

GN ReSound

# Personal Fine Tuning

User Interface Specifications, Version 11

Chris Kiess  
7/23/2014

## Contents

Introduction.....	3
1.0 Calibration Instructions.....	4
1.1 Calibration .....	5
1.2 Home Page .....	6
1.3 Selecting an Environment.....	7
1.4 Environmental Switching dialog.....	8
1.5 Environmental Switching 10 Second Delay .....	9
1.6 Adjustment Screen - Loud Environments.....	10
1.7 Environment and Instrument Limitations.....	11
1.8 Unlinked State .....	12
1.9 Linked.....	13
1.10 Making Additional Changes.....	14
2.0 User Flow.....	15
3.0 Unsaved Changes Warning Dialog.....	16
3.1 Lost Connection Dialog.....	17
3.2 Feature not Available dialog .....	18
4.0 Technical Specifications.....	19
5.0 Open Issues .....	19
Version History .....	20

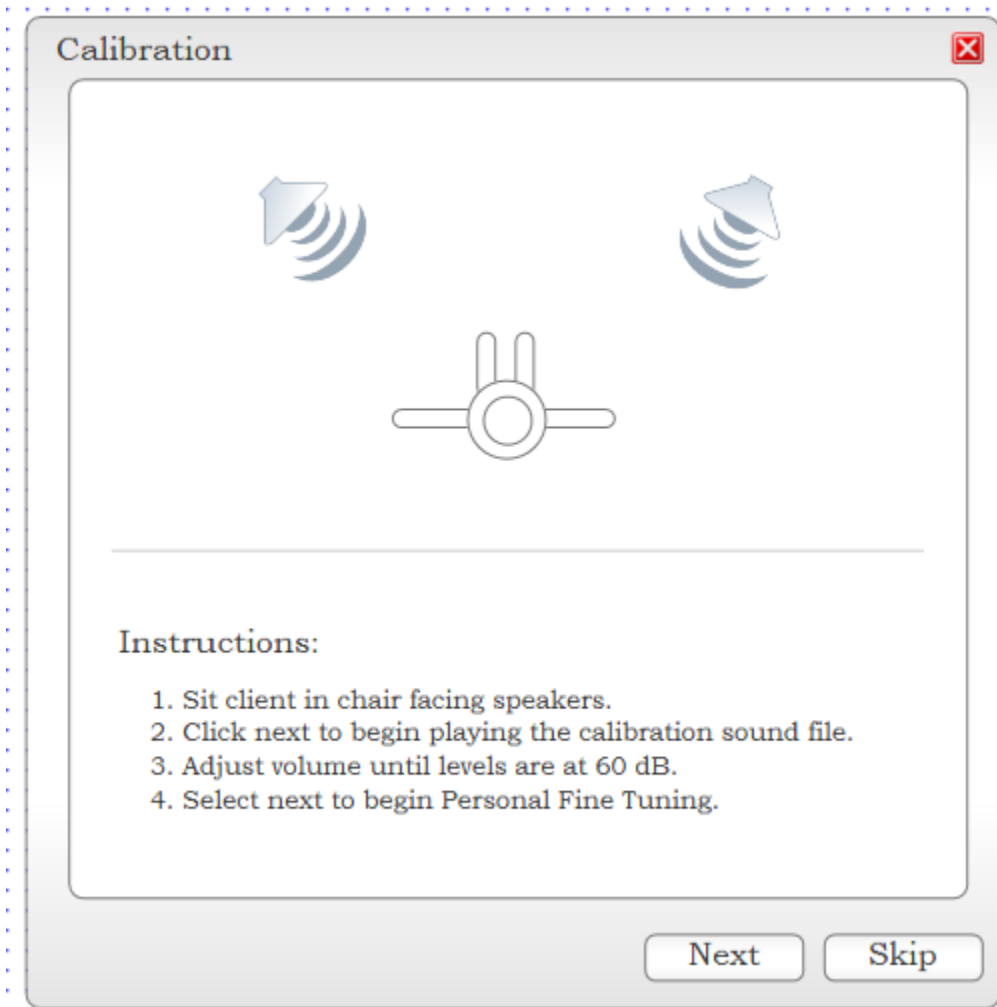
## Introduction

**Summary:** This document represents the user interface for the Audika Personal Fine Tuning feature - a method of allowing the patient/customer to fine tune and adjust their hearing instruments through an active interface and partnership with their audiologist.

**Use Case / Problem:** Hearing instrument users often have difficulty expressing the problems they have with their devices or articulating shortcomings in the hearing experience. Evidence from the literature indicates patients who actively participate in their fitting process and the fine tuning aspects of the hearing instruments have higher rates of satisfaction. However, this is currently hindered by complex fitting software interfaces designed for clinicians and not hearing instrument users.

**UX Task:** Develop an interface that is user friendly for the hearing instrument user and provides them with options (which equates to control) in the fitting process to fine tune their hearing instrument settings. Specifically, the user should have the ability to adjust gain and noise control settings for 6 different environments.

