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| **Virtual Buzz:**  **Simulating visual Influences of Alcohol in an Augmented-Reality App** |

**Users Manual**

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# Installation

## APK File

An APK file is the file format used for installing software on the Android operating system. This is the file used to install the Simulating Substances application. Since this app is currently not to be found on any app store and the decision to do that is not planned as of yet, this is expected to stay the primary way

### Activate Developer mode

As there are different android devices, it’s recommended to search in Internet how to activate this service on your device.

Generally you must navigate in your phone to the “Build number” portion of the settings and tap on the section 7 times.

After two taps, a small pop up notification should appear saying "you are now X steps away from being a developer" with a number that counts down with every additional tap. After the 7th tap, the Developer options will be unlocked and available.

Please keep in mind, that this information may be different on your device.

### Allow third-part apps

Before you can install the application on your phone you will need to make sure that third-party apps are allowed on your device since the installation-file does not come directly from an app store and therefore is not signed.

Go to Menu > Settings > Security > and check Unknown Sources to allow your phone to install apps from sources other than the Google Play Store. Please keep in mind, that this information may be different on your device.

## Installation

After obtaining the “SimulatingSubstances.apk”-file, you just have to find it on your phone, tap it, and then hit Install. And you're done.

# Introduction

## Scenes

The term ‘Scene’ referenced throughout this tutorial refers to the individual screens (as a composition of different UI-elements) accessible within the app and has its roots in the Unity game engine we used to create the app. This chapter will provide a quick explanation of the scenes in our app.

### Main Scene

This scene is the entry point of the app and gives you the option to navigate directly to all of the other scenes using the listed options.

### Simulating Scene

This is where the ‘action happens’ and the visual effects used to simulate the influence of alcohol are applied based on the selected configuration. While in this scene you are expected to wear a device such as Google Cardboard.

The effects in play are displayed on the upper part of the screen and the buttons used to navigate away from this scene are located on the bottom.

### Configuration Scene

This scene is used to create your own configurations as a set of settings for each of the simulated effects available with an option to permanently save the current selection on your smartphone under a chosen name.

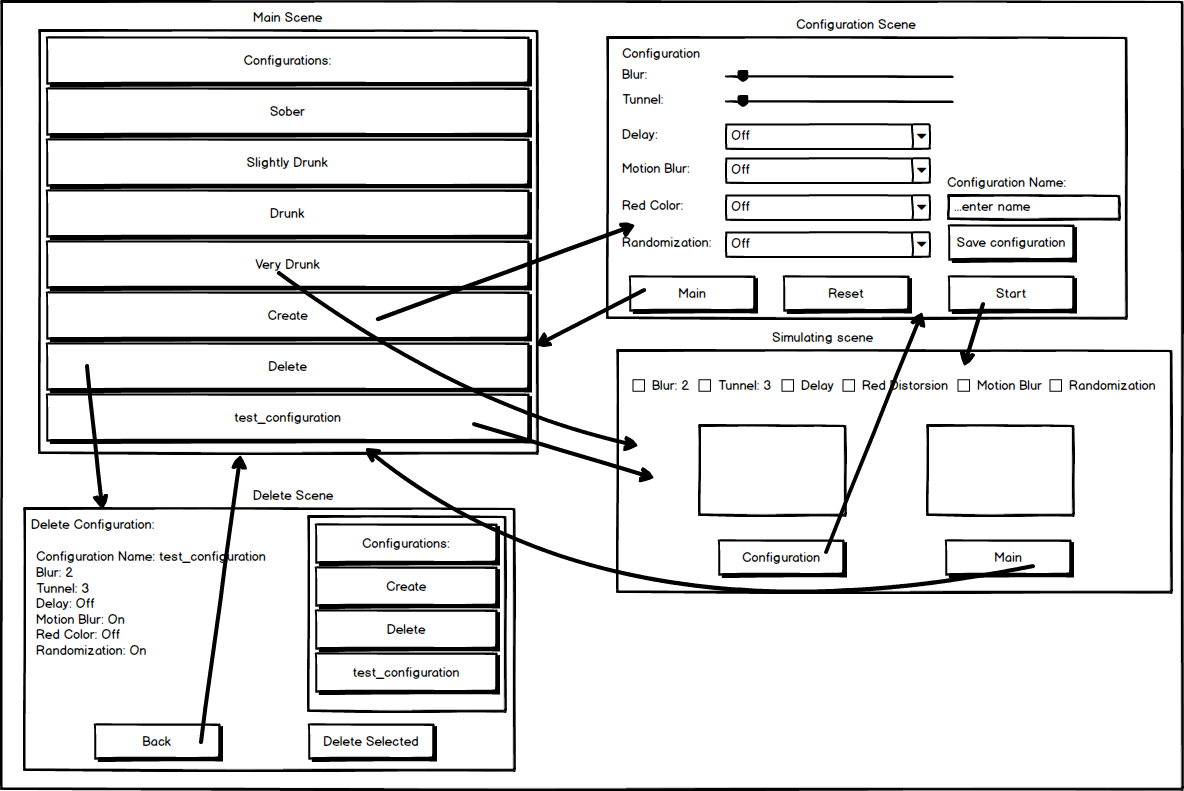
Any configurations saved will then appear in the listed options in the “Main Scene” and be available for selection until you either delete the file using the “Delete Scene” or do so manually. Since the configurations are saved in files on your smartphone, you could also transfer them onto another device manually.

