



# ENZO 3D First fitting with ReSound Smart Fit™ 1.1

This fitting guide gives an overview of how to fit ReSound ENZO 3D wireless hearing instruments with ReSound Smart Fit 1.1. A ReSound ENZO 3D 998 wireless binaural fitting is depicted.

ReSound Smart Fit 1.1 fitting software supports all ReSound ENZO 3D and ReSound LiNX 3D hearing instruments.

Prior to connecting to ReSound Smart Fit

ReSound hearing instruments require a fresh battery when fitting. Remove the stickers from the batteries to activate them. Wait for 2 minutes for best results.

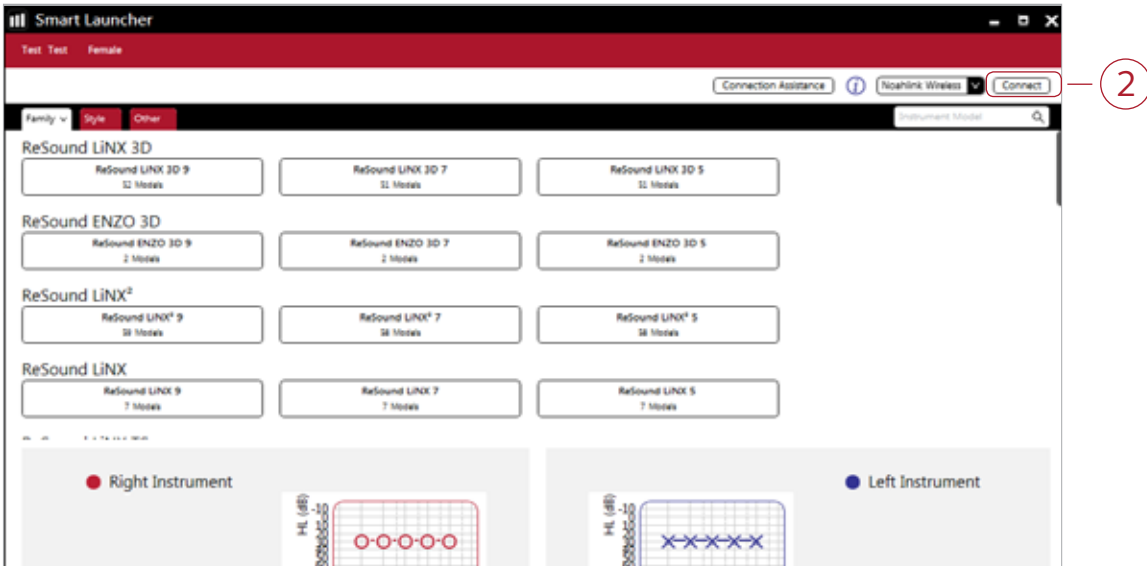
- Wireless fittings: Insert an Airlink 2 with updated firmware or Noahlink Wireless in a USB slot on the fitting PC and wait for the message that new hardware has been found. Then open ReSound Smart Fit.
- Wired fittings: Ensure that the programming interface (Speedlink, Hi-PRO USB or NOAHlink) is connected to the PC before launching ReSound Smart Fit.

Open ReSound Smart Fit 1.1. For new fittings, the fitting software begins in the Smart Launcher.

## Smart Launcher

Both ReSound Aventa 3.12 and ReSound Smart Fit 1.1 are contained within one software installation. The Smart Launcher will detect both ReSound ENZO 3D and legacy instruments, and then retrieve the software appropriate for the connected device.

1. Insert the battery and close the battery door of each hearing instruments to be programmed.
2. Click 'Connect' in the upper right of the Launcher screen.



## Select instruments

The hearing instruments will appear in the 'Select instruments' section.