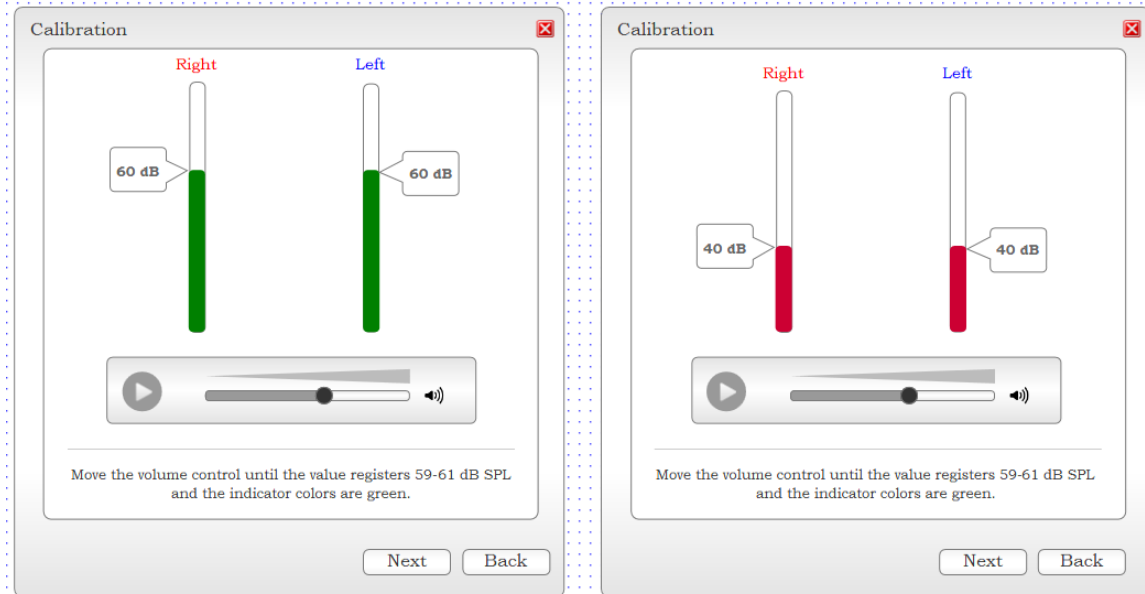
## 1.0 Calibration Instructions



On clicking the Personal Fine Tuning button in Audika (located in the Smart Gains screen) the audiologist will immediately be presented with a modal window for calibration. This window is a prelaunch window (designed at 500 x 500 px) to the Personal Fine Tuning modal window. The audiologist is presented with instructions for calibration on the initial screen and has an option to skip this process or continue to calibrate. Should they choose to calibrate the audiologist can click the next button to begin the calibration process.

Cancelling out of this window returns the audiologist to the fitting software (Smart Gains Screen)

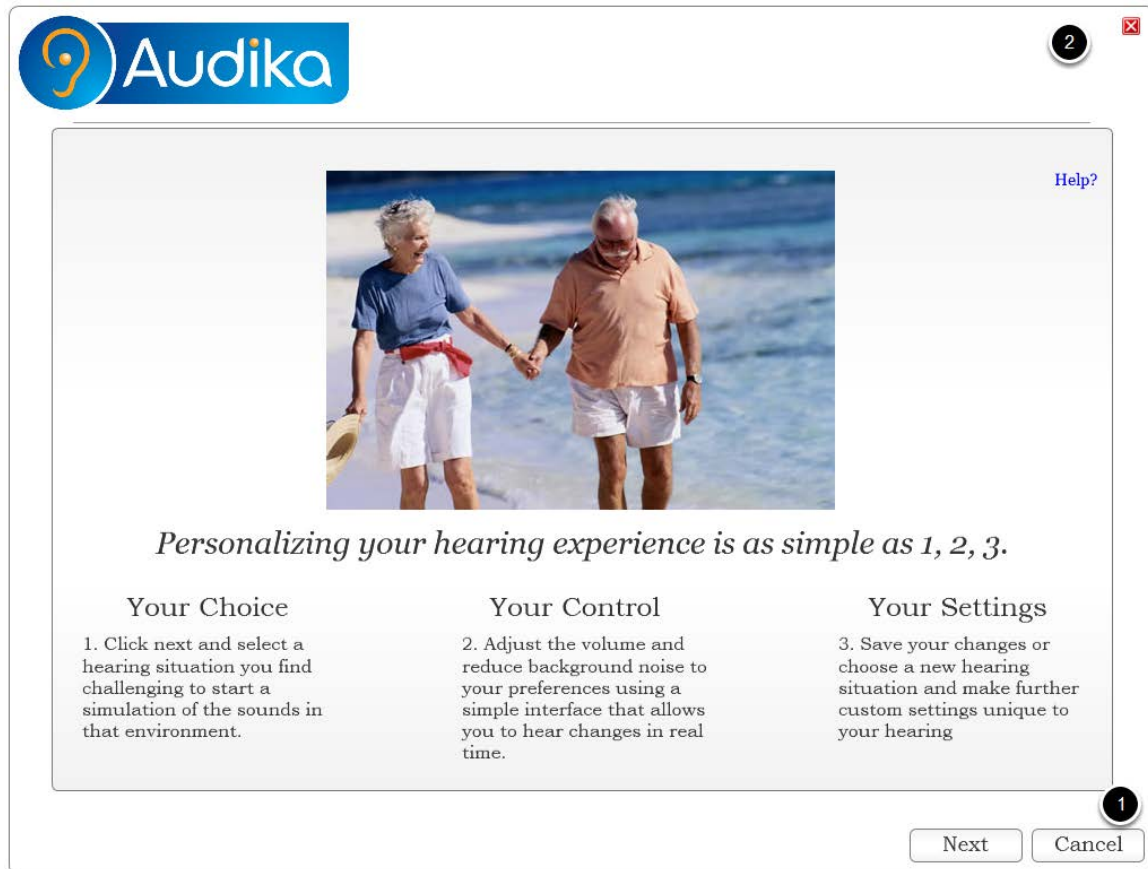
## 1.1 Calibration



The audiologist adjusts the volume of the speakers until the indicators show a level of 60 dB (or a calibration range?). Once this is achieved, the bar(s) turn green and calibration is complete. If the volume is below or above 60dB (or the calibration range?), the bars will display red indicating the calibration level is not met. Clicking next launches the Personal Fine Tuning home screen.

Question: Is there a need to add conditions at this point in the process? That is: If calibration is not achieved, should the dispenser be able to click next?

