SMART HEARING™

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ReSound Up Smart™

ReSound Aventa® 3.10
Fitting guide

SURROUND
SOUND
by ReSound

ReSound

rediscover hearing

This fitting guide gives an overview of how to fit ReSound Up Smart wireless hearing instruments with ReSound Aventa 3.10 and Noah using the pediatric fitting mode.
A ReSound Up Smart 977-DLW wireless binaural fitting is assumed here. ReSound Aventa 3.10 fitting software supports all ReSound instruments built on the ReSound Range™, Range™ II and SmartRange chips.

Enter the child's details, including date of birth, with the audiometric data into Noah. Aventa will default to the appropriate pediatric fitting mode based on the child's date of birth.

Getting started:

A dialog will ask if you wish to change the fitting mode to the age-appropriate Aventa pediatric fitting mode.

1. If the developmental age of the child differs from the chronological age, go to Fitting Mode and select the appropriate mode from the drop down menu.
2. Click Apply to activate the age-related settings and close the pop-up.

Select appropriate fitting mode

Click Apply

Audiogram, RECD and REUG specifications:

Click Pre-Fit. The audiogram and age-appropriate RECD and REUG data can be viewed in the Pre-Fit screen. Enter how the audiogram has been measured; in the Measurement method drop down select the appropriate measurement method used to obtain the threshold:

• Auditory brainstem response (ABR)
• ASSR or Other
• Puretone.

In the Transducer Type drop down select the appropriate transducer type used to obtain the threshold.

See "Useful information section" for more information regarding obtained ABR thresholds.


Select measurement method   Select transducer type

RECD and REUG:

RECD and REUG will by default be "Predicted", meaning that age-appropriate averages are used. If measured values are available click Open Entry/Measurement module. Measured values saved in Noah may be incorporated by choosing "Import from Noah" or by clicking on the graph to manually enter data. Any changes saved are used to calculate new targets.

Click "Open Entry/Measurement Module"
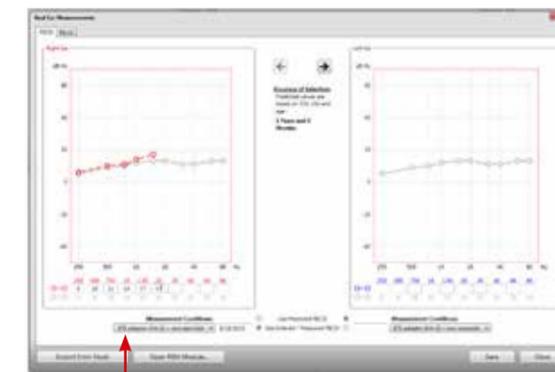
Click "Import from Noah"

Getting started

Prior to connecting to Aventa 3:

1. Attach the patient's earmold to the hearing instruments or place the hearing aid in the coupler.

2. ReSound devices require a battery when fitting. Make sure the battery is fresh and that it is inserted correctly. ReSound Up Smart 977 devices use a size 13 battery.

3. a) For wireless fittings, insert Airlink™ or Airlink2 in a USB slot on the fitting PC and wait for the message that new hardware has been found. Then open Aventa 3.
   b) For wired fittings, ensure that the programming interface (Speedlink, Hi-PRO or NOAHlink) is connected to the PC before launching Aventa 3.

4. Launch Aventa 3. For new fittings, Aventa 3 begins in the Start screen, where the patient's experience with amplification can be selected and connection to hearing instruments can be established.

Remove the stickers from the batteries to activate them. Wait for 2 minutes for best results. Insert a battery into each hearing instrument, close the battery door and click "Connect" in the center of the top ribbon of the ReSound Aventa 3 Start screen.
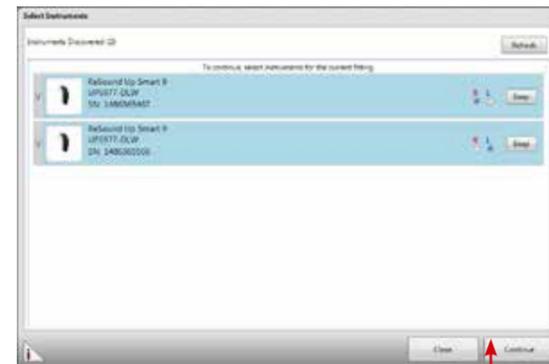
The hearing instruments will appear in the "Select Instruments" section. When all hearing instruments to be programmed have been discovered, click on "Beep" to identify each hearing instrument, and assign it as a right or left device. When each hearing instrument has been assigned, click "Continue".


