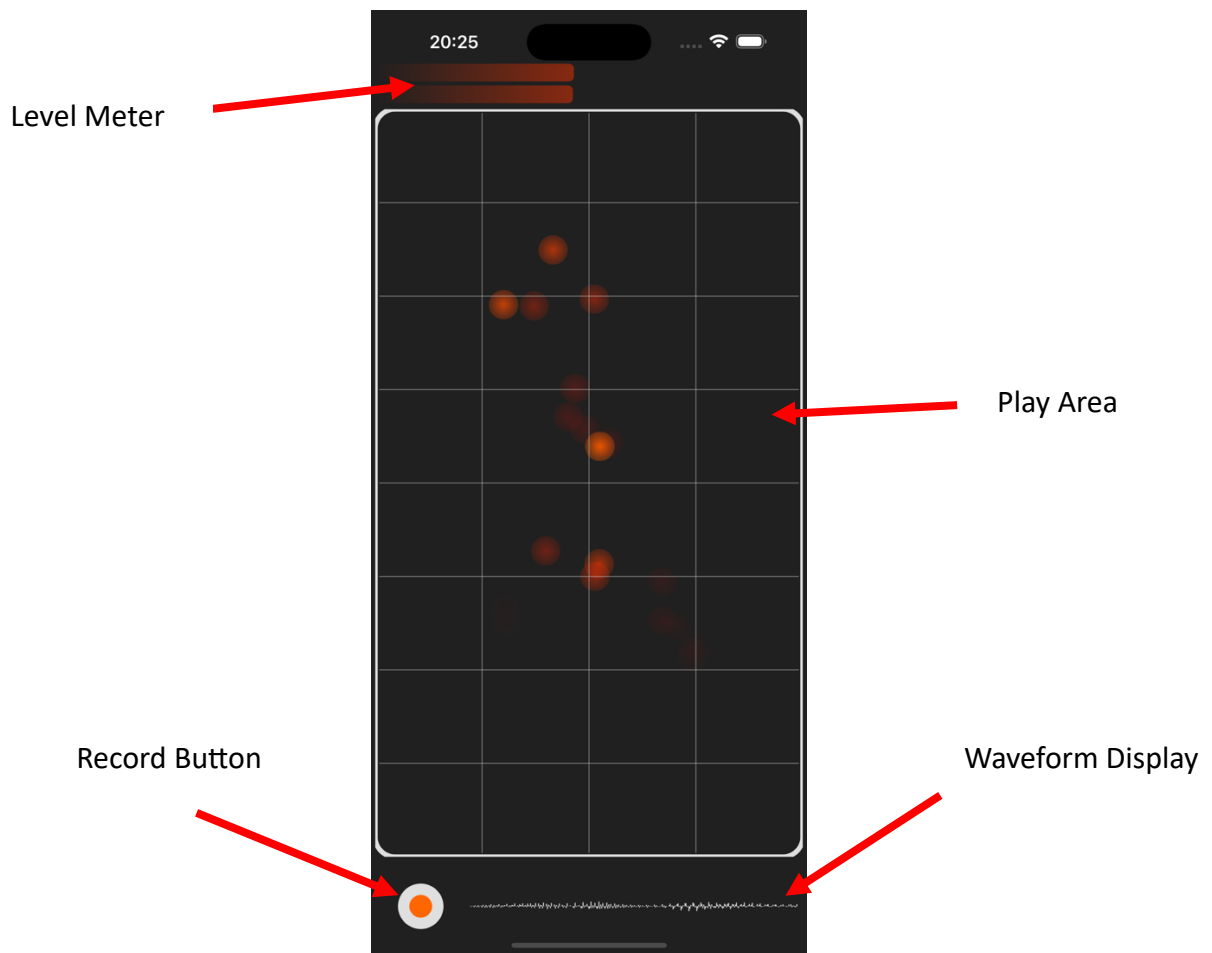
2. Screen Layout

Figure 1: The screen layout of Sound Stasis

3. Performing Sound Stasis

Performing with Sound Stasis involves two main actions: adding partials to the sound by tapping the play area, and controlling their onset and release by tilting the device.

Play Area Interaction:

The play area is represented as a rectangle where vertical positioning indicates frequency and horizontal positioning sets the pan. For instance, tapping near the top of the play area adds high-frequency overtones, with their pan position corresponding to the horizontal touch point.

Device Tilting for Onset and Release Control:

Onset Control: Tilt the device towards you (see Figure 2) to adjust onset time. When held upright, the onset time is minimized, resulting in a short attack suitable for creating bell-like sounds. When the device is laid flat, the onset time is maximized, producing a slow attack perfect for crafting ambient pad sounds.
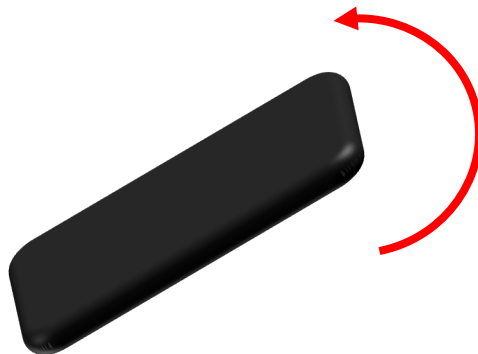
Figure 2 illustrates the device held from a side view, demonstrating the change in onset time when tilted towards the user.
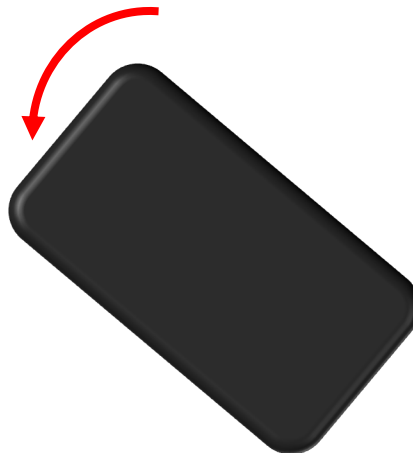
Figure 3 shows the device rotated horizontally to demonstrate release time control.

Release Control: Rotate the device horizontally to modify release time (see Figure 3). A leftward tilt at approximately 45° reduces the release time to a minimum. However, different tilting angles can produce varied and sometimes unpredictable outcomes. Experimenting with continuous tilting during performance can result in unique and evolving soundscapes as the onset and release times adjust dynamically.

4. Saving Performances

To record a performance, tap the record button. The waveform display will turn orange to indicate recording has started (see Figure 4). To stop recording, press the record button again, which will now appear as a stop button. Your recordings are saved in the Files app under On My iPhone → Stasis → Recordings. From this location, you can listen to your recordings or share them with other devices using the Share button.
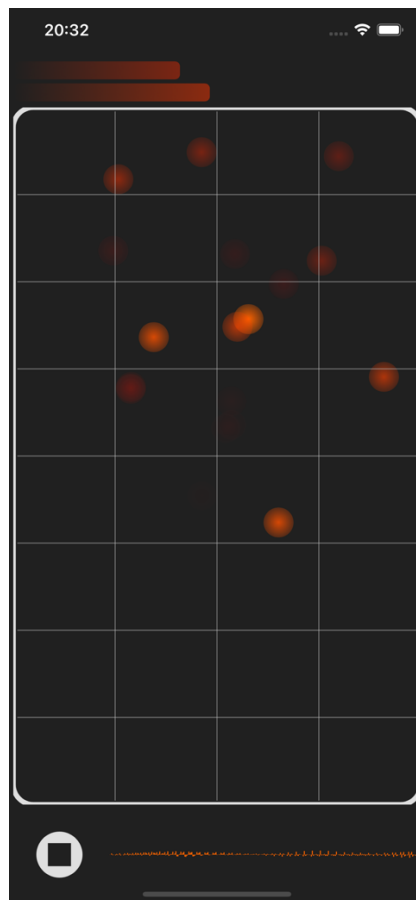

Figure 4 shows an active recording session with the waveform display in orange.