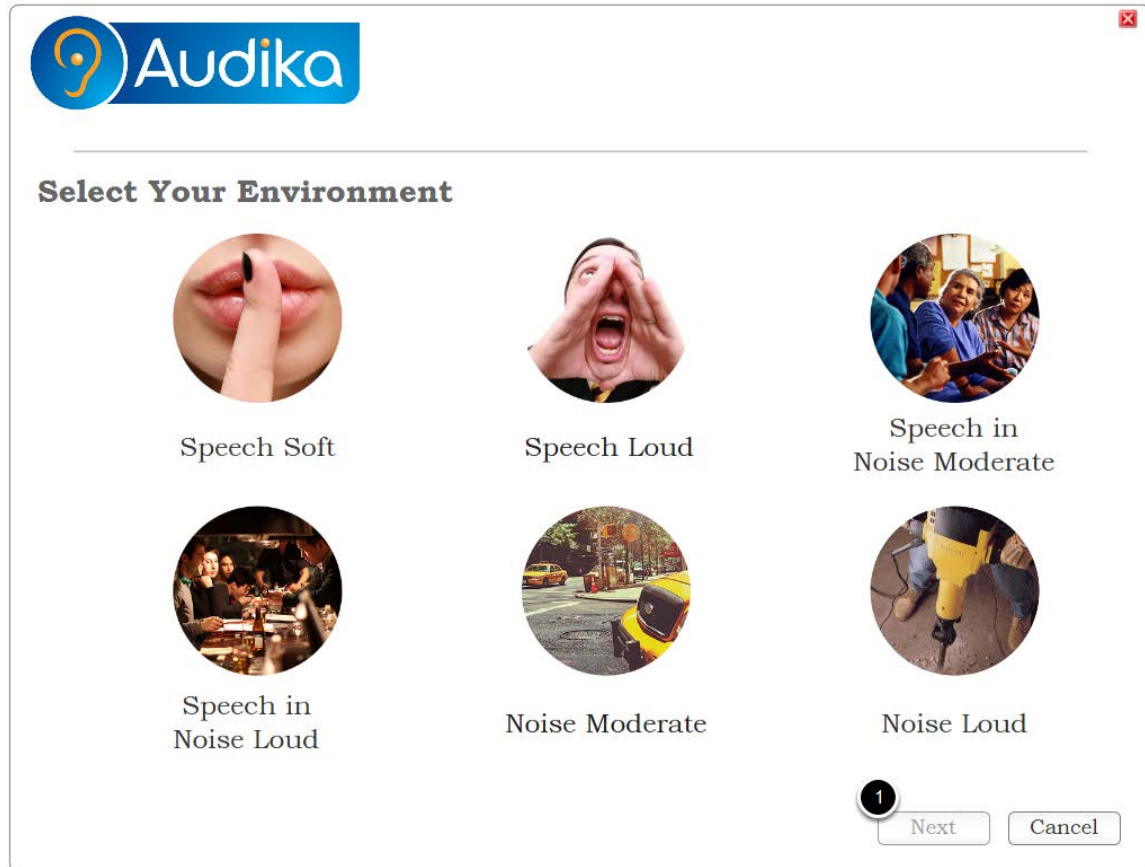
## 1.2 Home Page



The home page displays a friendly, simplistic look with clear instructions for using the site. Clicking the Cancel Button **(1)** or X in the top right corner **(2)** takes the user back to Audika fitting software. Next **(3)** takes the user to an environmental settings selection screen.

**Physical Environment:** Ideally, the audiologist and client will sit next to one another during this process. Either a single screen or a dual screen can be used. In the event a dual screen setup is an option, the feature will initially open on the audiologist's screen. This will allow initial calibration to be conducted prior to launching the Personal Fine Tuning feature. The audiologist can perform calibration while their screen still allows activity. This will then launch the fine tuning feature window where the audiologist and then move the window over to a second screen/monitor (if one exists). At that point, the client will take control of the mouse, to be assisted by the audiologist if necessary, and will navigate through the software.

## 1.3 Selecting an Environment

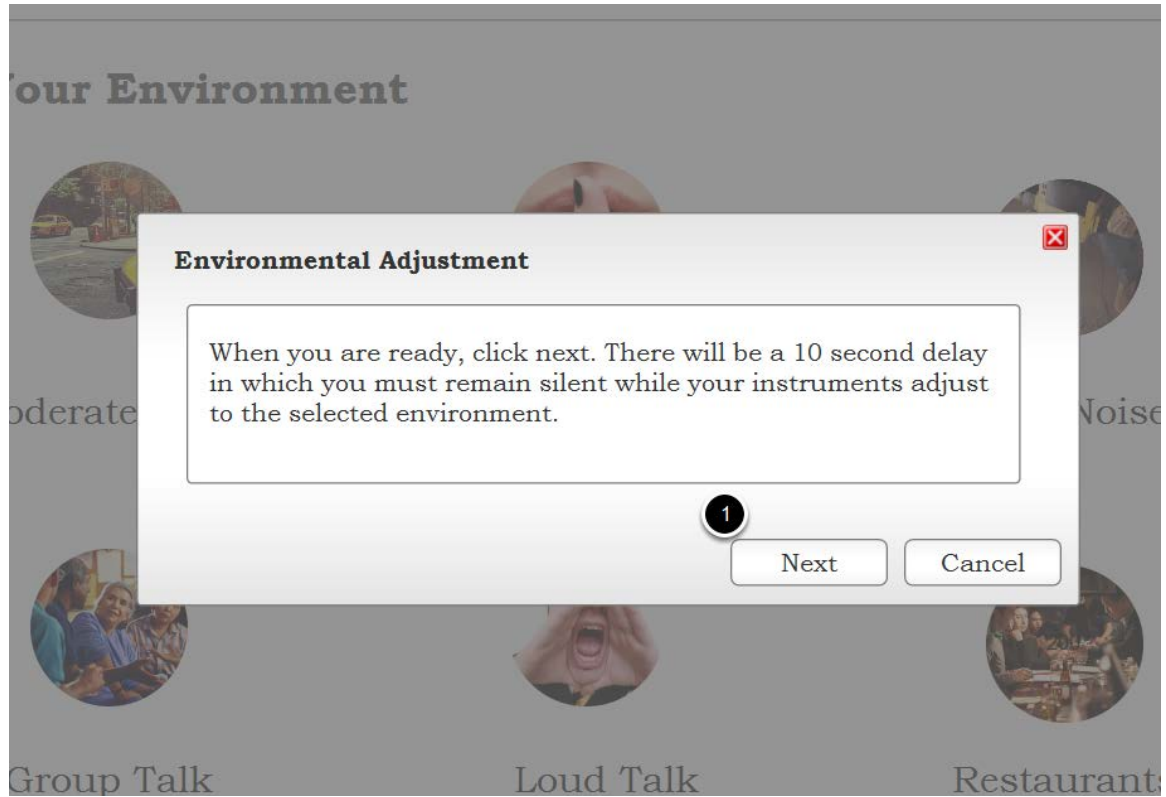


The environmental selection screen allows the patient to select an environment to adjust settings for. Environments are clickable along with the labels under them. The Next button **(1)** does not become active until the environment has been selected. Selecting cancel button or X in the top right corner in this screen returns the user to the FSW when no changes have been made. If changes have been made to an environment, an unsaved changes dialog will appear prompting the user to save or discard changes (see 3.0).