### Delete Scene

As the name indicates, this scene is used for the deletion of custom configurations as an alternative to manually deleting the files created in the app’s directory on the phone. To make sure you delete the right configurations, an overview of the settings stored within the selected configuration is provided on the left and in case any error was encountered during the deletion-process, a message will appear in the same place accordingly.

## Graphical User Interface Overview

The image below provides a better understanding of the navigation in the Simulating Substances application. The entry point to the application is the Main scene:



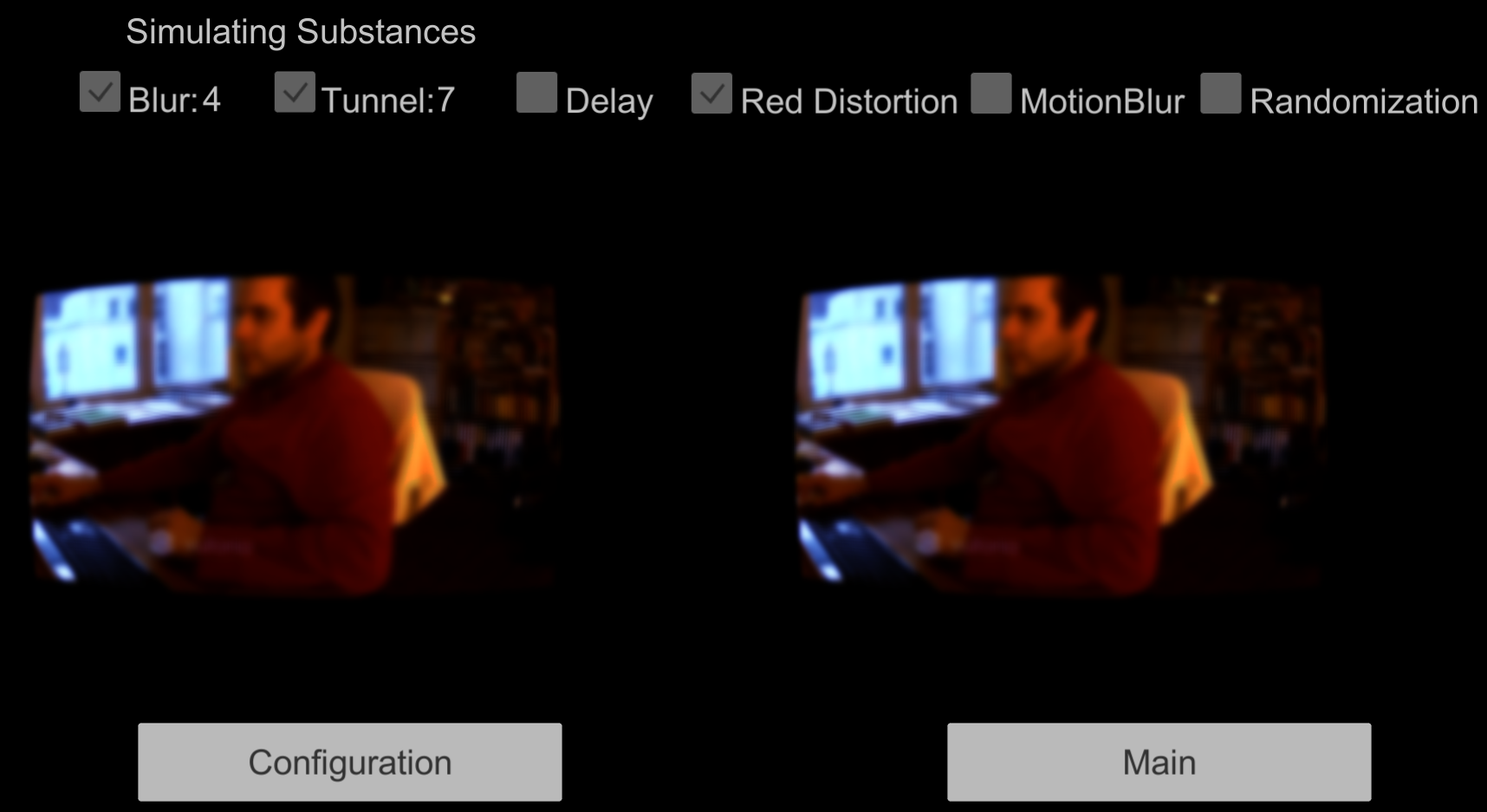
# Use Cases

## Start with a default configuration

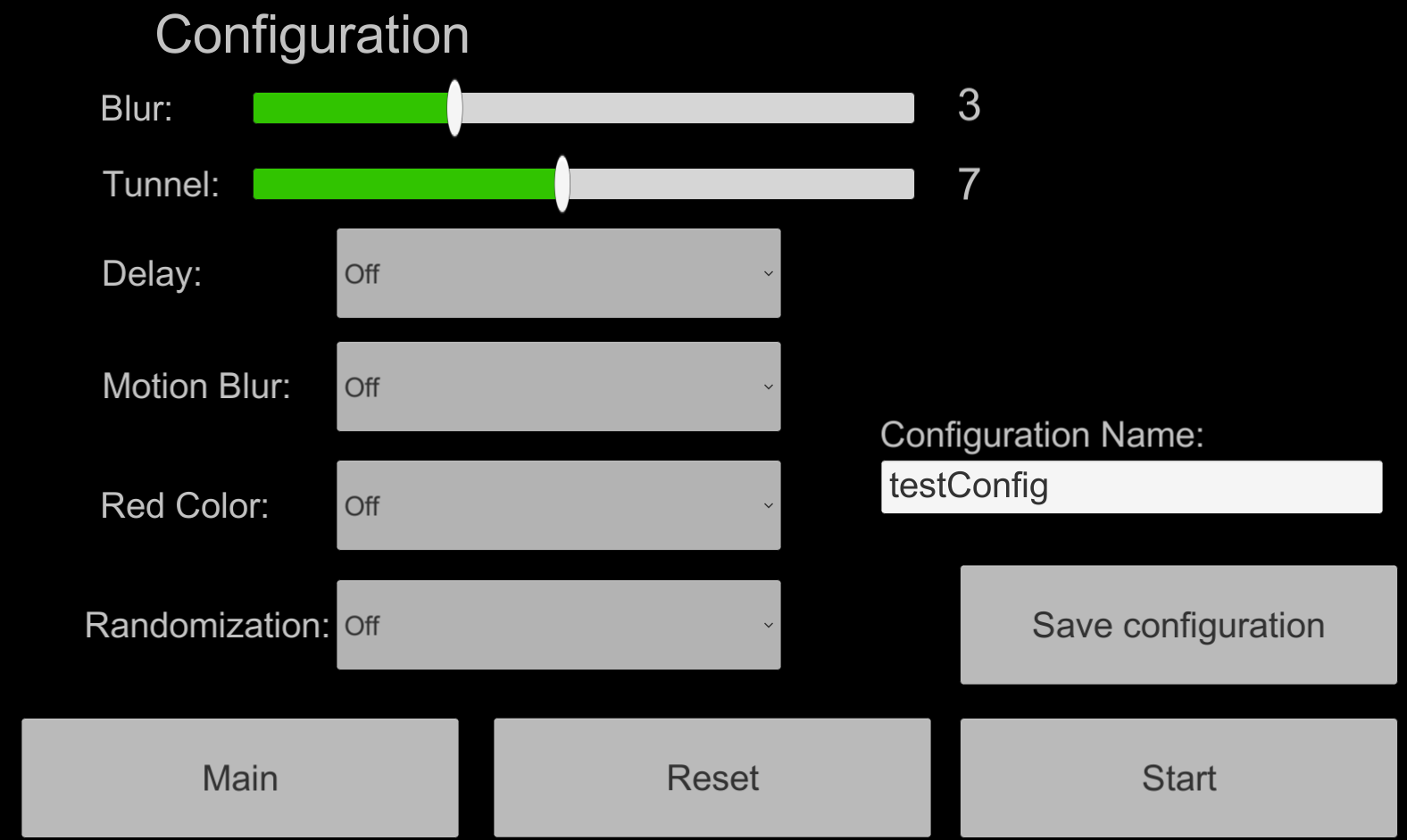
The application comes with the following four default configurations, which are supposed to resemble different stages regarding the influence of alcohol:

1. Sober
2. Slightly Drunk
3. Drunk
4. Very Drunk.

After starting the application, the “Main Scene” is loaded. There you have the option to select a default configuration from the list by **double-clicking** it. The selected configuration will then be loaded and used by the “Simulating Scene” that is started therewith and you can put your phone in a fitting device such as Google Cardboard.

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## Create a custom configuration

In the “Main Scene” **double-click** on the “**Create”**-option.

The Configuration scene will then load and allow you to create a custom configuration with any combination of the displayed options.

Choose the Blur and Tunnel View values by sliding the slider to the left or to the right. Activate or deactivate the Delay, Motion Blur, Red Color Distortion or Randomization effects just by selecting “On” or “Off” in the corresponding dropdowns.

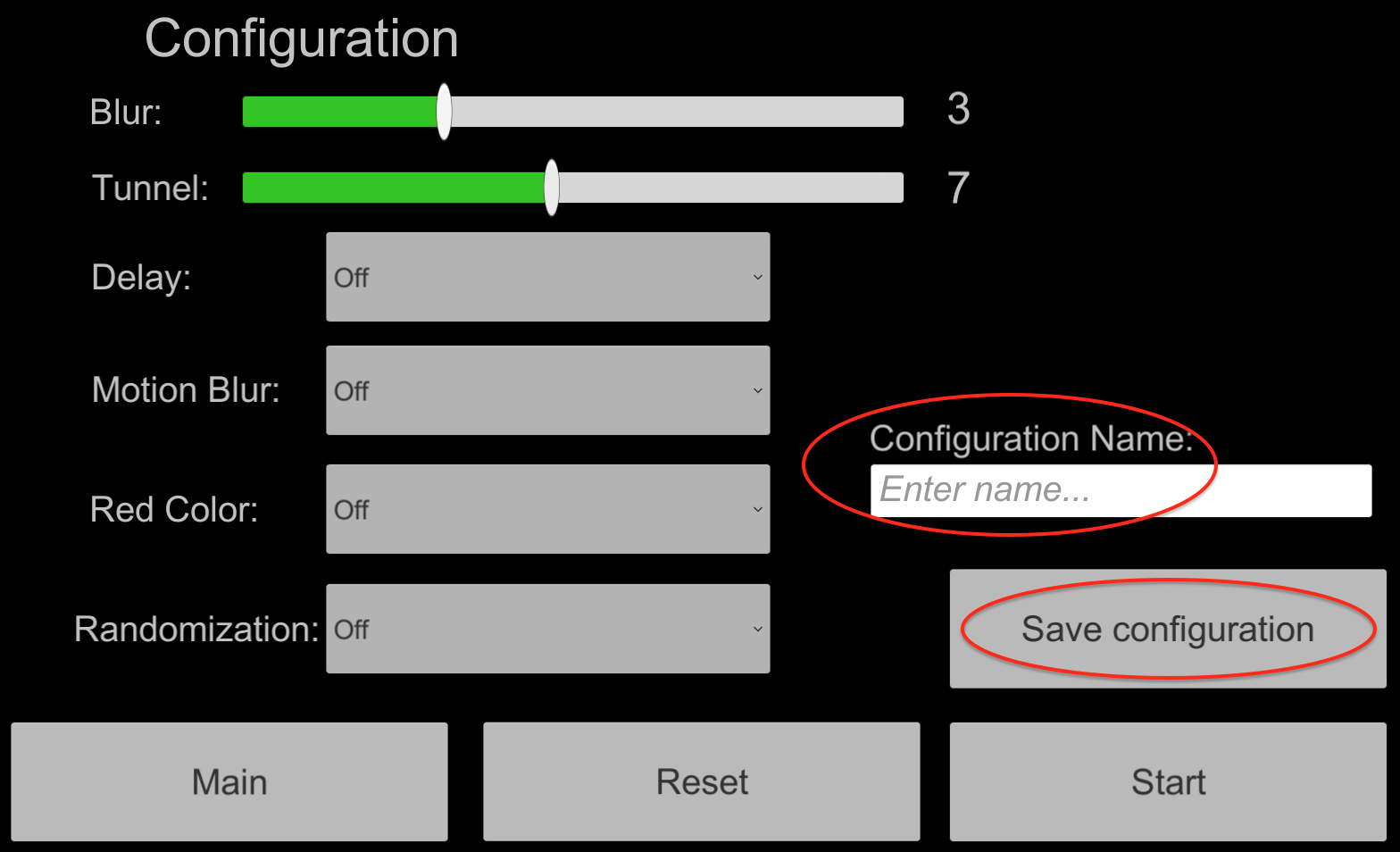
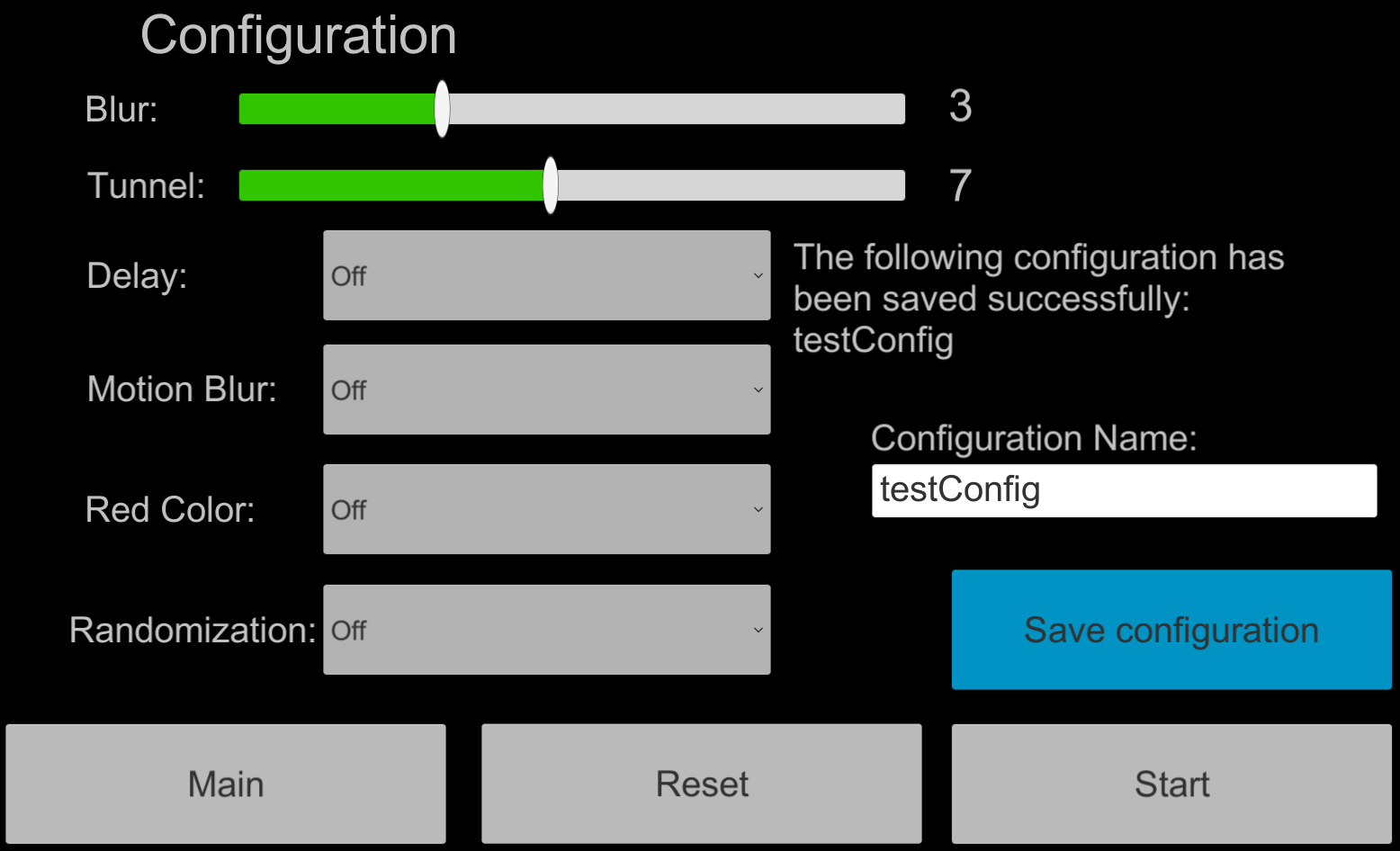
Once finished, hit the Start button and the simulation will start.