1. Select the desired instruments and then click "Continue" at the bottom right of the screen.



## Calibration

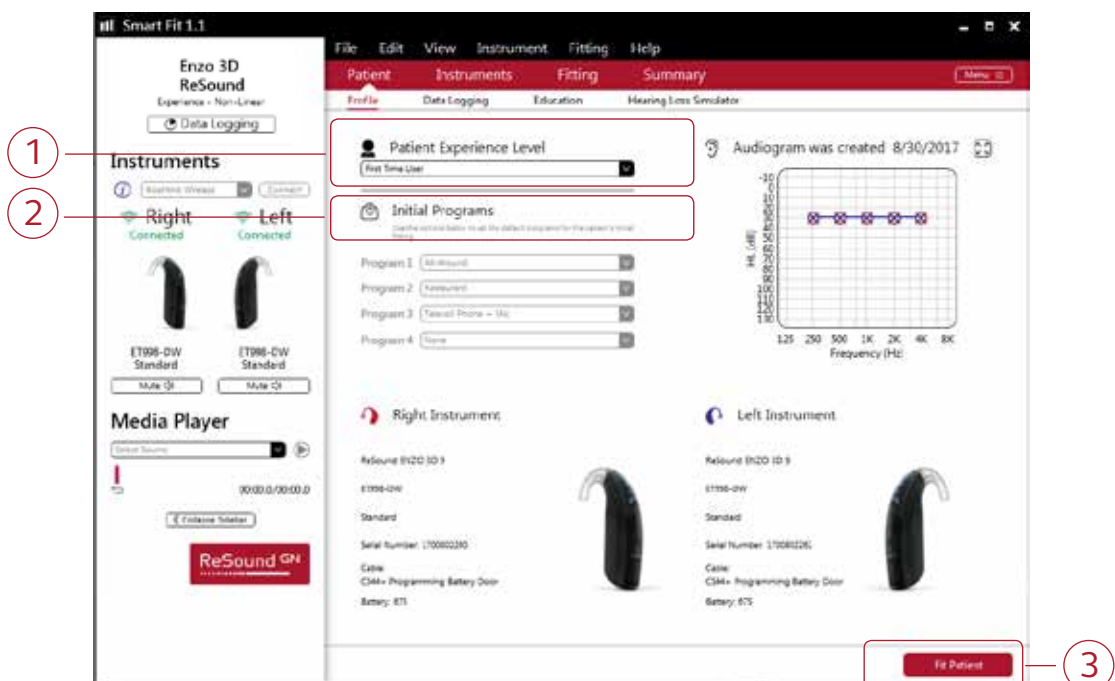
Once the hearing instruments have been selected, calibration will begin.

1. Calibration of the hearing instruments is required in order to activate DFS Ultra II. Inform your patient that he or she will hear a buzzing sound and should sit still and quiet during calibration. Click “Calibrate” in the lower right corner. When calibration is complete, click “Continue.”



## Patient profile screen

1. Select the Patient Experience Level based on the amplification history.
2. Set programs for initial fit.
3. Click 'Fit Patient' button in the lower right corner to move to Fitting Screen.



## Fitting screen

In the Fitting screen, you can adjust the Gains, Advanced Features, Environmental Optimizer II and Device Controls. You can access additional tools and features in the upper right menu (see inset).

1. Access to instrument controls is found on the Fitting screen. The tabs below the red navigation bar will provide access these tools.
2. Additional tools and features can be found in the upper right menu (see inset for details).
3. Programs are listed in the program tabs. To select a different program select the arrow in tab to view program options. Select the '+' to add additional programs. Program tools can be found in the tab on the far right.
4. Click the 'Save' button to save the fitting to the hearing instruments and database.
5. Wireless accessories can be paired both outside and inside the software. To pair inside the software select 'Pair Accessories'. Be sure that the accessory is charged or plugged in, and turned on during the pairing process.

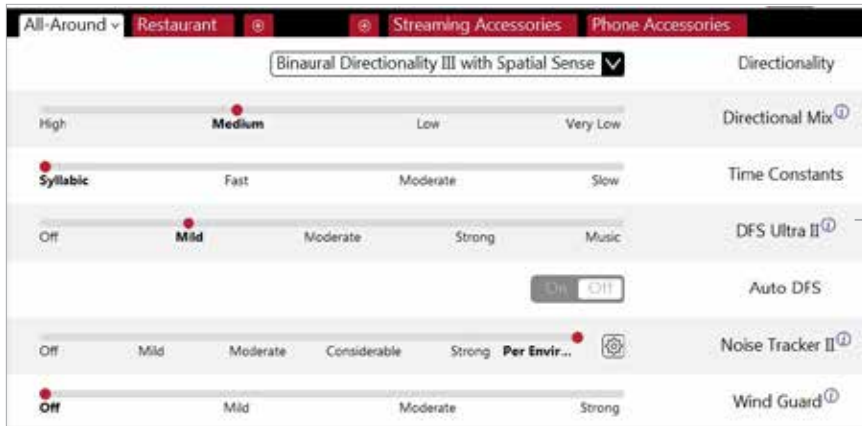
The screenshot displays the Fitting screen with the following elements:

- 1:** A red navigation bar at the top with tabs for Patient, Instruments, Fitting, and Summary.
- 2:** A menu icon in the top right corner of the software window.
- 3:** A row of program tabs below the navigation bar, including 'All Programs', 'Advanced', 'Wireless Accessories', and 'Pair Accessories'.
- 4:** A 'Save' button located at the bottom right of the main interface.
- 5:** A 'Pair Accessories' button located at the bottom left of the main interface.