User Flow:

The environments can be clicked on to select the correct one;  
The next button will become active when a selection is made **(1)**;  
Clicking next brings up a delay dialog (see below)

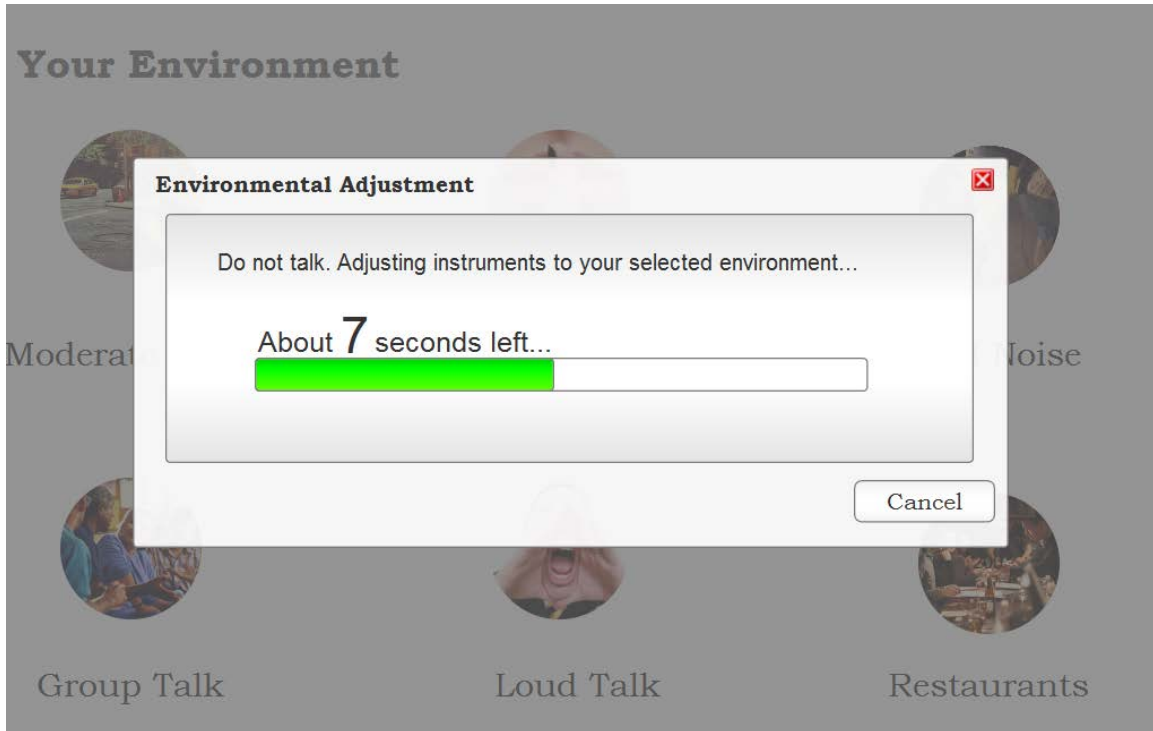
## 1.4 Environmental Switching dialog



A dialog will appear instructing the user to remain silent and click next to begin "the environmental adjustment process." Canceling this process takes the user back to the environmental selection screen with the environment they initially selected still selected and the next button active. Clicking next on the modal window above **(1)** enables a progress bar counting a 10 second span (see below).

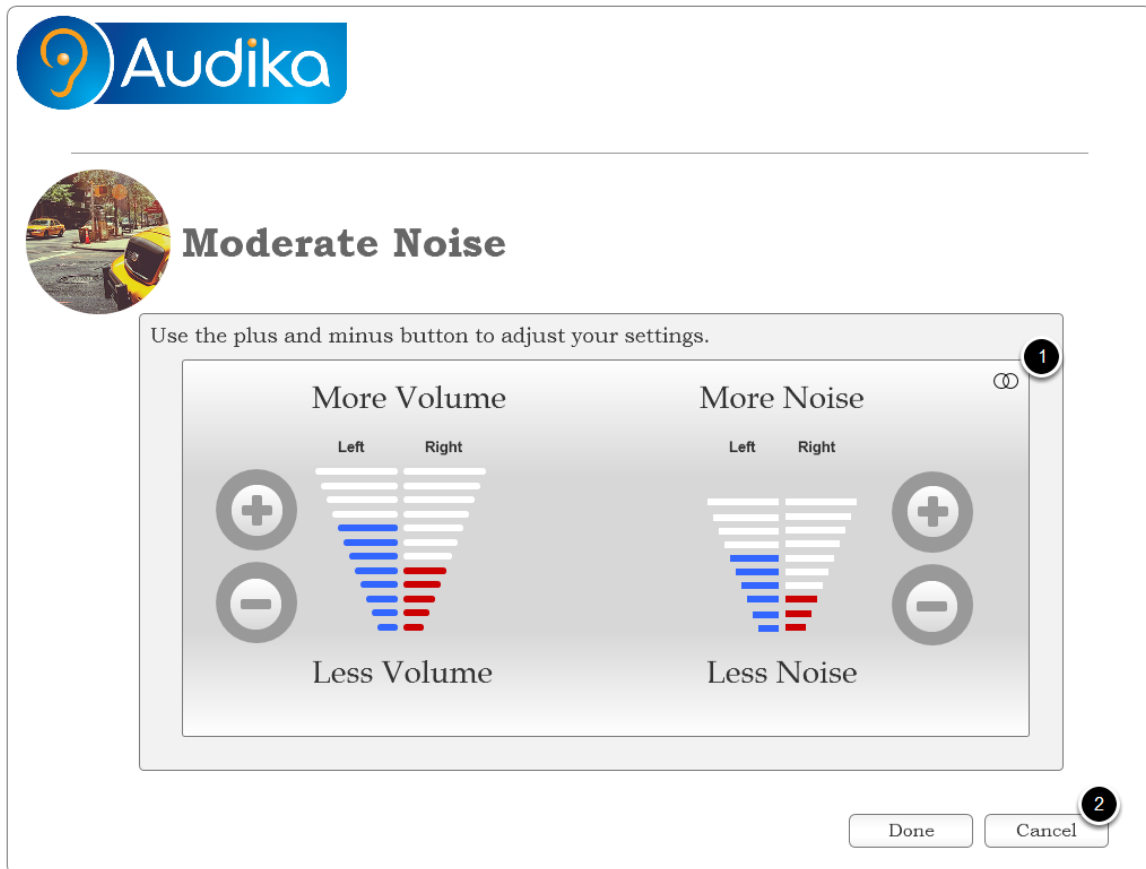


## 1.5 Environmental Switching 10 Second Delay



While the client is remaining silent, a progress bar initiates the 10 second delay. Canceling this process takes the user back to the environmental selection screen with the environment they initially selected still selected and the next button active. Once the process is complete, the adjustment screen will appear.

