Phonak FAQs.

TargetMatch 1.0 with Natus Otosuite

TargetMatch 1.0 is an all-in-one automated real ear measurement (REM) and verification solution. It is accessible within Phonak Target and it syncs with your Natus Otosuite REM software, using a proprietary software interface, allowing for a proprietary workflow. TargetMatch measurements take into account the unique anatomy of your client's ear, for a more personalized fitting experience.

Equipment and preparation

What equipment is needed to use TargetMatch 1.0?
- Latest version of Phonak Target
- Noah software version 4.4 or higher
- Natus Otosuite software version 4.88 or higher
- Natus Aurical FreeFit and/or HIT test box

How do I get TargetMatch 1.0 to work in Phonak Target?
- Install the appropriate version of the REM software and Phonak Target to the Noah system.
- Confirm everything is plugged in, turned on, and working.
- Open Phonak Target. TargetMatch is visible under [Fitting] > [Global tuning].

Which workflows are included in TargetMatch 1.0?
TargetMatch 1.0 offers two verification modes:
- Real ear measurements
- Test box measurements

Is there a standalone version of TargetMatch 1.0 available?
TargetMatch 1.0 is only available when Phonak Target is installed through the Noah system. The Noah system allows the communication between Phonak Target and the REM equipment.

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If AudiogramDirect results are available, does TargetMatch 1.0 take the audiogram from the Noah software or the audiogram from AudiogramDirect?

If the AudiogramDirect results are applied to the fitting, then TargetMatch 1.0 takes the audiogram from AudiogramDirect. If the audiogram stored within Noah software is applied to the fitting, then TargetMatch 1.0 takes the audiogram from Noah.

Which prescribed targets are compatible with TargetMatch 1.0?

TargetMatch 1.0 is compatible with NAL, DSL, and Phonak's proprietary fitting rationale, Adaptive Phonak Digital (APD).

Is performing the feedback test necessary before beginning TargetMatch 1.0?

It is recommended to perform the feedback test in order to verify that the chosen acoustic coupling is able to provide the necessary amplification the client may need without introducing feedback. If the feedback test result is poor, it is recommended to reevaluate the fit and/or venting of the earpiece before beginning TargetMatch 1.0.

Which gain level are the hearing aids set to when performing TargetMatch 1.0?

TargetMatch 1.0 can match targets for all gain levels (70% to 110%). The selected targets are based on the gain level the hearing aids are set to in [Global Tuning]. If the hearing aids are set to 80% gain level, then the targets in TargetMatch 1.0 will be set to 80%.

How often should the REM equipment be calibrated?

It is recommended to consult with the manufacturer of your REM equipment for guidance.

I received the chirp calibration failed error message. How do I correct for this?

The chirp calibration error may be related to loud background noise levels. When this message appears, reduce or remove the noise, and try the measurement again. If this does not work, verify if the measurements can be carried out using the REM software outside of TargetMatch 1.0. If further issues persist, please contact your REM equipment representative.

Guided probe tube placement and real-ear unaided gain (REUG) measurement

Which age range is the guided probe tube placement available for?

The guided probe tube placement has been tested and validated with adult ears. It is available with children older than 10 years of age because they have similar size ear canals as adults.

How does the guided probe tube placement work?

It estimates the distance to the eardrum due to a probability distribution. This means a probability for distance is calculated based upon known ear canal distance and a margin of safety is applied so that the probe tube does not touch the eardrum.

What happens if I cannot get the guided probe tube placement to work on some ears?

There is a small percentage of ears (<10%) where this check may not work. If the placement check fails, consider the following:

- First, pull out the probe tube slightly if it is already deeply inserted into the ear canal, or push the probe tube slightly in, if it is further away from the eardrum. Redo the measurement.
- If this new measurement succeeds, continue with the placement. If the new measurement continues to fail, stop using the placement check and do the probe tube positioning visually.

Can TargetMatch 1.0 detect issues such as blocked, crushed, bent, or debris in a probe tube?

Yes, TargetMatch 1.0 has this capability and will provide troubleshooting suggestions if an issue has been detected.

Acoustic transformation measurements

What are acoustic transformation measurements?
The acoustic transformation measurements include real-ear unaided gain (REUG), acoustic coupling, real-ear occluded gain (REOG) and microphone location effect (MLE). Measuring the acoustic transformations on a specific client provides customized information about the acoustical properties of the individual ear of the client, such as the ear canal volume and resonance.

These individual acoustic transformations will then be used to adapt the gain of the hearing aid to the individual ear of the client. For example, if a client has a smaller than average ear canal, less gain will be needed to achieve the same SPL at the eardrum than for a client with an average ear canal size. Measuring these variations first and adapting the gain accordingly can lead to a more accurate match to targets.

Can the acoustic transformation measurements be skipped?
The acoustic transformation measurements are automatically measured and applied as part of the TargetMatch 1.0 workflow. No additional step is required. The benefit is an individualized fitting pre-calculation.

Do I have to remember to mute and unmute the hearing aids when measuring aided responses with open fittings?
No, the hearing aids will automatically be muted and unmuted as needed.

After performing the acoustic transformation measurements, the blue message with "high ambient noise level" appears. How do I correct for this?
When you see a message with a blue color indicator, this indicates information where no further action is required. It is okay to proceed by clicking [Continue]. When high ambient noise is detected, TargetMatch 1.0 will adapt and provide corrected values.

After performing the acoustic transformation measurements, an orange error message appears, indicating that the measurement could not be obtained. How do I correct for this?
The conditions that could elicit this alert could be due to:
- middle ear blockage, such as cerumen.
- mismatch between acoustic parameters – what is entered into Phonak Target versus what the client is wearing
- more sound leakage from the earpiece than expected
- improper insertion of the probe tube
- excessive movement from the client

Measuring and matching real–ear aided responses (REARs)

Which verification modes are available with TargetMatch 1.0?
There are three different verification modes to choose from:
- Automatic match: applies acoustic transformation measurements and automatically measures and matches to targets
- Manual match: applies acoustic transformation measurements and runs a first set of REARs. Fine tuning to match targets can be performed manually.
- Measure responses only: performs acoustic transformation measurements and REARs for verification purposes only without applying the results to the fitting.

Which hearing aid program can I perform TargetMatch 1.0 in?
By default, TargetMatch 1.0 is performed in the client's startup program. However, you can choose to perform TargetMatch 1.0 in a program other than the client's startup program. In the automatic match workflow, the adjustments done by TargetMatch 1.0 will be applied to all programs and not only to the measured program. In the manual match workflow, you can either apply the adjustments to all programs or only to the measured program.

Are hearing aid features deactivated during TargetMatch 1.0?

Adaptive hearing performance features, such as SoundRecover2 and sound cleaning features, are temporarily deactivated during measurements. The feedback threshold canceller remains active. This reduces the amount of steps you would need to take to prepare the hearing aids for measurement.

Which stimulus is used to perform REAR?

The stimulus used is the International Speech Test Signal (ISTS). The ISTS is a standard test stimulus that includes all the relevant properties of speech, consisting of multiple different languages which are non-intelligible.

Which stimulus levels are used?

The stimulus levels are soft speech at 50 dB SPL, average speech at 65 dB SPL and loud speech at 80 dB SPL.

Finalizing TargetMatch 1.0

When the results are displayed, is that view in output or gain?

The view is in output dB SPL.

What do the different lines show in the results screen?

- The dark red/blue lines are the aided responses from the hearing aid.
- The light red/blue lines are the standard targets.
- The dotted gray lines are the individualized targets.

What are individualized targets?

The individualized targets are based on the audiogram, fitting rationale, the acoustic transformation measurements and the feedback threshold. It shows the targets that can be achieved. For example, if the feedback threshold limits significant gain due to the openness of the fitting, then the individualized targets show what can be achieved with these limitations in place. The individualized targets are only displayed in the results screen of TargetMatch 1.0.

Once you accept the changes and close TargetMatch 1.0, are the changes then reflected in the fine tuning screen?

Yes, the changes made will be reflected in your fine tuning screen.

Can I view the TargetMatch 1.0 results in the REM software?

The measurement results are saved to the Noah software and can be viewed in both Phonak Target and in the REM software.

Why does the measured feedback threshold look different after performing TargetMatch 1.0?

When viewing the measured feedback threshold in the gain – real ear view or insertion gain view, the displayed feedback threshold may look different as the new acoustic transformation measurements obtained from TargetMatch 1.0 are applied to the gain curves and target curves. The measured feedback threshold itself does not change.

Why may the prescribed targets in the REM software differ to the one in TargetMatch 1.0?

When comparing targets generated by TargetMatch 1.0 and the targets generated by the REM software, it is important to recognize the reasons for these variances. Examples of differences may be due to:

- the various implementation methods available for calculating the target curve across REM software.
- differences in available parameters between Phonak Target and the REM software.
- differences in target gain levels. The REM software displays 100% targets and the targets from TargetMatch 1.0 is dependent on the gain level set in [Global tuning].
- vent compensation applied to the calculated targets as TargetMatch 1.0 can read more information about the hearing aid, fitting conditions and acoustic coupling than what is foreseen when looking at the generic fitting formula in the REM software.
- For more details, please refer to the Phonak Insight on *Client satisfaction and fitting efficiency with verification* available on phonak.com/evidence.