



RSVP Keyboard™ GUI User Manual

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Setup

Installing Python

The RSVP Keyboard GUI requires Python 2.7.11. Installers for this version of Python can be found at <https://www.python.org/downloads/release/python-2711/>

Installing RSVP Keyboard GUI

The latest version of the GUI can be found at <https://bitbucket.org/smekkala/ohsu-rsvp-gui/downloads/>

After downloading and unzipping the contents of the repository, run `pip install -r requirements.txt` from the directory where `requirements.txt` is located. This will install all required Python libraries. This installation only needs to be performed once.

Launching GUI

To launch the RSVP Keyboard GUI, run `python RSVPKeyboard.py` from the directory where `RSVPKeyboard.py` is located.

GUI Overview

Buttons

Buttons perform various functions when clicked.

Input Fields

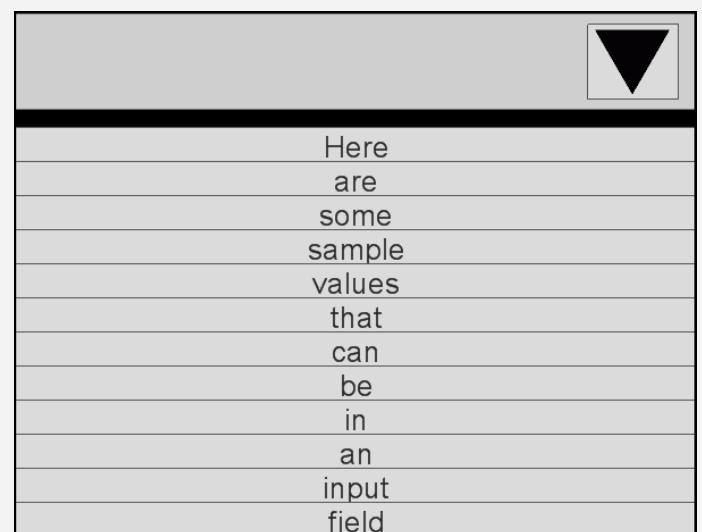
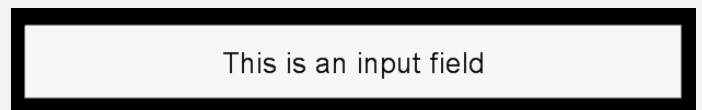
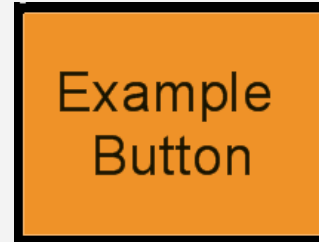
Clicking on an input field allows the user to type in that input field.

Drop-Down Menus

Clicking on a button with a triangle image will open a drop-down menu of clickable values. Clicking on one of these values will set that text as the contents of the input field, and will close the drop-down menu. The list can be scrolled using the mouse scroll wheel.

Switches

Switches appear in the Parameters Menu, and toggle the value of certain parameters between 'true' and 'false' when clicked.