## 1.6 Adjustment Screen - Loud Environments



Each environment screen allows the client to adjust settings. Depending on the environment selected and the type of hearing instrument, the user can adjust gains (volume en Francais) and/or Noise Control (bruit en Francais). Previous smart gains and noise reduction levels will be carried forth from the FSW.

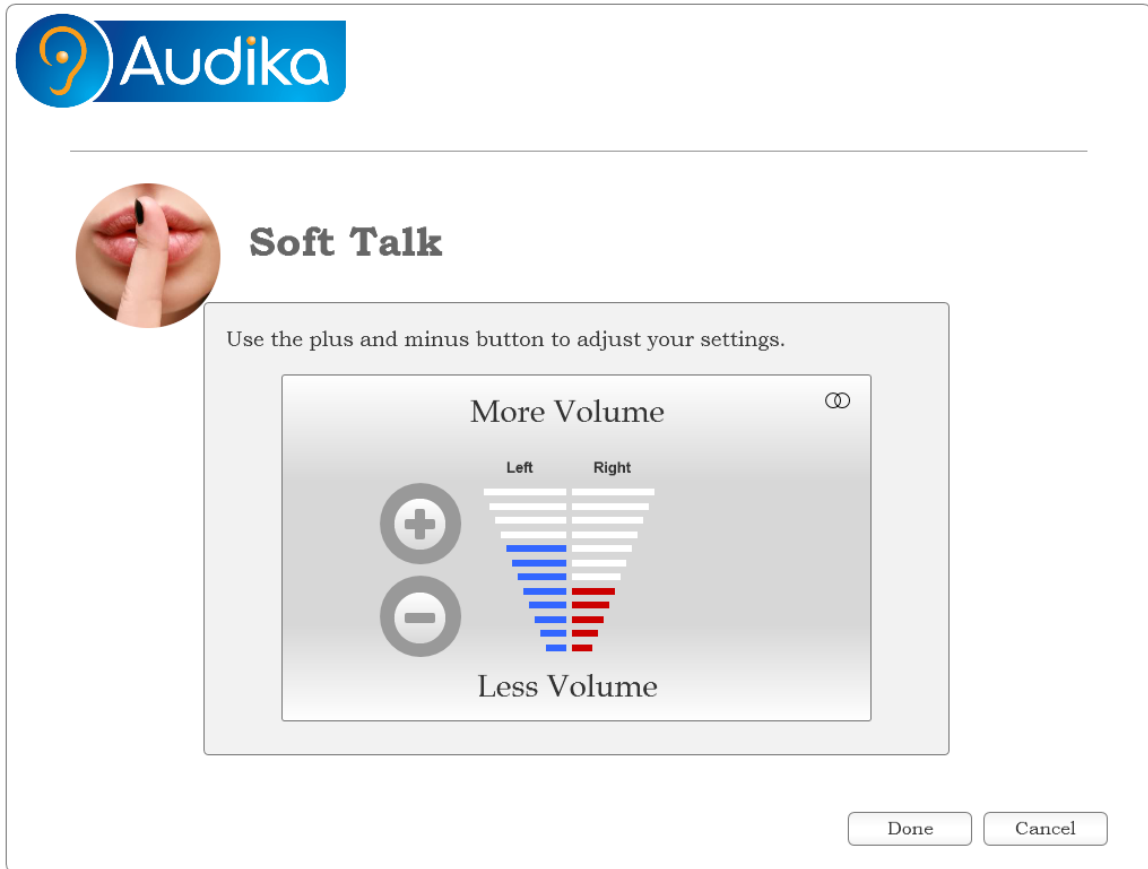
A link control **(1)** allows the user to adjust individual ears (see below).

Cancel Changes **(2)** initiates a warning dialog informing the user that adjusted changes will be lost. If they continue, they will be taken back to the environmental selection screen with the environment they initially selected still selected and the next button active. Clicking Done **(2)** will take the user to the environmental screen and save the adjustments. [Note: In the adjustment screens there is no option to close the modal window with a cancel or X in the top right corner. This window enables a binary process where either changes are made to the HI or no changes are made and the user is returned to the environmental selection screen.]

Special Environmental Considerations:

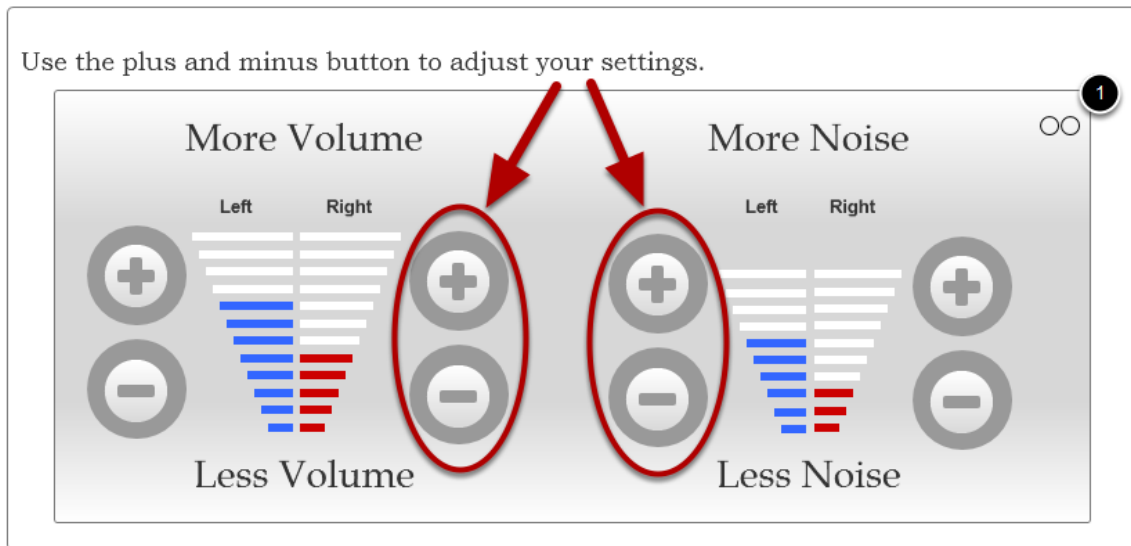
For all HIs being adjusted in Speech (soft) and Speech (loud) environments, only the gain control will present to patient.