The main area contains two frequency response graphs (left and right ears) and a central control panel with various sliders and buttons. A sidebar on the right shows a menu with sections: Patient (In-Situ Audiometry, Speech Scores, Patient Consent), Instruments (AutoFit, Reset to Initial Fit, Reconfigure, Test Device, Accessory Updater), Fitting (Tinnitus Sound Generator, Acceptance Manager, AutoREM, Real Ear Measurement, Smart Fit Guide), Help (Connection Assistance, Feature Demonstrations), Notifications (Check for Updates), and Other (Sound Player).

# Advanced features

Advanced features are prescribed per program, and can be modified from their default settings selecting from the drop down box or by moving the slider to the desired value. The defaults are set based on the program environment, which is selected in the program tab.



The information icons provide a short explanation of the feature. Some information may include links to an in-depth explanation or video.

## Directionality

**Binaural Directionality III:** Uses ReSound 2.4 GHz ear-to-ear wireless technology to allow the hearing instruments to work together, dynamically selecting the best microphone response for the listening environment. Possible configurations are bilateral omnidirectional, bilateral directional or an asymmetric omnidirectional and directional response, depending on the analysis of speech and noise detectors from both hearing instruments. This provides the optimal combination of speech understanding in noise plus a more natural sense of surroundings.

**Natural Directionality II:** Asymmetric directionality option that creates a Focus (directional) ear and Monitor (omnidirectional) ear to simultaneously provide directional advantage. Focus and monitor ears are prescribed based on the audiogram and any speech audiometry data that may be available.

**Spatial Sense:** An omnidirectional microphone response, which mimics the human ear’s natural response to sound, preserves spatial cues and helps with the localization of sound sources.

**Soft Switching:** Seamlessly enables and disables AutoScope/MultiScope Adaptive Directionality depending on the listening environment. The response can be either omnidirectional or directional, based on whether noise is present and the direction of speech in the listening situation. With binaurally fit wireless devices at the 9 and 7 technology levels, the hearing instruments synchronize microphone responses.

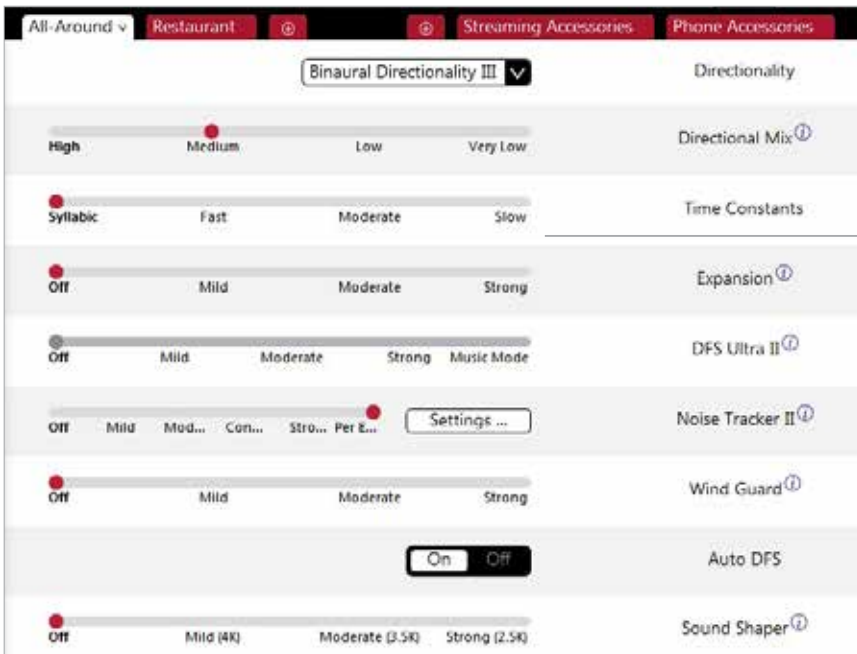
**AutoScope Adaptive Directionality:** Enables the beam width to automatically widen or narrow depending on the acoustic surroundings, and directs the null of the response towards the noise for better SNR benefit. N/A in All Around program.

