

Phonak Target 6.1

SoundRecover2 fitting guide

This guide contains details on using and/or fitting of SoundRecover2 available in Phonak Target fitting software. The following fitting guide is intended for adults. For Pediatric fittings please see the separate Junior Mode fitting guide. SoundRecover2 is a frequency compression system with adaptive behavior. It is defined by two cut off frequencies CT1 and CT2. The new adaptive behavior in SoundRecover2 enables the cut off frequency CT1 to be set at lower frequencies than before. As a result typical compression ratios will be lower in SoundRecover2. For fitting SoundRecover2 two sliders are available in the software.

For additional details on programming and fitting Phonak hearing aids, please refer to the Phonak Target Fitting Guide.

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The Audiogram

The SoundRecover2 default parameters will be pre-calculated based on the audiogram for the better ear.

The default parameters will be calculated/set for the better ear and applied to both ears.

Click on [Client] > [Audiogram] > to enter the audiogram.



Default values and Curve Display

SoundRecover2 is a complex algorithm that follows this general rule for activation:

SoundRecover2 is

- ON by default for flat or sloping hearing losses where the 8kHz threshold is 45dBHL or poorer and
- OFF by default for reverse sloping losses (8kHz \geq 30dB better than 3kHz).

When ON by default, SoundRecover2 will be enabled by default in all hearing aid programs, automatic and manual. It can be disabled by clicking on the Enable SoundRecover2 checkbox.

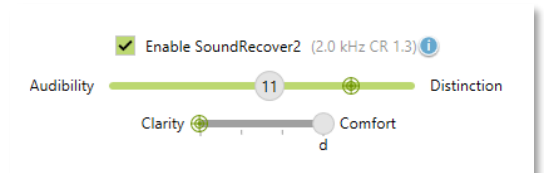
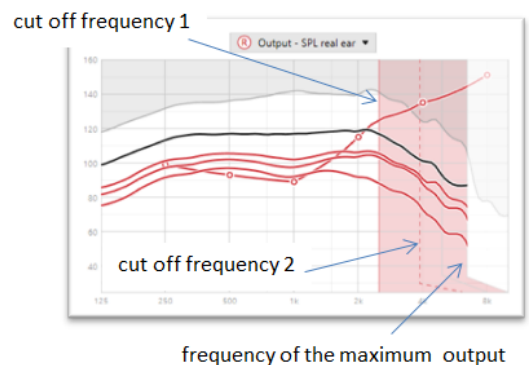
SoundRecover2 settings can be viewed in the Target curve display.

The shaded area, in red for the right ear and blue in the left ear, gives information in which frequency range SoundRecover2 is active. The algorithm is defined by 3 parameters. The first solid-line cut off frequency1, the 2nd dashed-line cut off frequency2 and the 3rd line maximum output frequency

Adaptive compression is applied to frequencies in the shaded area which fall between both cut off frequencies. This frequency region is compressed if the input is dominated by high frequency energy, otherwise it remains uncompressed. Frequencies in the shaded area which fall at frequencies higher than cut of frequency 2 (the dashed-line) are always compressed. Frequencies outside the shaded area, 1 are always uncompressed. There is no output at frequencies above the maximum output frequency.

The SoundRecover2 pre-calculation can be fine-tuned binaurally by moving the sliders.

Click on **[Fine Tuning]** > **[SoundRecover]** > **[SoundRecover2]** > adjust the values with the Sliders.



Fine tuning

Changing any slider will influence the cut off frequencies, compression ratio and the maximum frequency of the output. The sliders can be adjusted by clicking directly on the slider or by click-and-hold and slide on the number circle on the slider.

The performance of SoundRecover2 is described by perceptual dimensions and the sliders are labelled to reflect the three important perceptual dimensions:

- **Audibility** of high frequency sounds like phonemes /s/, /f/ and /th/,
- **Distinction or discrimination** of lowered high frequency sounds like /s/ and /sh/ and
- **Sound quality** of low and mid frequency sounds, like vowels /a/, /e/, /i/.

Slide toward **[Audibility]** to increase the ability to detect an /s/ and /sh/.

Slide toward **[Distinction]** to increase the ability to distinguish the difference between /s/ and /sh/.

Slide toward **[Comfort]** to increase the naturalness of vowel sounds.

Adjust the Audibility Distinction slider first during fine tuning

Note: the Clarity-Comfort slider will automatically re-set each time the Audibility-Distinction slider is adjusted to automatically optimize for sound quality of vowels.

When the sliders are both fully left, at **[Audibility]** and **[Clarity]**, then the maximum lowering results, this would be expected to provide the maximum audibility or detection of high frequencies.



Recalculate

Clicking on **[Recalculate]** will **[Reset all fine tuning changes]** to the pre-calculated settings.

The pre-calculated settings are also indicated on the sliders by target symbols.

Verification

The following verification is recommended for adults:

1. **Good:** Live voice /sh/ or /s/ or "Mississippi" to check detection. A word like "moon", or "name" to check vowels.
2. **Better:** Test box verification
3. **Best:** Phoneme Perception Test: especially for fine tuning for adults with severe to profound hearing loss.

See also the

User Guide for the Phoneme Perception Test.

Best practice protocol: Pediatric verification for SoundRecover2

Information and description of symbols and system requirements

Information and the description of symbols and an overview of system requirements can be found in the Phonak Target Fitting Guide.

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