## 1.7 Environment and Instrument Limitations



Speech soft and loud environments will only support a gain setting. Mid-level Hearing Instruments will also only support gain settings. Clicking the Done button gives the user an option to continue adjusting a new environment or complete adjustments (see below).

## 1.8 Unlinked State



The link / unlink button **(1)** allows the user to adjust individual ear settings by splitting the volume and bruit bars and offering individual controls.

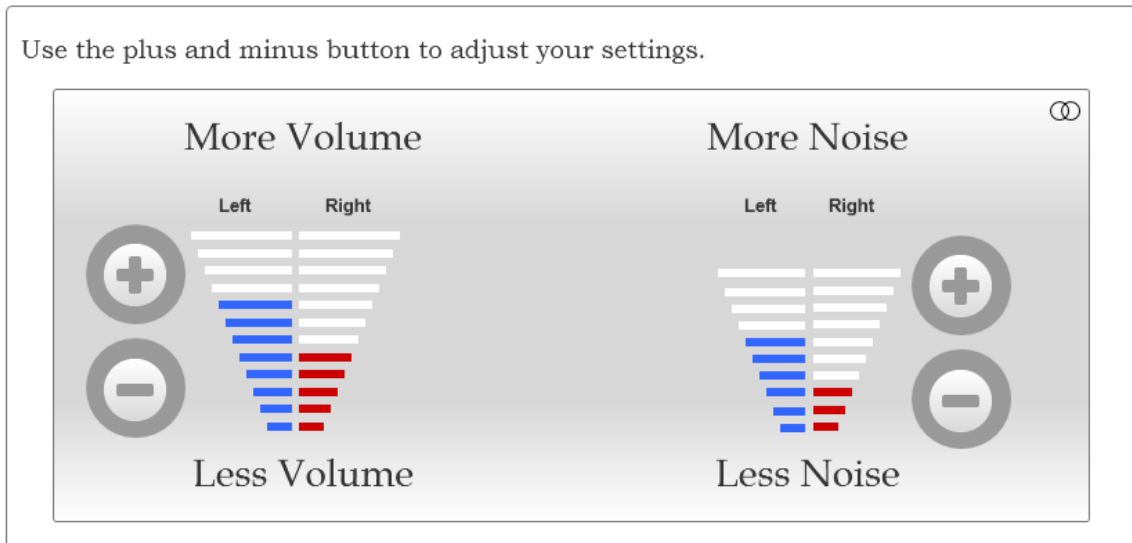
This should occur only when the unlink button is is clicked;

Controls will appear on each side to allow for individual settings;

Each ear must be adjusted independently in this scenario;

If the user clicks the link button, they will get the screen shown below.

## 1.9 Linked



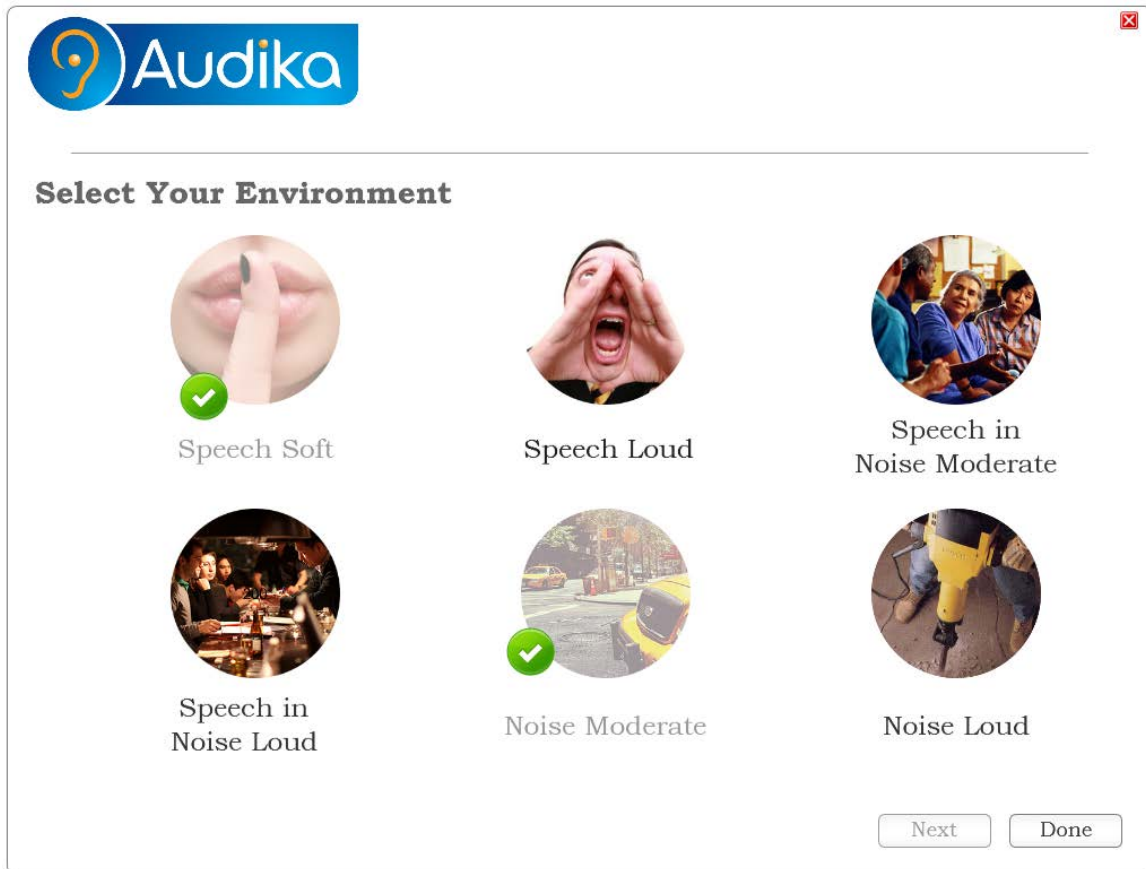
Above is the linked state when each right/left values are different.