## Directional Mix

All directional microphone modes have both omnidirectional and directional processing through the frequency spectrum. The setting determines the degree of directionality in the output of the hearing instrument(s). Directional Mix applies omnidirectional processing below a crossover frequency and directional processing above that frequency. The default setting is prescribed depending on the hearing instrument model selected and the degree of low-frequency hearing loss. If the patient is still experiencing difficulty hearing in noise, increasing the Directional Mix setting may help.

## Time Constants

This feature adjusts the attack and release times of the compressor. The default setting, “Syllabic,” applies fast time constants, and the “Slow” setting applies slow time constants. It is recommended not to adjust these time constants unless the patient has prior experience with amplification using slow time constants, or is not doing well with speech perception with fast time constants.



Access additional Advanced Features by either scrolling down or pulling up the Advanced Features section.

## DFS Ultra II

This is the feedback control. It is activated when the devices have been calibrated for DFS Ultra. The default setting is Mild. Adjust the setting to a stronger level (Moderate or Strong) if concerns for feedback arise. The Music Mode setting is a Mild setting, typically used for music programs or if the patient experiences feedback only when tonal sounds occur (for example, from a musical instrument).

**AutoDFS:** AutoDFS is a feedback control setting that is activated automatically before the hearing instrument has been calibrated for DFS Ultra II. AutoDFS is designed for use when a patient is unable to return to the clinic for the fitting, and the hearing instrument is instead shipped to the patient from the fitter. It applies a mild level of feedback cancellation, but as it has not been calibrated for the patient's ear, it may not be as effective at controlling feedback as a Mild setting of DFS Ultra II.

## Noise Tracker II

Noise Tracker II noise reduction uses spectral subtraction to reduce noise between words and syllables in many real-world noisy environments. The Per Environment setting allows for personalized noise reduction settings in 7 environments. The environments include Quiet, Soft Speech, Loud Speech, Moderate Speech in Noise, Loud Speech in Noise, Moderate Noise and Loud Noise, and classification is performed on a continuum if the listening situation has characteristics of more than one listening environment. If a patient is reporting specific issues such as hearing conversation in restaurants, for example, the fitter can precisely increase the Noise Tracker II setting only for restaurant-like environments, including Moderate Speech in Noise or Loud Speech in Noise. This maintains the setting for other environments, permitting a great amount of fitting precision and personalization. Alternately, the Mild, Moderate and Strong settings of Noise Tracker II apply the same level of noise reduction for all listening environments, when noise is present.



## Wind Guard

Wind Guard applies noise reduction specifically for windy situations. The default setting is Off. If a patient is experiencing too much wind noise, increase the setting to a stronger level. If the patient experiences the hearing aid becoming quiet occasionally in outdoor situations, reduce the setting to a milder level.

## Expansion

This feature reduces amplification for low-level sounds, such as fans and refrigerator motor noise.

## Low Frequency Boost

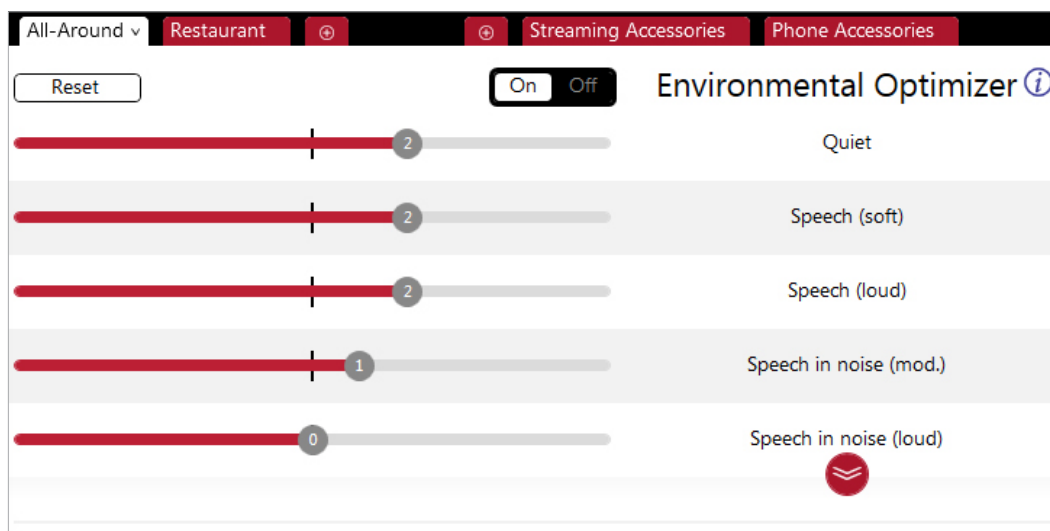
Low frequency boost is a quick way to increase the low frequency gain from 250 - 1000 Hz.