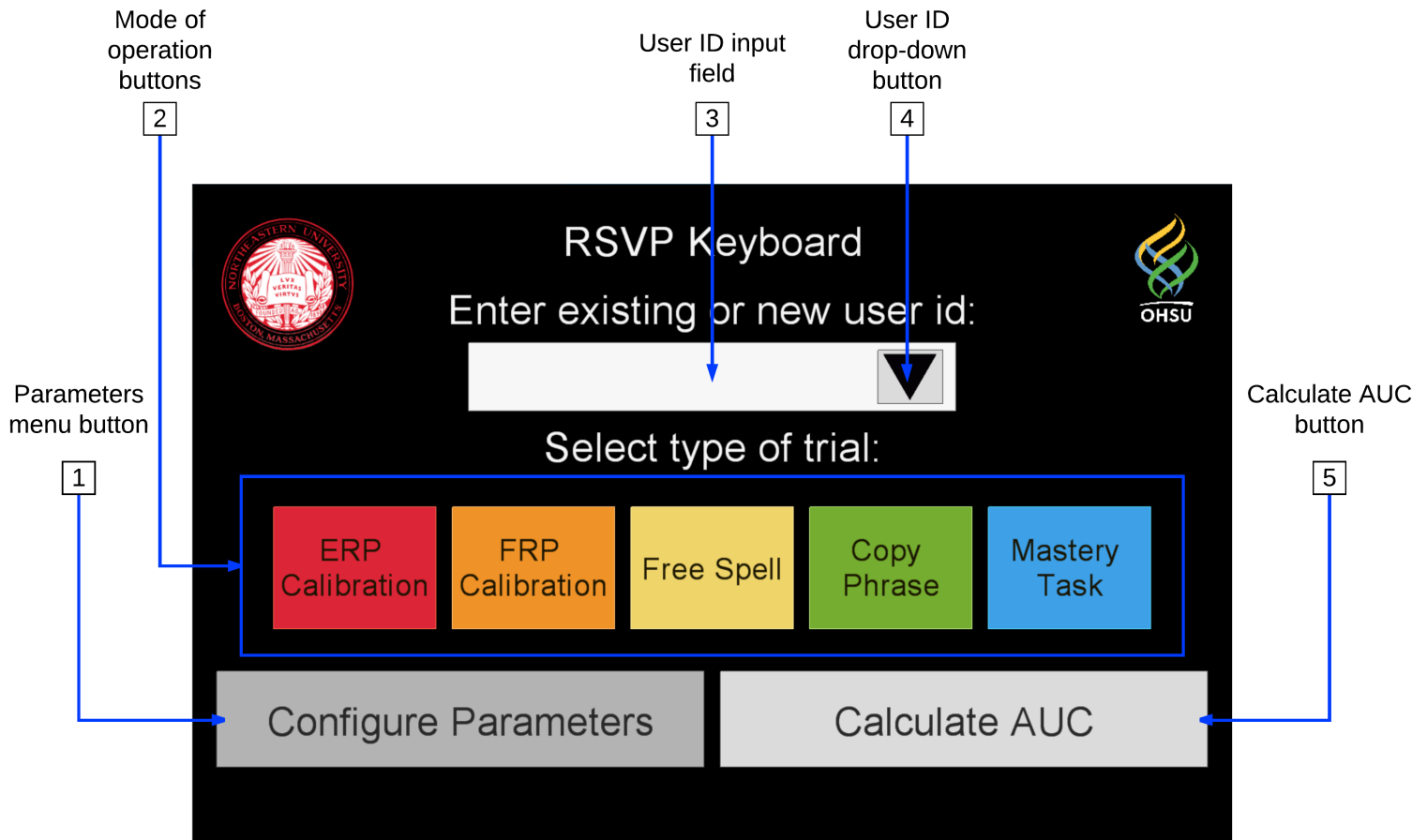


Switch set to 'false'



Switch set to 'true'

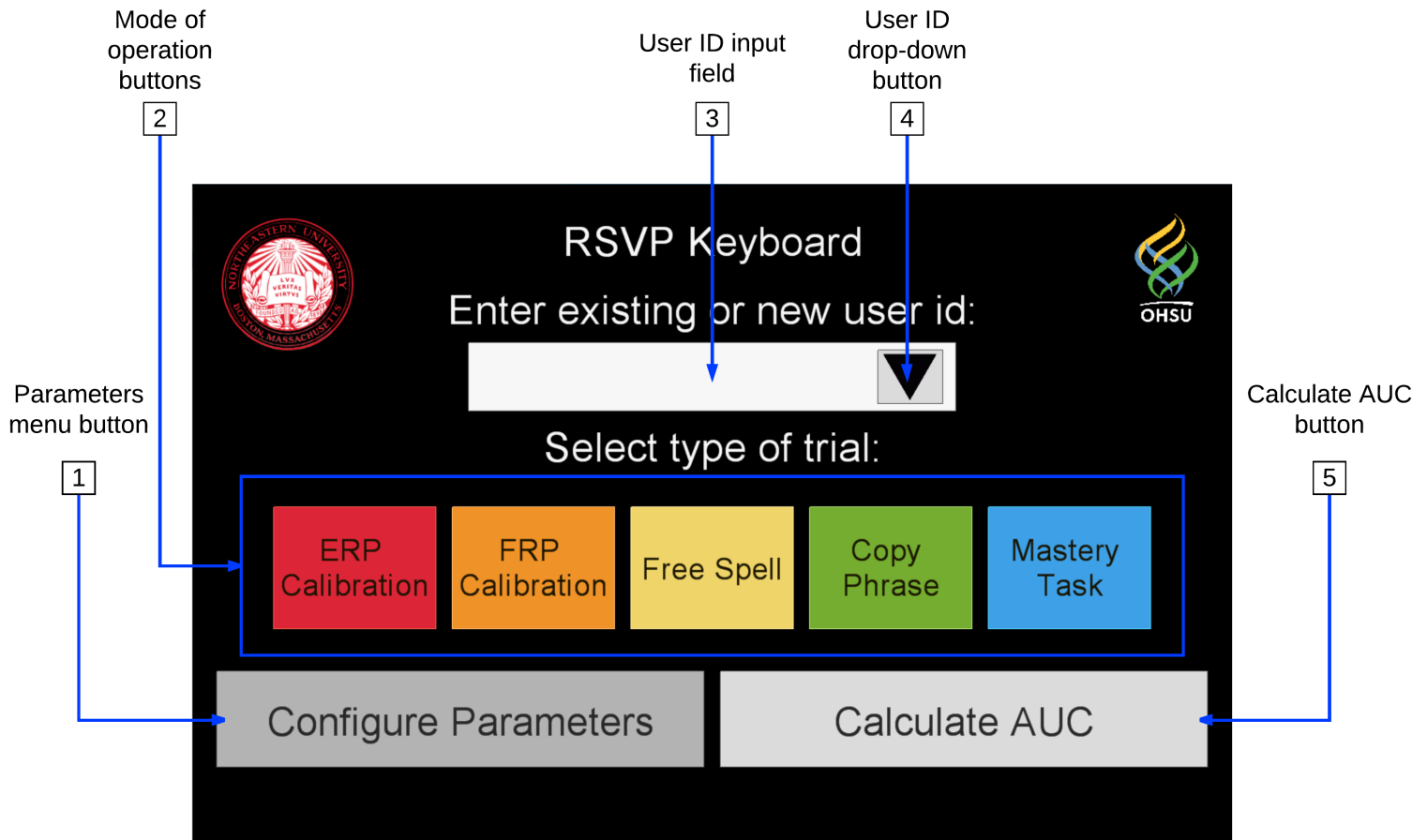
Main Menu



Overview

1. The Parameters Menu button opens the Parameters Menu.
2. The Mode of Operation buttons open the Launch Menu when clicked, if a user ID has been entered. If the user ID entered has not been previously used, it will be added to the user ID drop-down display.
3. The user ID input field is used to input a user ID.
4. The user ID drop-down button displays a drop-down list of previously used user IDs.
5. The Calculate AUC button calculates the user's AUC.

Main Menu



Setting Up a Session

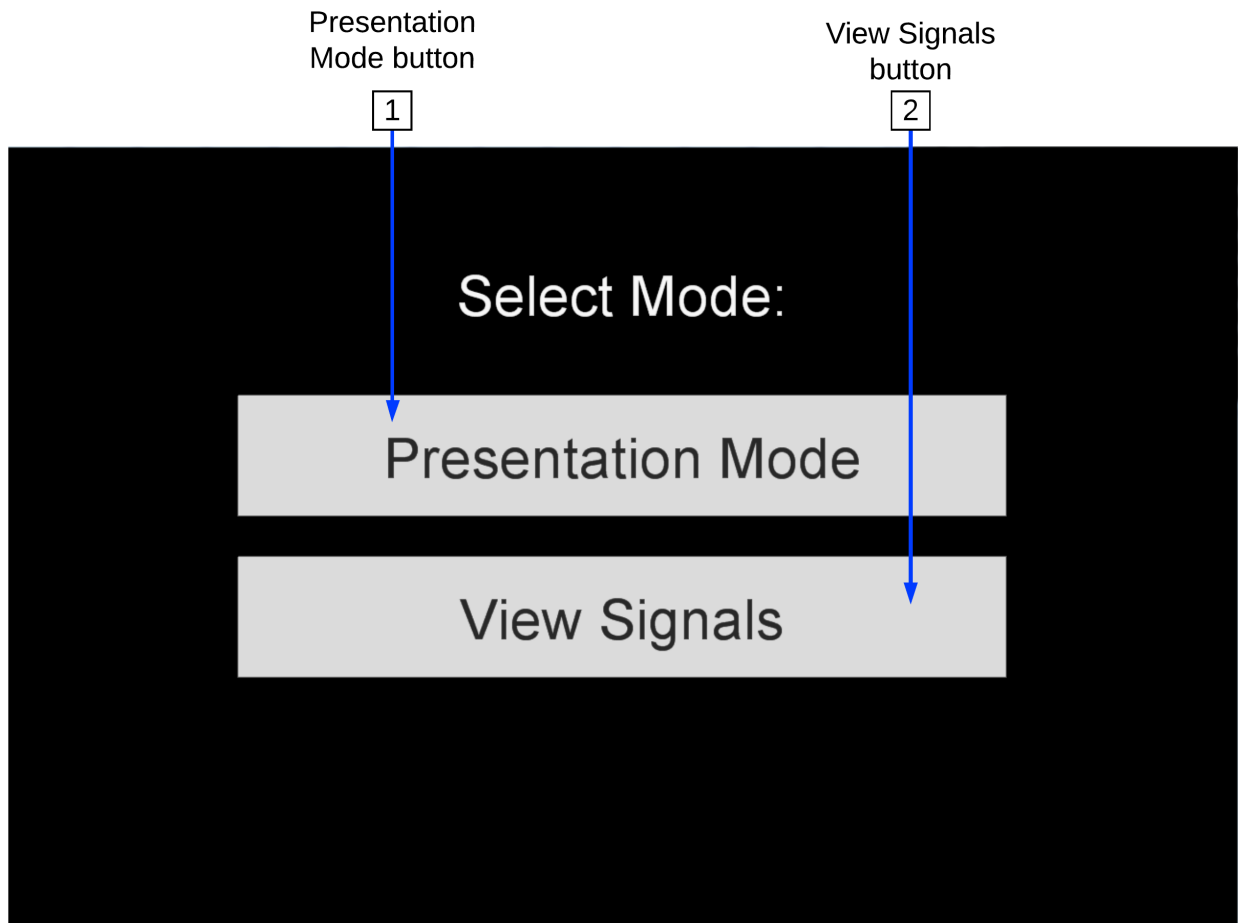
To launch a RSVP Keyboard session with a new user ID, enter the new ID into the user ID input field [3].

To launch a RSVP Keyboard session with an existing user ID, click on the user ID drop-down button [4], and select a previously entered ID from the scrolling drop-down list that appears.

After entering a user ID, click on the Mode of Operation button [2] that indicates the type of session you would like to launch.

A list of previously entered user IDs is stored in *users.txt*.

Launch Menu



The Launch Menu is opened by clicking one of the Mode of Operation buttons in the Main Menu.

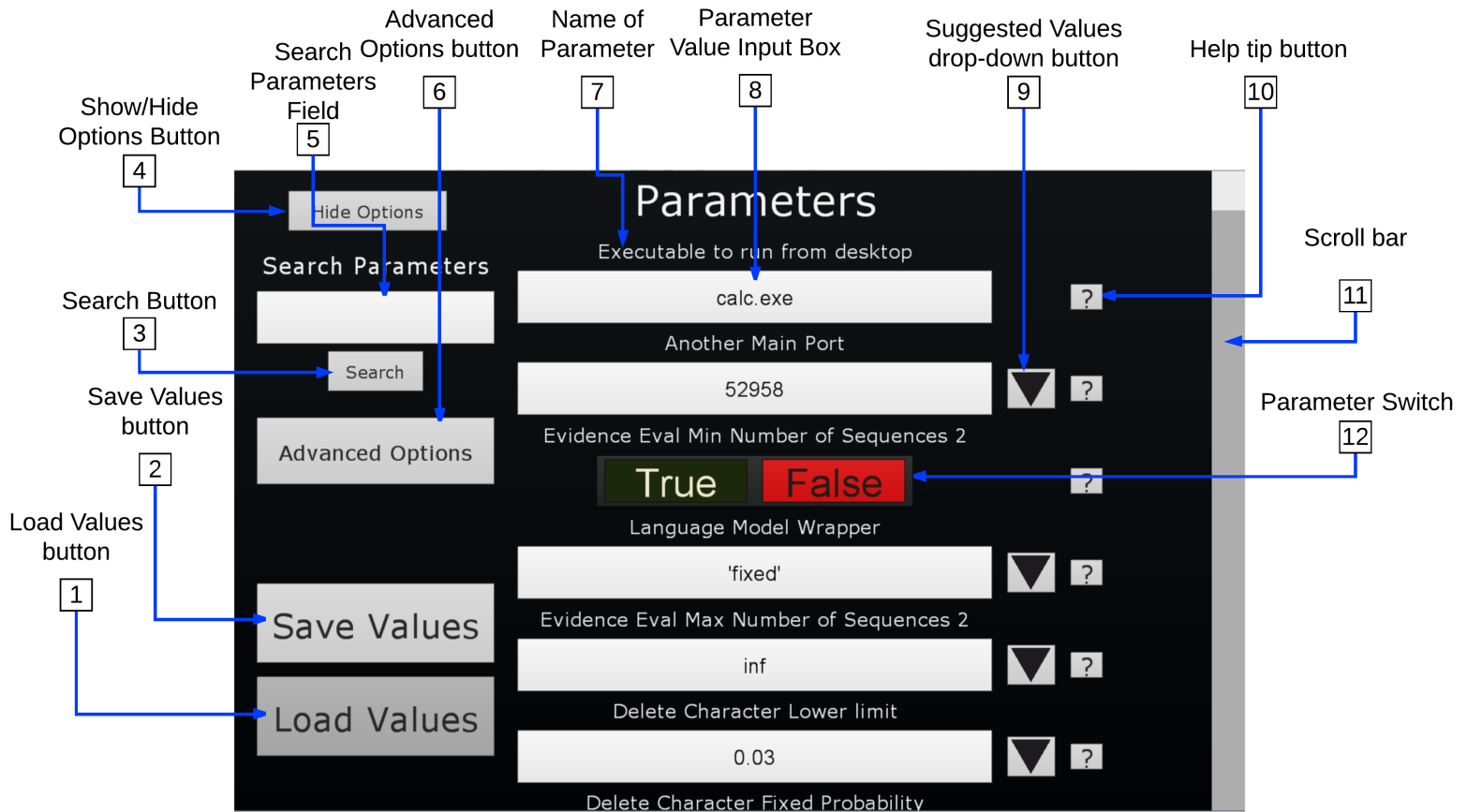
Launching a Session

Clicking the Presentation Mode button [1] will launch a RSVP Keyboard session of the type indicated by the Mode of Operation button.

Viewing EEG Signals

Clicking the View Signals button [2] will launch the EEG signal display.

Parameters Menu



The Parameters Menu is opened by clicking the Configure Parameters button in the Main Menu. The list of parameters may be scrolled through using the mouse wheel or the scroll bar [11].