If needed it’s possible to reset all the values to 0 or “Off” by pressing the Reset button.

## Saving a custom configuration

Follow the steps described in “Create a custom configuration”. Before starting the simulation, enter your chosen name for the configuration in the field and hit the “Save configuration”-button.

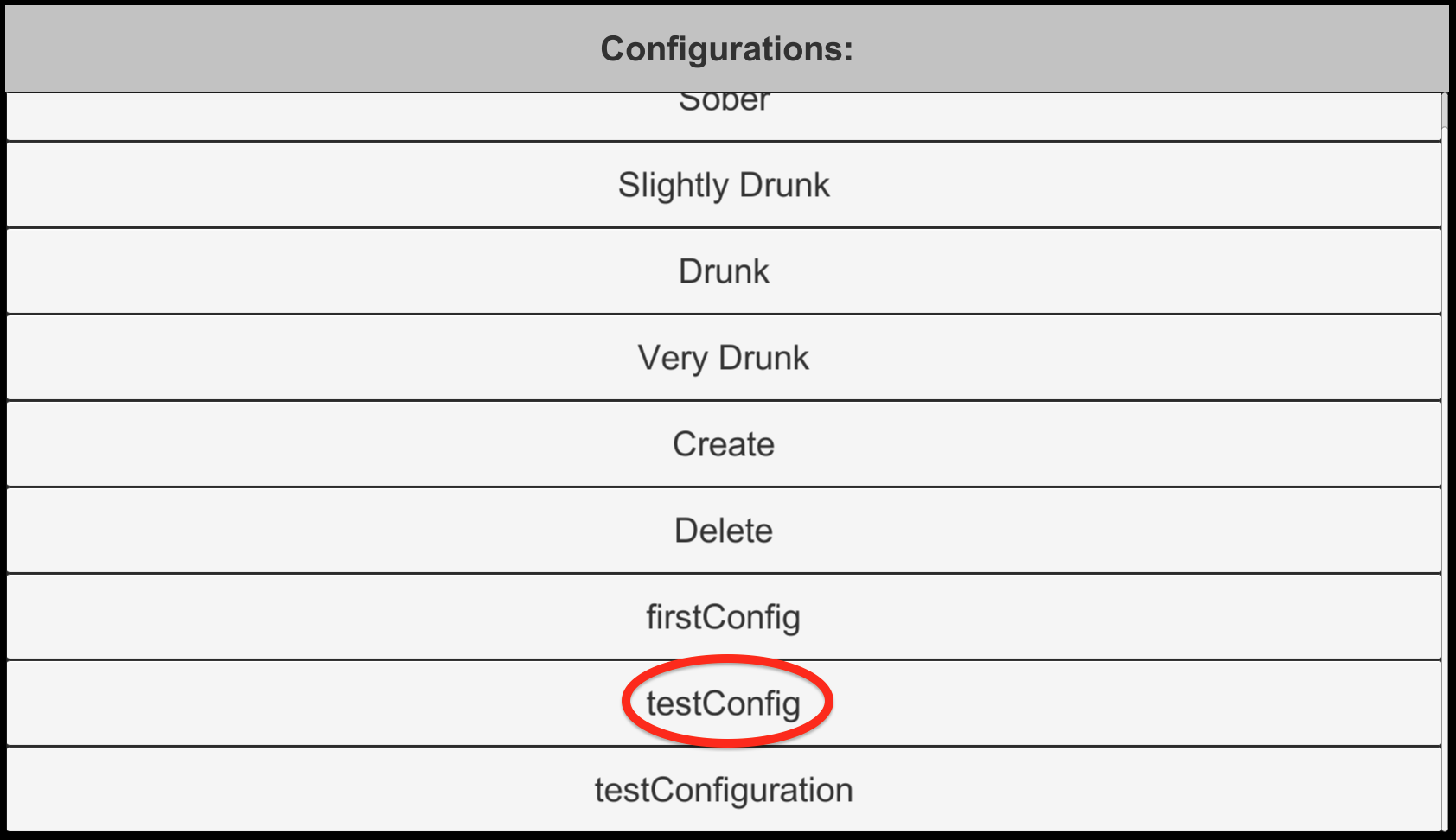
A message will appear once the saving process has been completed.

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Hit the “Start”-button in order to begin the simulation and test the configuration or use the saved configuration by selecting it on the list in the “Main Scene”.

## Starting with a custom configuration

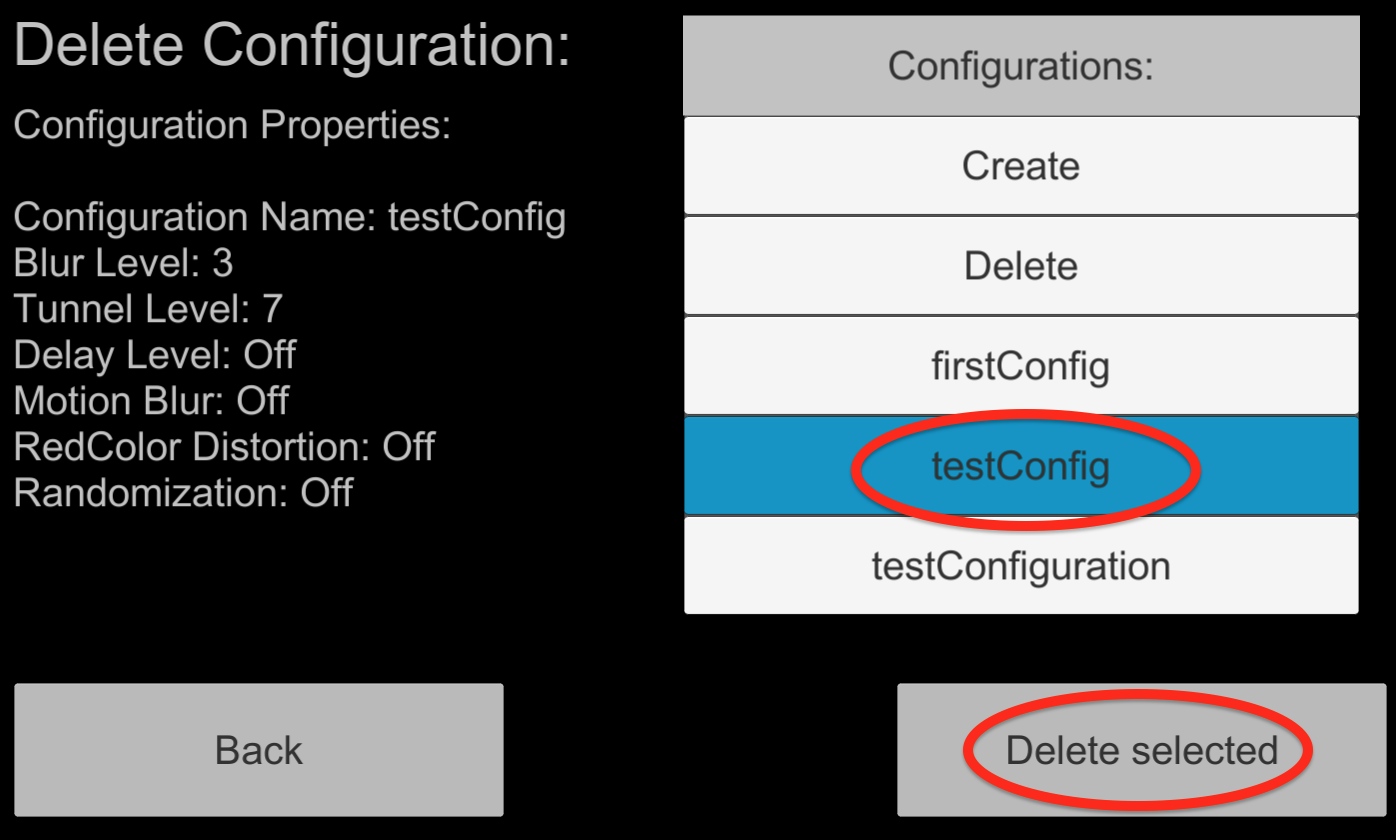
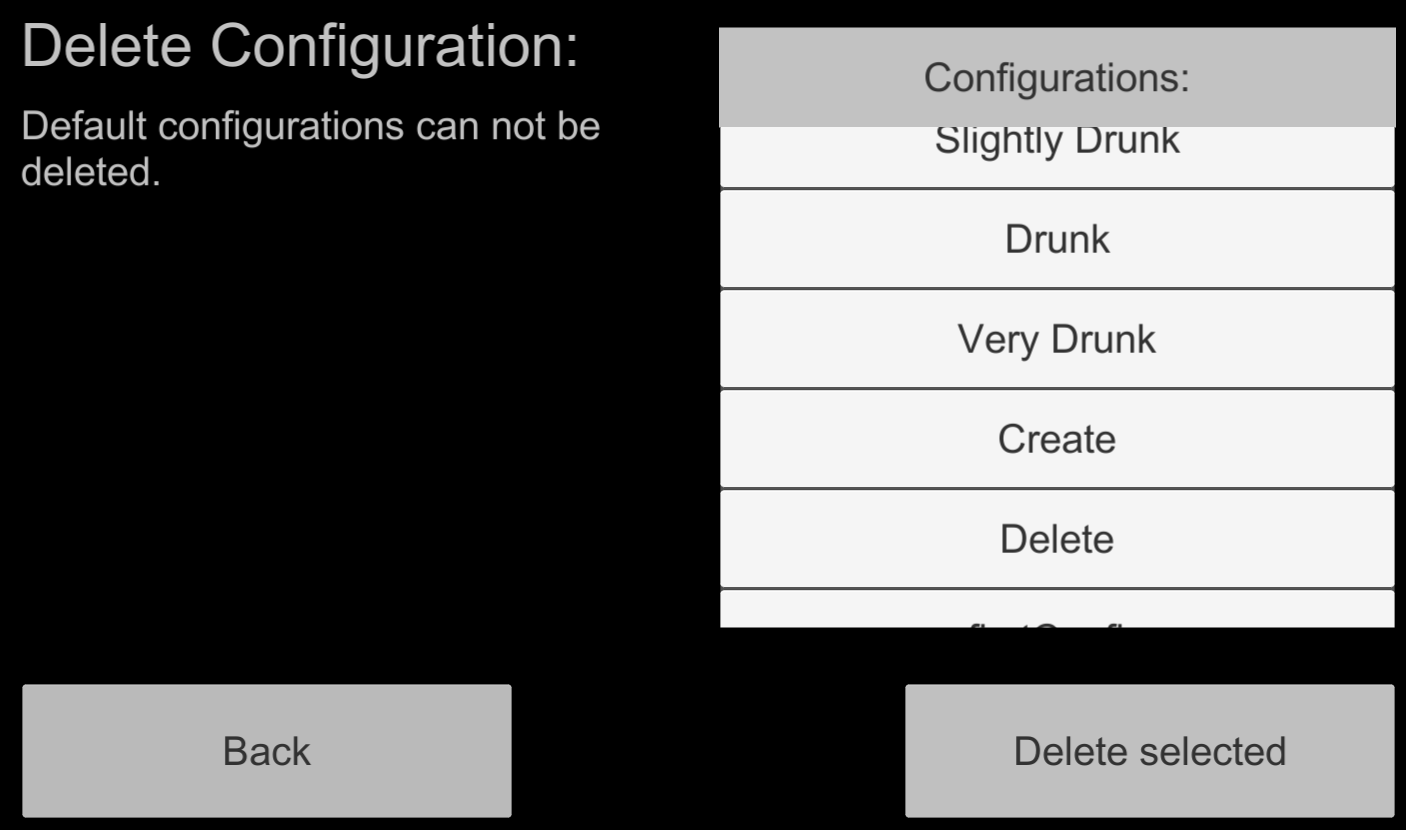
Similar to “Start from a default configuration”. In the Main scene scroll the list down until you find the desired custom configuration. **Double-click** the item and the simulation will start.



## Delete a custom configuration

In the “Main Scene” select **Delete** from the list and **double-click** on it. The “Delete Scene” will be loaded. In the Delete scene you can check the values of the different configurations by tapping on the list.

If you want to delete a configuration, **double-click** on it in the list and then hit the “Delete selected”-button. If you choose to delete a default configuration an error message will appear.

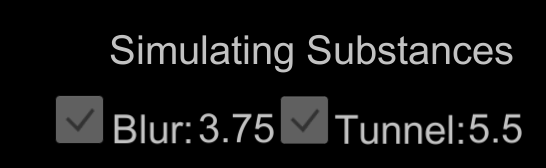


## Activating the Randomization Effect

The randomization effect is a feature, which tries to imitate the inconsistency of the alcohol effects by changing the Blur and Tunnel view effects strength on the runtime after a time interval of five seconds.

This effect is conceived to increment or decrement this values in a progressive way, avoiding big steps which could be very disturbing for the user and has a probability of 30% to remain the same.

After activating this effect in the “Configuration Scene” you can see any changes applied to the values in runtime in the upper corner of the “Simulating Scene”:

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