## Sound Shaper

Sound Shaper applies proportional frequency compression to the fitting. Higher frequencies are lowered to a more usable or audible range for the patient. As patient candidacy criteria for the use of frequency lowering is based on many factors, the default setting is Off. However, if the fitter perceives the patient could benefit from frequency lowering, in the case of continued difficulties with speech recognition or previous success with frequency lowering features, Sound Shaper can be activated.

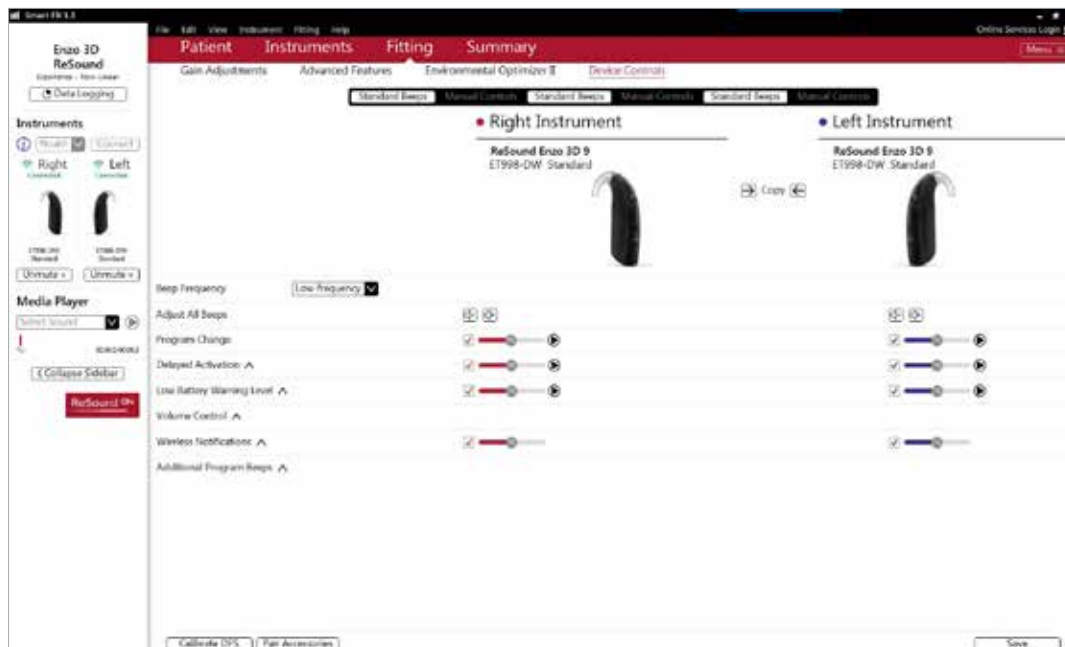
## Environmental Optimizer II

Environmental Optimizer II allows specific gain and Noise Tracker II adjustments for seven different environments, ensuring the user receives optimal gain and noise reduction settings as the acoustic environment changes. Classification is performed on a continuum if the listening situation has characteristics of more than one listening environment. With binaurally fit wireless devices, the hearing instruments will optimize and synchronize the Environmental Optimizer settings for a binaural fitting. If a patient experiences difficulty in a particular listening environment, adjust the sliders to assign environment specific gains and noise reduction without requiring a manual program change or altering overall program settings.