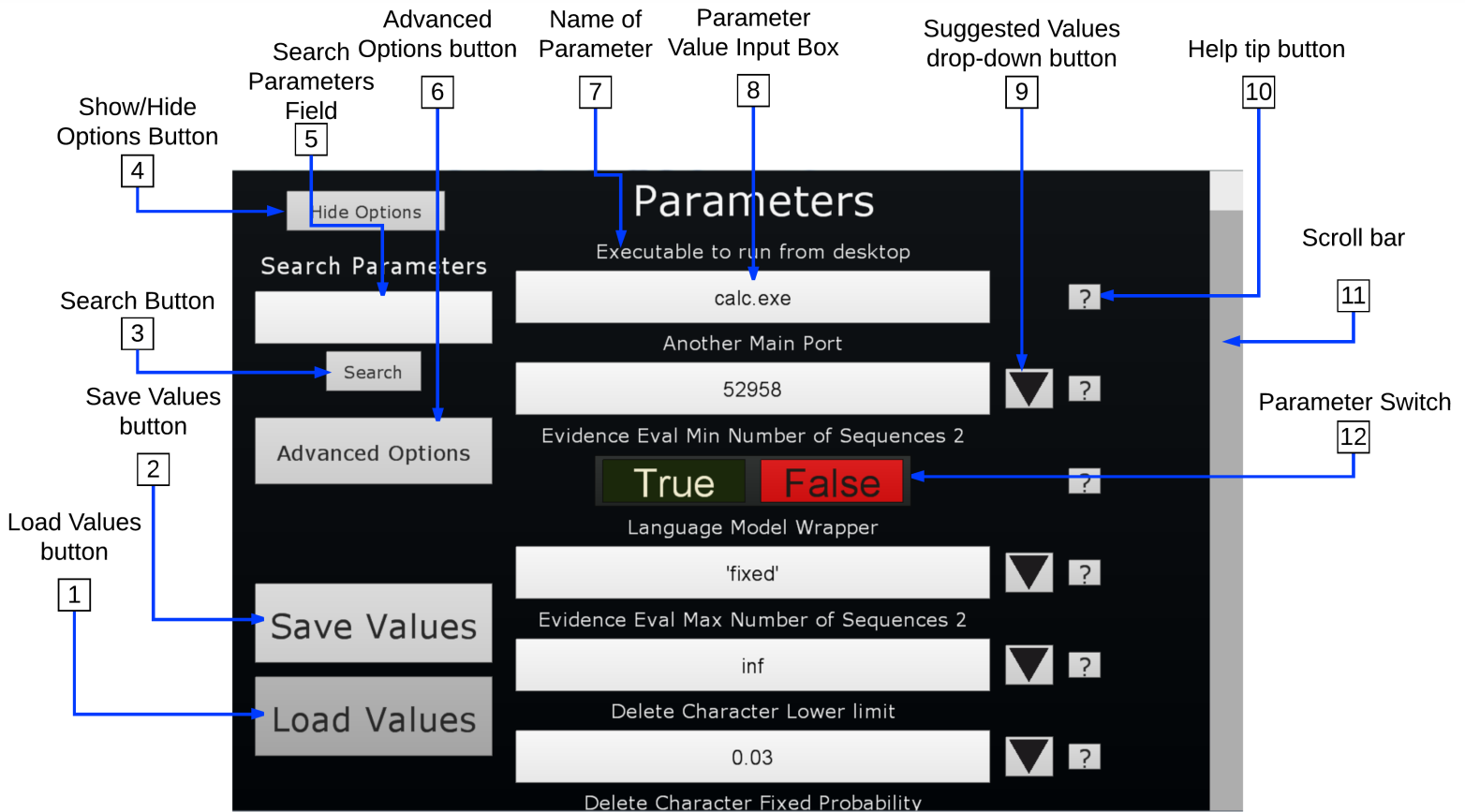
To get help regarding the functions of a given parameter, click on its adjacent help tip button [10].

Editing parameters

Boolean (true/false) parameters have switches [12] below their names. The values of these parameters can be toggled by clicking on their switches.

Each non-Boolean parameter has an input box [8] below its name. Values can be typed in this box. Each parameter also has a drop-down menu of suggested values, which can be accessed by clicking its Suggested Values drop-down button [9].

Parameters Menu



To view the Load Values, Save Values, and Search buttons, click on the Show/Hide Options button.

Searching parameters

To search for a specific parameter by name, type the name of the parameter you would like to search for in the Search Parameters field [5], then click on the Search button [3].

To find the next parameter containing the text you searched for, click the Search button again.

The Search function searches the parameter list from top to bottom. If a parameter containing the text you searched for cannot be found lower on the list, the search will continue from the top of the list.

Parameters Menu

Saving and Loading Values

Saving Values

To save the current set of parameters as a JSON file for later use, click the Save Values button. This will bring up a dialog box in which the user may set the name and location of the parameters file to save.

Loading Values

To load a previously used set of parameters for editing, click the Load Values button. This will bring up a dialog box in which the user may select a previously saved parameters file to load.

Saving and loading values from the Parameters Menu will also save values in the Advanced Options menu, regardless of whether or not it is open.

Advanced Options

The Advanced Options button opens the Advanced Options menu. This menu functions in the same way as the Parameters Menu. Parameters in this menu should only be edited by users who are extremely familiar with RSVP Keyboard.

All parameters, as well as their names, help tips, suggested values, default values, and which menus they appear in, are stored in *parameters.json*.