Assign hearing instruments to right and left ear

Play a beep to determine right from left hearing instrument

Assign hearing instrument to right or left ear

A window will appear showing the status of the connection, and will alert you to recommendations for venting. Choose to either keep the "Current" configuration or the "Recommended" configuration. Click "Continue."

A window will alert you to the capability of the hearing instrument to exceed 132 dB SPL. Click "Continue."

Next, a window will appear to prompt calibrating DFS Ultra™ II. Click "Calibrate" to begin the calibration procedure. The progress of the calibration will be shown. Click "Continue" after calibration is completed.

It is strongly recommended to always run the calibration at the start of a new fitting, or if venting (including dome changes), receiver, or earmold changes are made. This is because any such changes affect the feedback path and thus the performance of DFS Ultra™ II. Counsel parents that a brief buzzing sound will be presented to each ear and that the child should sit quietly.
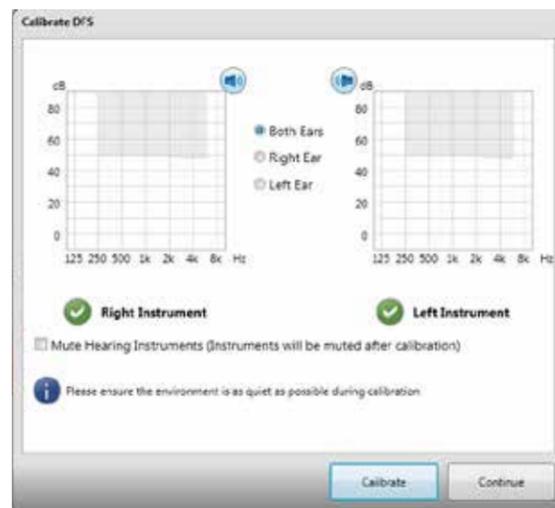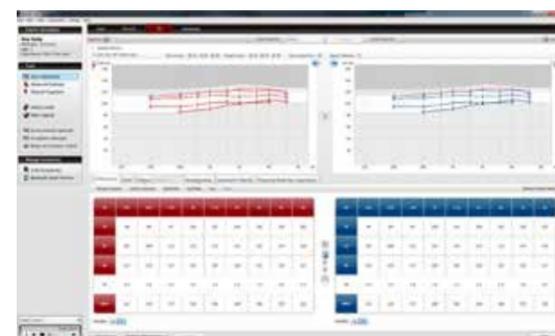

At this point, you may pair Wireless accessories by clicking "Wireless Accessories," or proceed to the fitting by clicking "Continue." In this guide "Continue" is selected.


Fitting the Hearing Instruments
When the Fit screen is displayed, the hearing instrument gains and MPOs can be adjusted, and advanced features can be accessed.


Output view:
The Fit screen defaults to an output view. The output view shows the hearing threshold levels converted to dB SPL, prescriptive targets for up to 3 input levels and MPO, as well as the amplified speech spectrum.
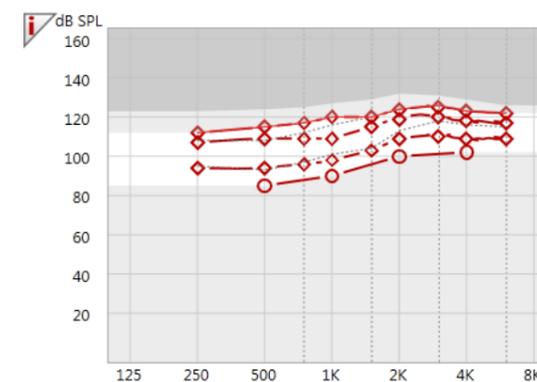
DFS Ultra™ II
DFS Ultra II is ReSound's anti feedback system with buildt in WhistelControl™.

The DFS Ultra is recommended calibrated in all fittings.
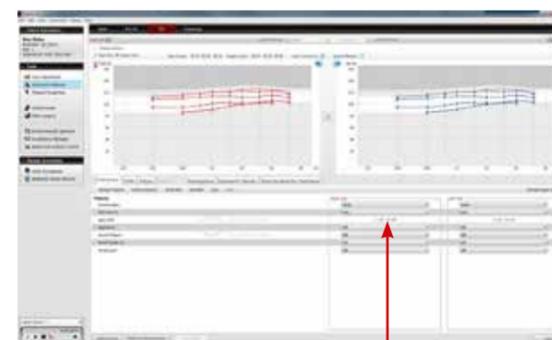
Auto DFS settings are grayed out when DFS Ultra II has already been calibrated

Program management
The Program tabs are located between the graph and the gain handles. This is where programs can be changed, compared, recalculated, autorelated, coupled, added or removed.

Removing and reordering programs is done by clicking "Manage programs" on the Program handling toolbar.

Program handling toolbar

Manage Program Names

Program names that will appear on the user's iPhone or accessory may be personalized by clicking "Manage Remote Control Program Names". Program names must be at least three characters, and programs may not share the same name. Program names longer than ten characters may be truncated. If changes are made, click "Save."

Gain adjustment

Aventa® 3.10 includes three input level controls at 50, 65 and 80 dB SPL. This allows for greater flexibility for fine tuning gains. By default, Aventa® calculates the gain settings for the particular audiogram using the DSL v5 fitting rationale. Other fitting prescriptions can be selected from the "Fitting" menu. To fine-tune a program, adjust the gain manually by using the gain handles or by using the Aventa® Guide, where fine-tuning solutions to patient complaints can be automatically applied.

Once fine tuning is complete, the relative gain changes can be applied to any or all other programs by clicking the "Autorelate" button in the program handling tool bar beneath the program tabs.

Select which programs to autorelate to by checking the boxes. You may also choose whether to apply changes made to MPO or Sound Shaper for each program.


Autorelate gain changes to one or both hearing instrument(s)

Helpful hint about autorelating gains:

To ensure gains are autorelated appropriately at the end of the fitting, it may be helpful to establish a preference to prompt for autorelating when the fitting is saved. In the main menu, select "Edit" and then "Preferences."

For the entry "Prompt for Autorelate on Save," select "Prompt Each Time" and click "Save." This will prompt you to autorelate any gain changes you may have made to one program to any other program before completing the save process.
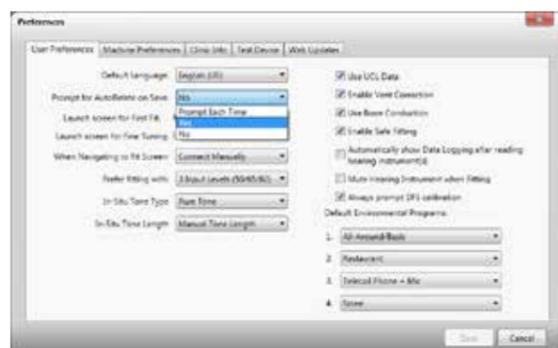
Beeps and Volume Control

Click on "Beeps and Volume Control" in the "Tools" section on the Fit screen. A window will appear with three tabs: "Standard Beeps", "Manual Controls" and "Visual Indication LED". In the Standard Beeps tab, all the acoustic indicators can be demonstrated, changed, added and removed. All beeps are disabled for age group 0-4 and 5-8.


The "Manual Controls" tab contains options such as enabling and disabling the program button and adjusting the volume control range. All controls are disabled for age group 0-4 and 5-8.

Program Switch and Manual VC can be enabled and disabled according to individual preferences

LED demonstration

In the "Visual Indicator LED" tab, the different blinking patterns can be demonstrated. Press the play button arrows to demonstrate the various blink patterns on the connected instruments.
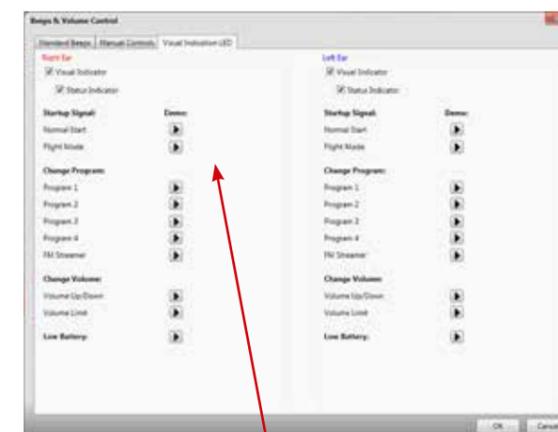
Click the arrow to demonstrate the blinking LED patterns on the hearing instrument

Saving and Completing the Fitting

Once the fitting is complete, click "Save" at the bottom right of the Fit or Summary screens. Once the data is saved to the instruments and to the database, options to "Exit Aventa" or "Continue Fitting" appear in the lower right corner of the window. After the Save process, it is safe to disconnect the hearing instrument(s). If any changes are made after the save process, it will be necessary to re-save the data before disconnecting.