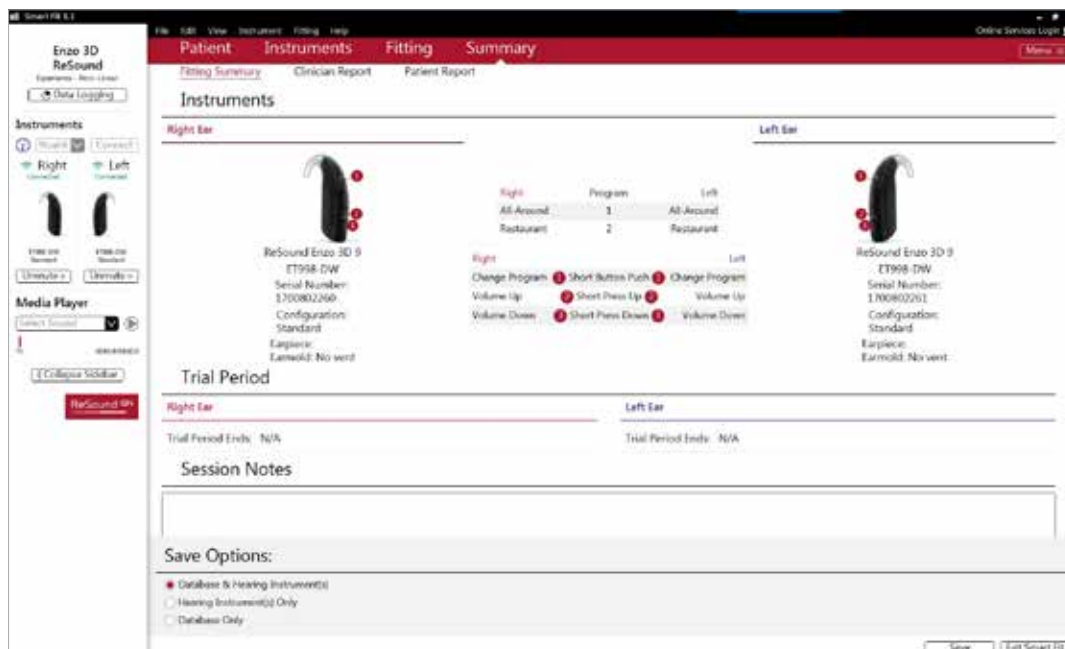
## Device Controls

This screen allows you to view, alter and demonstrate the settings of the program button to your patient. It also allows you to program and demonstrate beeps in the hearing aids, such as “Low Battery Warning Level” and “Smart Start.”



## Summary Screen (optional)

This screen allows you to view information about the fitting. Program settings, the operations of the program button, trial period end dates and session notes can be viewed or entered on this screen. There is also the option to save the fitting to the database and hearing instruments, or to the database or hearing instruments alone.





# Completing a follow-up visit from ReSound Aventa

Upgrading a patient from legacy hearing instruments to ReSound ENZO 3D

## ReSound Aventa 3.12

If the patient has an existing hearing instrument fit in ReSound Aventa, then ReSound Aventa 3.12 will open when you begin a new fitting.

1. Click the 'Go to Smart Fit' button in the left navigation panel to close ReSound Aventa and arrive at the Smart Fit Launcher.
2. Follow steps in the 'First Fitting' section of this guide.

ReSound ENZO 3D hearing instruments cannot be fitted in ReSound Aventa software.



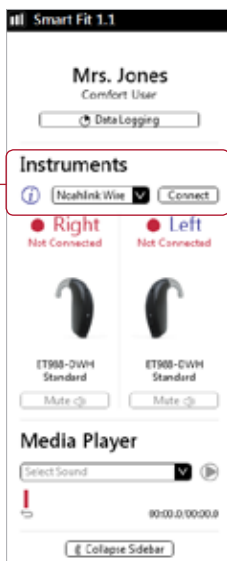
**Note:** To transfer settings from a legacy fitting to ReSound ENZO 3D fitting, select 'use session' in the fitting data mismatch screen of the connection flow. To start a fresh fitting choose 'reset to initial fit'.

# Replacing one hearing instruments of a pair

## Connecting during a follow-up

When returning for a follow-up visit, the software will open to the last saved session. Depending on the saved preferences, the session will open to either the Patient Profile screen or the Fitting screen.