The only element that changes is the user now only has a single set of controls;

If the user clicks plus or minus, the bars each move one click per push. If one bar reaches the maximum or minimum, it will cease to move further up or down. The bar that has not reached its maximum/minimum will continue to move with each click;

If the user over adjusts and needs to move up or down on a single side, they will have to unlink in order to do so.

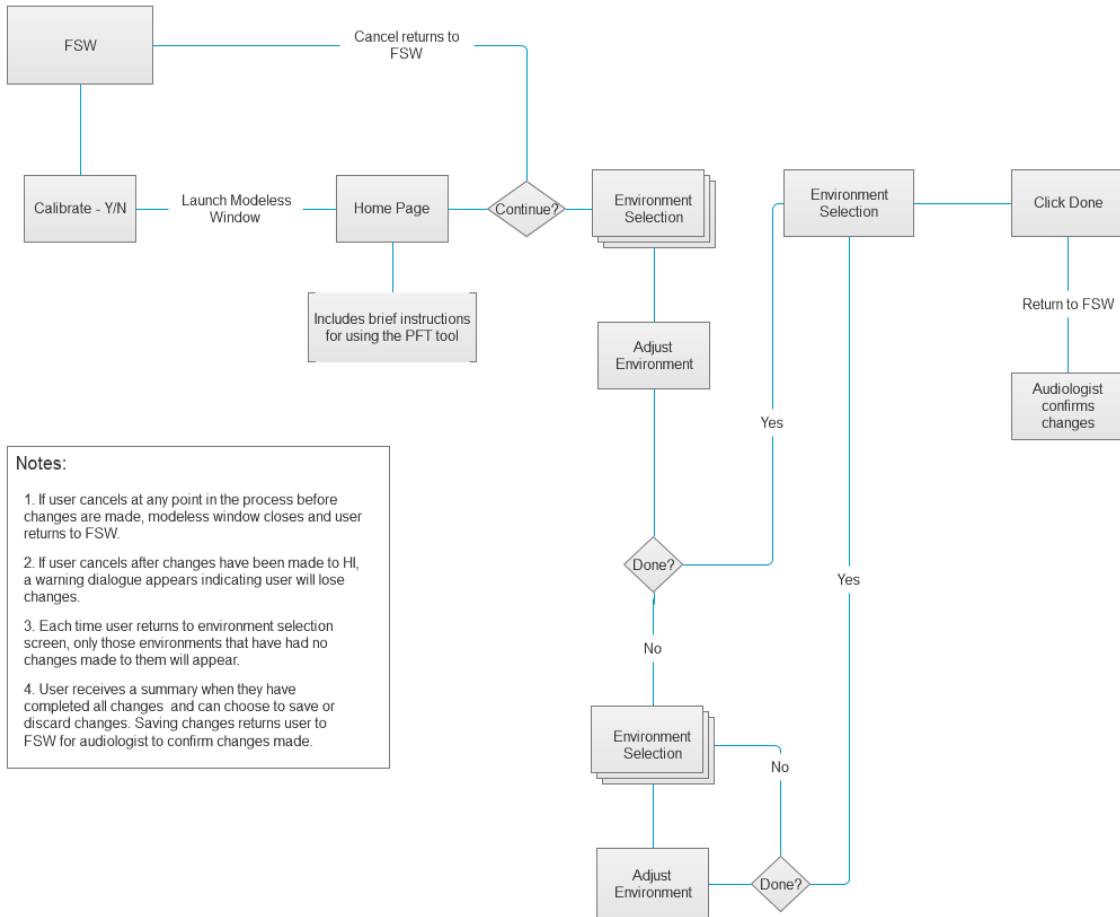
## 1.10 Making Additional Changes



After clicking the done button for a single environment change, the user is taken back to the environment selection screen. Previously adjusted environments, are greyed out with a check mark next to them. These environments are still active, can still be selected and adjusted further if the client chooses to do so. However, they are visually distinguished so the user knows which environments they have already adjusted. The functionality of this screen remains the same as in 1.2 save for two differences. 1) The Done button, which takes the user to the FSW, will now be present. 2) The environments the user has adjusted will appear greyed out to indicate they have been adjusted. If they choose to make additional changes, an environment selection will activate the Next button and take them through the process described in 1.3-1.5.

Note: The 10 second delay will apply to all situations with the exception of those instances when a client chooses to adjust an environment they previously adjusted and the instruments are still in the same environmental setting.

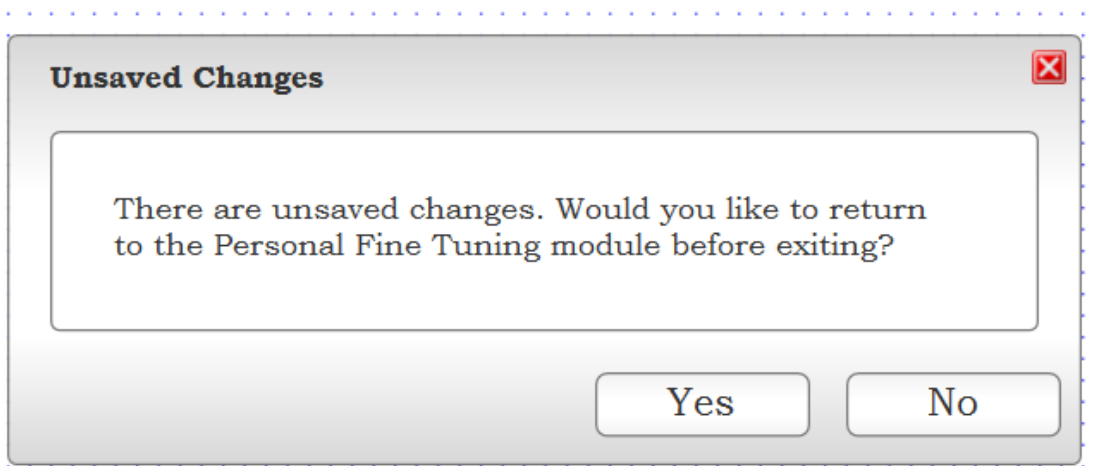
## 2.0 User Flow



### Notes:

1. If user cancels at any point in the process before changes are made, modeless window closes and user returns to FSW.
2. If user cancels after changes have been made to HI, a warning dialogue appears indicating user will lose changes.
3. Each time user returns to environment selection screen, only those environments that have had no changes made to them will appear.
4. User receives a summary when they have completed all changes and can choose to save or discard changes. Saving changes returns user to FSW for audiologist to confirm changes made.