Summary screen

The Summary screen allows the clinician to print information for the patient, a third party, or for chart notes. Notes can be entered, saved and printed as needed.
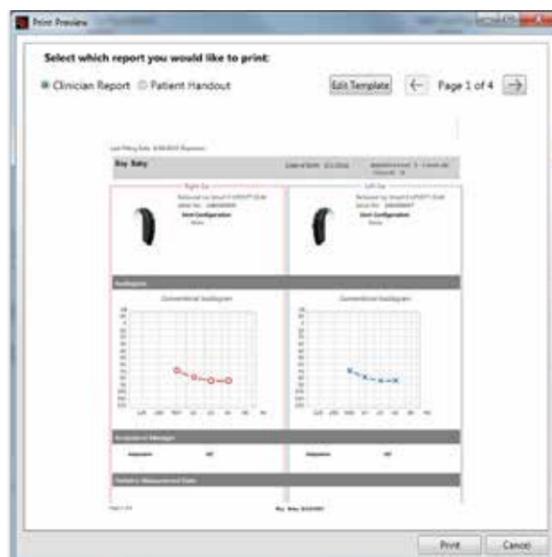
Useful information:

Pediatric preferences:

The Pediatric fitting mode defaults are evidence-based and depend on the child's age.

To customize the Pediatric defaults, choose "Pediatric preferences" from the "Edit" menu. Pediatric preferences show the default *Fitting prescription, Program settings, Program Environments* and *Hearing Instrument Options* appropriate for the three age groups. It is possible to change the default settings in the drop-down menus. Remember to save changes before closing the window.

The defaults will be applied depending on the features available within the selected hearing instrument model.

ABR measurements:

When it is not possible to obtain behavioral thresholds, an infant's hearing can be estimated using frequency specific auditory brainstem response (ABR). If the ABR threshold is measured in normal hearing levels (nHL) it requires a correction factor to obtain estimated hearing levels (eHL). These correction factors are needed so that you can accurately program the hearing instruments. Some ABR equipment already has embedded these correction values. It is important that you check with your ABR equipment manufacturer to make sure whether your measured ABR thresholds are corrected. This is important as you do not want to apply the corrections twice (and risk under-amplifying the child) or fail to make a correction (and risk over-amplifying the child).

To have the correct threshold for pre-calculation of your fitting targets in Aventa select Pre-Fit, Audiogram.

If the ABR thresholds are corrected to eHL choose:
- Measurement Method: Toneburst ABR
- Transducer Type: select the transducer type (eg. Insert earphone + foamtip) used for the measurement from the drop down menu
- Measured in: "eHL"

If the ABR thresholds are not corrected to eHL choose:
- Measurement Method: "Toneburst ABR"
- Transducer Type: select the transducer type (eg. Insert earphone + foamtip) used for the measurement from the drop down menu
- Measured in: "nHL"

If you are using ABR equipment which has its own correction values, then those should be applied. Choose "Preferences" from the "Edit" menu, then choose "Machine preferences" and select the default target rule as DSLv5 Adult and "Parameters" will appear. Click "Parameters" and you can now enter the ABR nHL to eHL correction values specific to the equipment you are using and click "Save".

ReSound helps people rediscover hearing with technologies that emulate the function of the natural ear. Our aim is to give your clients the opportunity to live a rich, active and fulfilling life unaffected by hearing loss.

ReSound Up Smart™ brings industry-leading ReSound technology to hearing care for children and teenagers. In combination with the ReSound Micro Mic and Multi Mic, a choice of excellent FM solutions and wireless streaming from iPhone, iPad and iPod touch, ReSound Up Smart provides a foundation for maximising speech and language development for children of all ages.

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