1. Insert the battery and close the battery door of each hearing instrument to be programmed.
2. Select the desired interface and click 'Connect' in the collapsible side bar panel.
3. The hearing instruments will appear in the 'Select Instruments' section. When the hearing instrument to be programmed has been identified, select it by checking the left box.
4. The hearing instrument that has already been programmed for this patient will already be assigned to the right or left side. When the other instrument is selected, it will automatically be assigned to the opposite side. It is recommended to keep the instrument for confirmation that the instrument selected in the software is in fact the instrument being used in the fitting and on the correct side.
5. Continue in the lower right of the screen once the instruments are selected and assigned.
6. Continue to the connection flow and follow steps in the 'First Fitting' section of this guide.



**Note:** To transfer settings from session to replaced instrument, select 'use session' in the fitting data mismatch screen of the connection flow. To start a fresh fitting choose 'reset to initial fit'.

# ReSound Smart Fit™

## TSG fitting guide



The Tinnitus Sound Generator (TSG) is designed as a sound therapy tool for tinnitus management.

### Notes:

- The TSG volume slider is in dB SPL.
- The TSG settings overlayed on the audiogram can be displayed in dB SPL or dB HL.
- The binaural link option is not available for all features in TSG. Only Amplitude Modulation, Modulation Speed and Volume Control can be linked during the fitting.
- For a TSG only program ensure the HI Microphone option is turned 'Off'.

### 1. Activate the TSG

- Select the program in which you want to activate TSG.
- Select the menu option in the upper right corner. (Figure 1)
- Under the Fitting heading, select Tinnitus Sound Generator. (Figure 1)
- Turn the Tinnitus Sound Generator slider to 'On'. (Figure 2)

Figure 1:

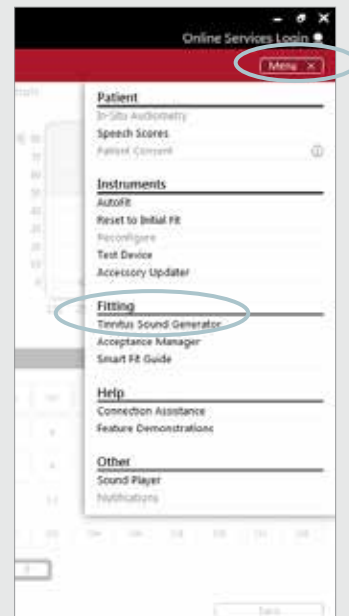
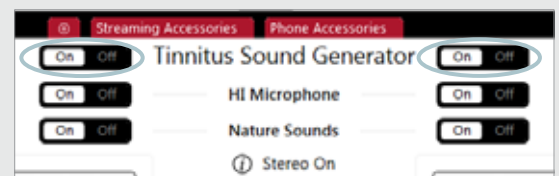


Figure 2:



## 2. Set the TSG volume

The volume of the TSG is set using the volume slider. The volume should be set to a level that provides relief, but does not completely mask the tinnitus. (Figure 3)

**Note:** The volume slider is in dB SPL.

Below is a suggestion on how to first fit the TSG. It uses the threshold of audibility as a starting point.

### Find the TSG threshold of audibility (three steps)

- Using the volume slider, turn up the volume until the patient reports that they can just barely hear the TSG white noise. This is the TSG threshold of audibility.
- Increase the volume slider until the patient reports they can no longer hear their tinnitus over the TSG sound. This is the level at which their tinnitus is completely masked. This is the minimum masking level (MML).
- Set the volume 5–10 dB above the threshold level. (Volume can be set above 10 dB if necessary but should not exceed the MML).

### Set the TSG bandwidth

- Our TSG defaults to a broadband white noise setting. There are 4 sound preset options to choose from. Each option's frequency range can be customized to patient preference using the Range option. (Figure 4)

## 3. Customize the TSG features according to patient preference

- Amplitude Modulation can be activated if the patient finds it to be comfortable. (Figure 5)
- Amplitude Modulation causes the TSG to fluctuate in volume, creating an “ocean-like” noise sequence. A Mild setting offers less fluctuation, whereas a Strong setting offers more fluctuation.
- Modulation Speed controls how quickly the volume fluctuations occur. A Slow setting allows more time between fluctuations, whereas a Fast setting allows less time between fluctuations. (Figure 5)
- Selecting ‘Ear to Ear Synchronization’ will enable ear-to-ear communication, ensuring the features of the TSG are automatically functioning symmetrically. (Figure 6)

## 5. Customize the Volume Control options

- The Volume Control options determine how the volume of the TSG will be controlled. Off is the default setting in TSG. (Figure 7)
- Selecting ‘Volume Control’ will reassign the function of the manual volume control to the TSG only for that program.
- Selecting ‘Environmental Steering’ will allow the volume of the sound generator to automatically adapt to the listening environment, ensuring comfort in all situations.
- Selecting ‘Volume Control + Environmental Steering’ will combine the use of these two features, allowing manual volume adjustments to override the Environmental Steering in any environment.