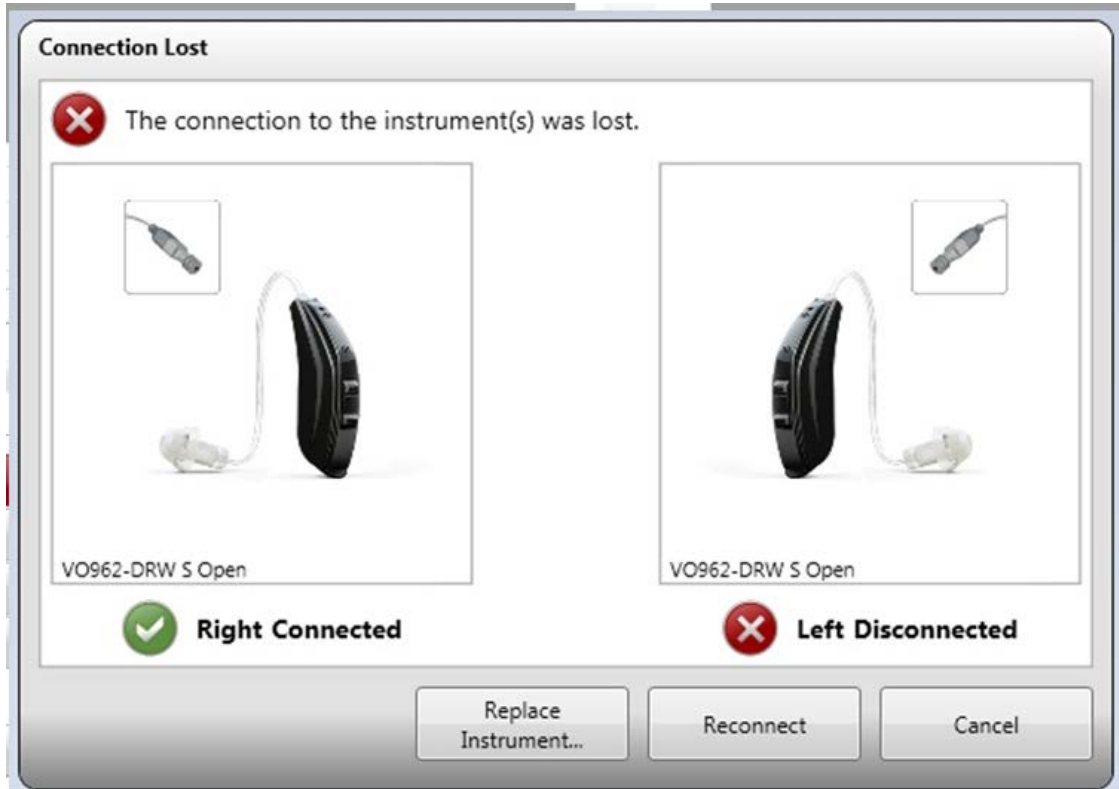
### 3.0 Unsaved Changes Warning Dialog



The unsaved changes dialog prompts when the user attempts to close the window prior to changes being confirmed or changed.



### 3.1 Lost Connection Dialog



When a connection is lost, the lost connection dialog will display as it does in other instances of lost connection in the FSW.

### 3.2 Feature not Available dialog



If the PFT feature is not available, the button will remain active but an informative message will appear as in the example above indicating the feature is not available and what must be done to activate the feature or make it available.

## **4.0 Technical Specifications**

Screen Resolution: All screens are at a 1024 x 780 resolution. These wireframes take into account the age of the intended audience and thus fonts, buttons and controls are larger than they would normally appear.

Font: Bookman Old Style

Size: 24 - 28 point for headers, 14 point for copy, 16 point for buttons

Plus & Minus Controls for volume and noise control: 36 x 36 pixels

Images for environments: 150 x 150 pixels

## **5.0 Open Issues**

None

## Version History

Version 1 - First draft for review

Version 2 - Corrected open issues 1) Added undo function 2) Changed environment representation; Removed shopping cart, changed comparison functionality, removed volume and noise control settings; Added save procedures

Version 3 - Added summary screen; added option screen on clicking done for a single environment; removed settings icon and replaced with global menu; edited controls for adjustment; revised environment selection screen

Version 4 - Reworked navigation; Added global navigation menu; added 10 second delay interface flow; added individual ear adjustment options; added descriptive text

Version 5 - Minor adjustments to navigation; added calibration screens; reviewed and represented user flow

Version 6 - Button labels adjusted and edited; environments all placed on one screen; minor changes to calibration interface and functionality; minor edits to size and placement of objects in interface

Version 7 - Added warning dialog; added lost connection dialog; provided details on mid-level instruments; added titles to delay dialog windows

Version 8 - Linked and unlinked states re-engineered; Reordered environmental displays; Reworded environmental switching dialogs; Added "Feature not Available" dialog

Version 9 - Redesigned calibration screen to add volume control; Removed summary screen; Changed environment selection screen to represent environments previously adjusted; Adjusted environment labels to match SolusPro Smart Gains; Enlarged images for environments; Changed wording for delay dialogs

Version 10 - Amended 1.6 to remove staging of levels for low-level HIs; Amended calibration to add visual feedback indicated calibration is achieved.

Version 11 - Amended calibration screen with some aesthetic changes, added SPL to dB for clarification, added cancel button, amended dB SPL range and edited instructions for functionality; Updated home screen with new wording; Amended delay dialog; Updated the wording for controls and the size of the plus/minus buttons.