RealFx
User Manual
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Introduction   1

This program is designed to simulate the acoustical effects of a room or space on a given sound. As such this program is intended for architects, musical performers, conductors, sound designers, and others who are interested in the effects of the environment on sound.

The program takes a rectangular room's width, length, height and material composition (choose from wood, plaster, glass, carpet, etc.), the source location within the specified room, the listener's location, and a sound input to model the reverberation that the room would add to the original sound. The sound input to the program can be chosen from the file which is in the same folder as the program. The parameters for describing the room include the number of walls, the height of the ceiling, the shape, and the material composition of each surface in the room. The source location in the room can be specified by choosing a location on the room floor plan and specifying the height of the source. The listener's location can be specified in the same manner as the source location. The program allows you to preview the effects within the program.

Getting Started   2

When you open the program, you'll see the screen below.

[Fig.1 Starting Interface]

- **Import File**

To get started, click on the [Import] button, which will bring up another screen.
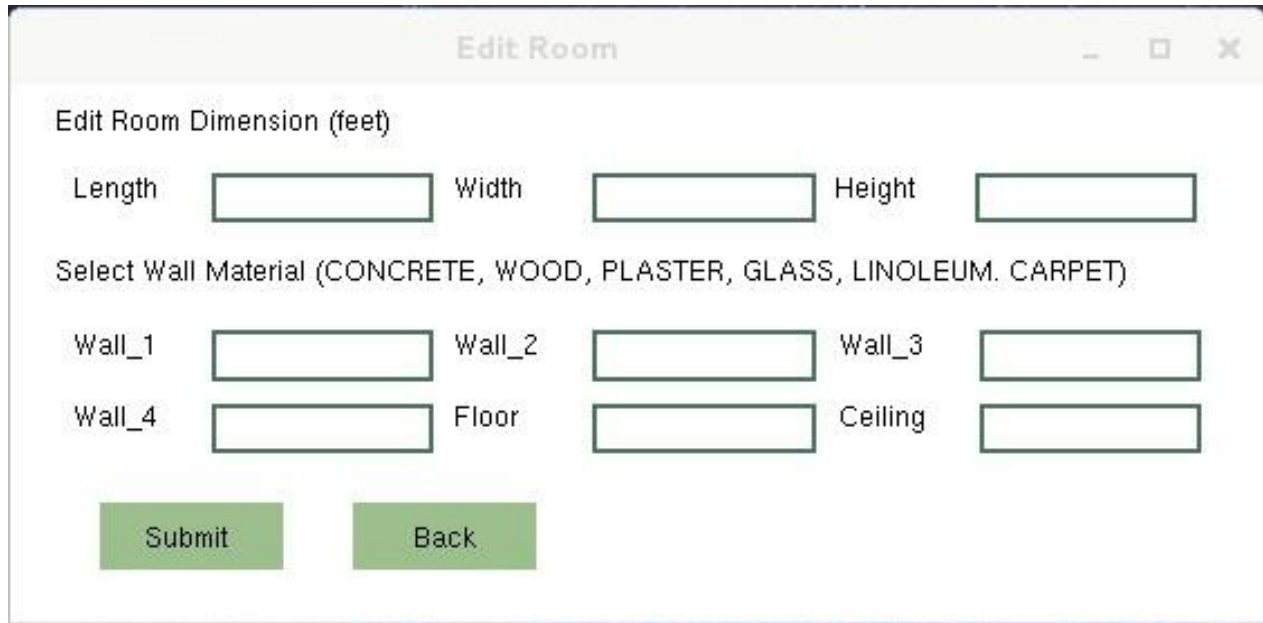

[Fig.2 Choosing File]

This screen will allow you to choose an existing file from your computer by typing in the file name.

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- **Edit Room**

Once you have chosen a sound file, you could go the main window's navigation click the edit room button, and enter the dimension of the room with the material of the room.

[Fig.3 Edit Room Screen]

This program can simulate the sound effect with following rooms:

Cubical Room: The cubical room has the same wall width, length, and height.

Rectangular Room: The rectangular room consists of four walls which may have different values for the width, length, and height, but the walls meet at 90 degree angles.

Once the room dimensions and materials are set, use the button submit to enter the data to the program for calculating the room related data for later use of sound processing.

- **Choose Location**

Now that you have the shape of the room and the materials, it's time to move on to determining the source and listener locations. The screen in Image {Fig.6} will appear once you submit and click the choose location button.
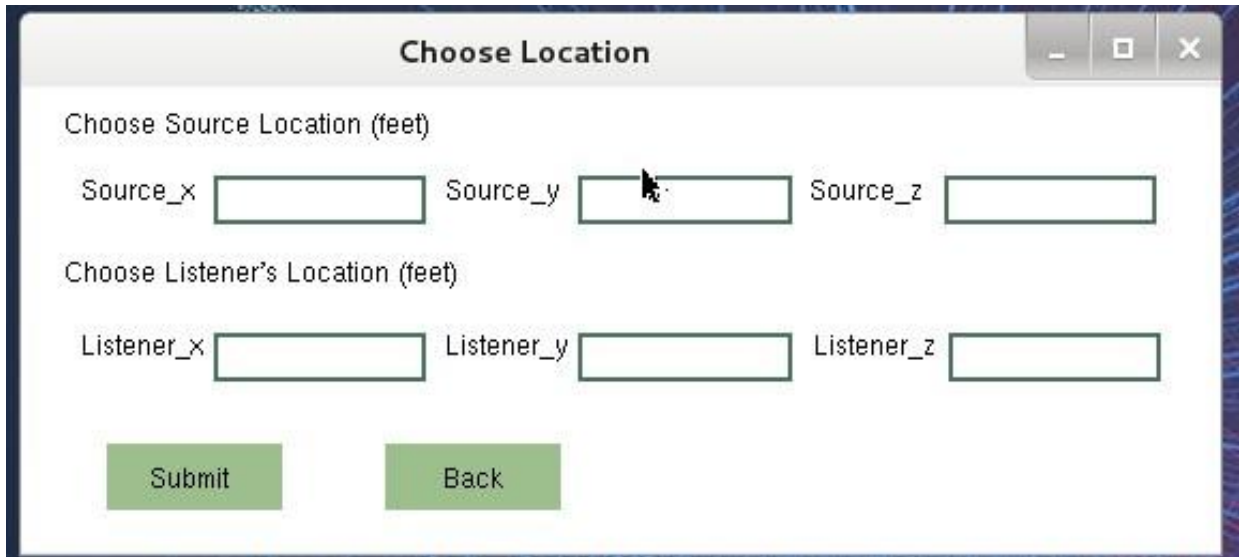
[Fig.6 source/listener location] both on same pop-up screen w/ button to toggle between them

To set the source and listener's location, type in locations you want with x, y, z coordinates.

Setting the listener location is identical to setting the source location.

After you are done with editing the locations, click submit for putting the data into the program.

Preview   3

Once you have settings selected, you are probably wondering "What does this sound like?" If you are then the preview feature is for you.

The Preview button will play the input sound file with the current reverb effects of the specified location. You can also preview for multiple times with clicking the preview button again.

Exporting   4

After hearing how the room sounds for yourself, you are probably going to want to share it with others (or if you are a sound designer have a permanent copy of the sound file with added reverb), which is where the Export feature comes in.

[Fig8. Export Window]

By clicking the Export button, you will be prompted for a filename for the sound to export in the same folder as the program's folder. After clicking the submit button, it will generate the output file, in .wav format with the user's typed file name.