Figure 3:

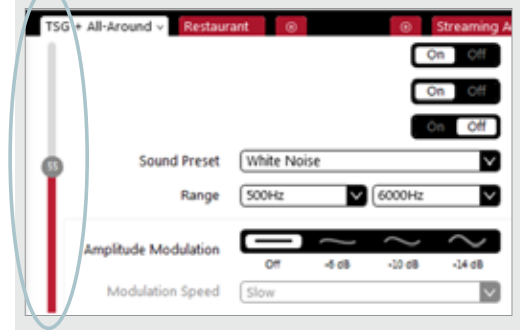


Figure 4:

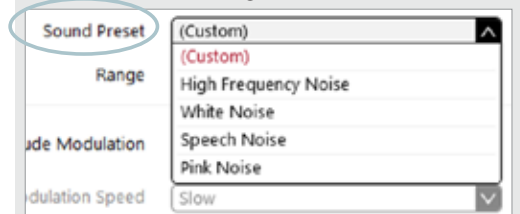


Figure 5:

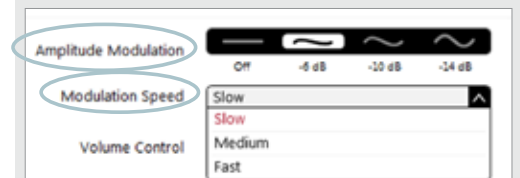


Figure 6:

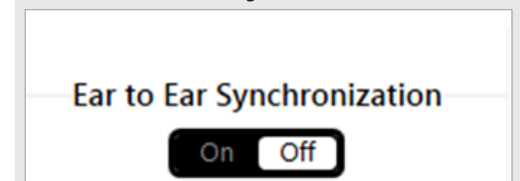
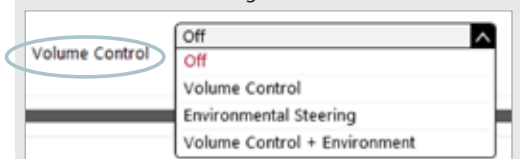


Figure 7:



## 6. Activating Nature Sounds

- Nature Sounds can be used as an alternative to the standard TSG, by positioning the Nature Sounds tab to 'On'. (Figure 8)
- To activate a Nature Sound, click on the picture of the desired Nature Sound.
- Note:** Selecting the same Nature Sound for both instruments in a binaural fitting will activate the Stereo effect. (Figure 8). The stereo effect will not be applied if different Nature Sounds are selected between instruments.
- 'Show Advance Settings' allows you to adjust the low, mid and high frequency bands of the Nature Sound. (Figure 9) **Note:** It is only recommended to use this if necessary.

## 7. Program and save

- To program the instruments and save to NOAH, click 'Done' in the lower right corner of the screen, and then click 'Save' in either the Fit screen or Summary screen. (Figure 10)

*Tinnitus patients have great variance in their needs and preferences for successful tinnitus management. The information in this fitting guide is designed to serve as suggested starting points, and can be modified as needed for individual patients.*

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Figure 8:

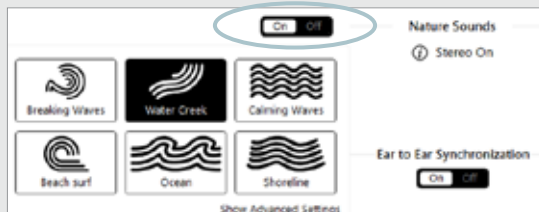


Figure 9:

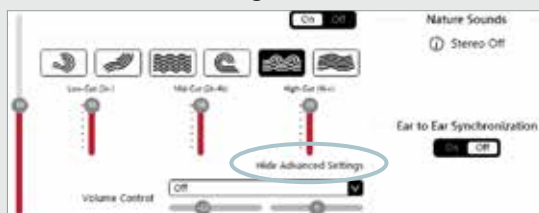


Figure 10:

