Aurical HIT: RECD

Hardware Overview

Unique: A space-saving and ergonomically correct design make IEC/ANSI tests and Coupler Based Fitting using RECD comfortable and easy.

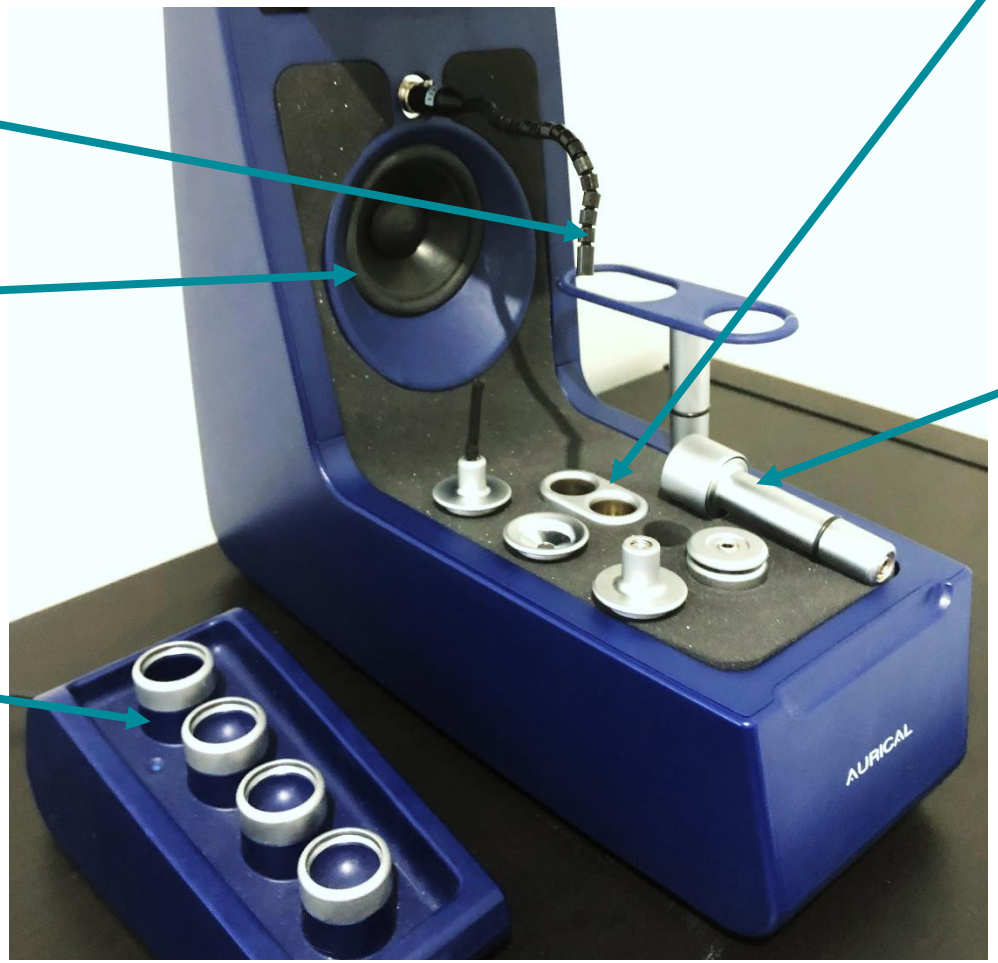
OnePosition: A unique concept for carrying out all measurements without having to reposition the HI.

Hardware Overview

Reference Mic

Loudspeaker

External Accessory Mic Base.



Coupler Mic sockets

Coupler Mic & 2cc Coupler adapter

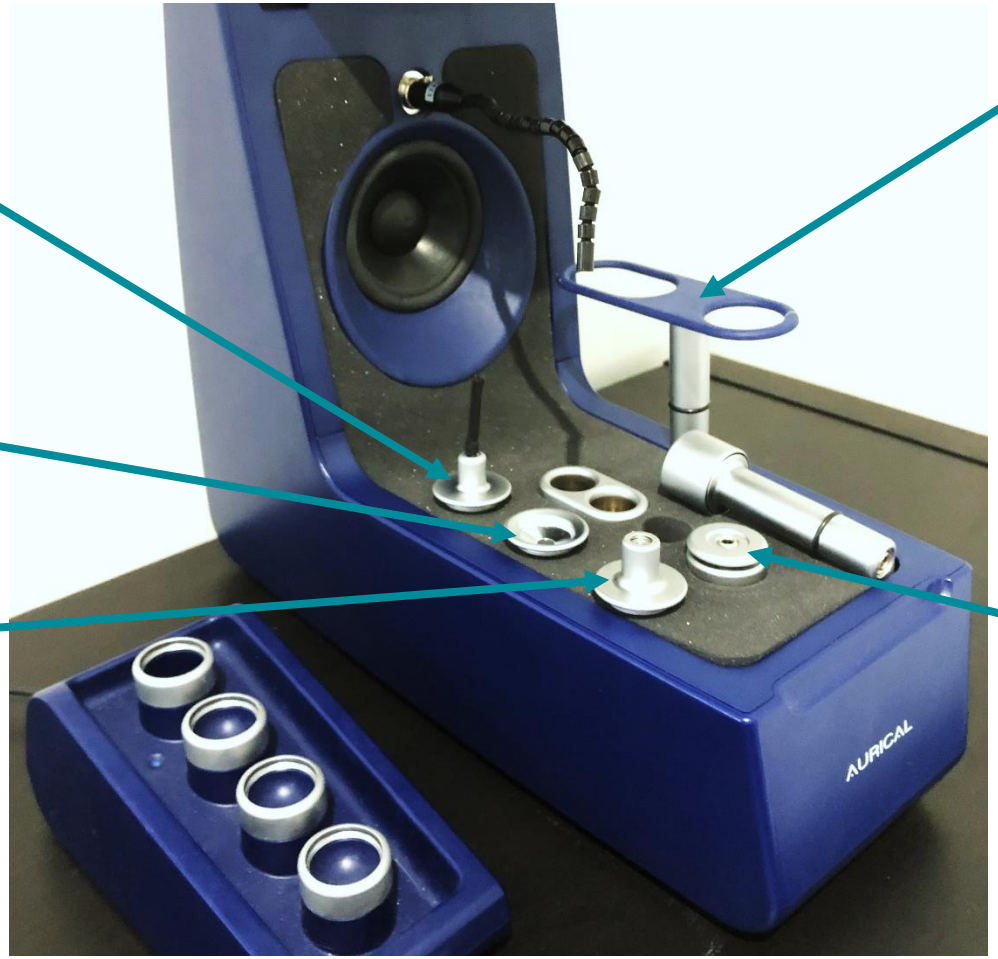
natus

Hardware Overview

HA2 Adapter with BTE tube

HA1 Adapter

Body worn aid adapter



Elevatable accessory platform

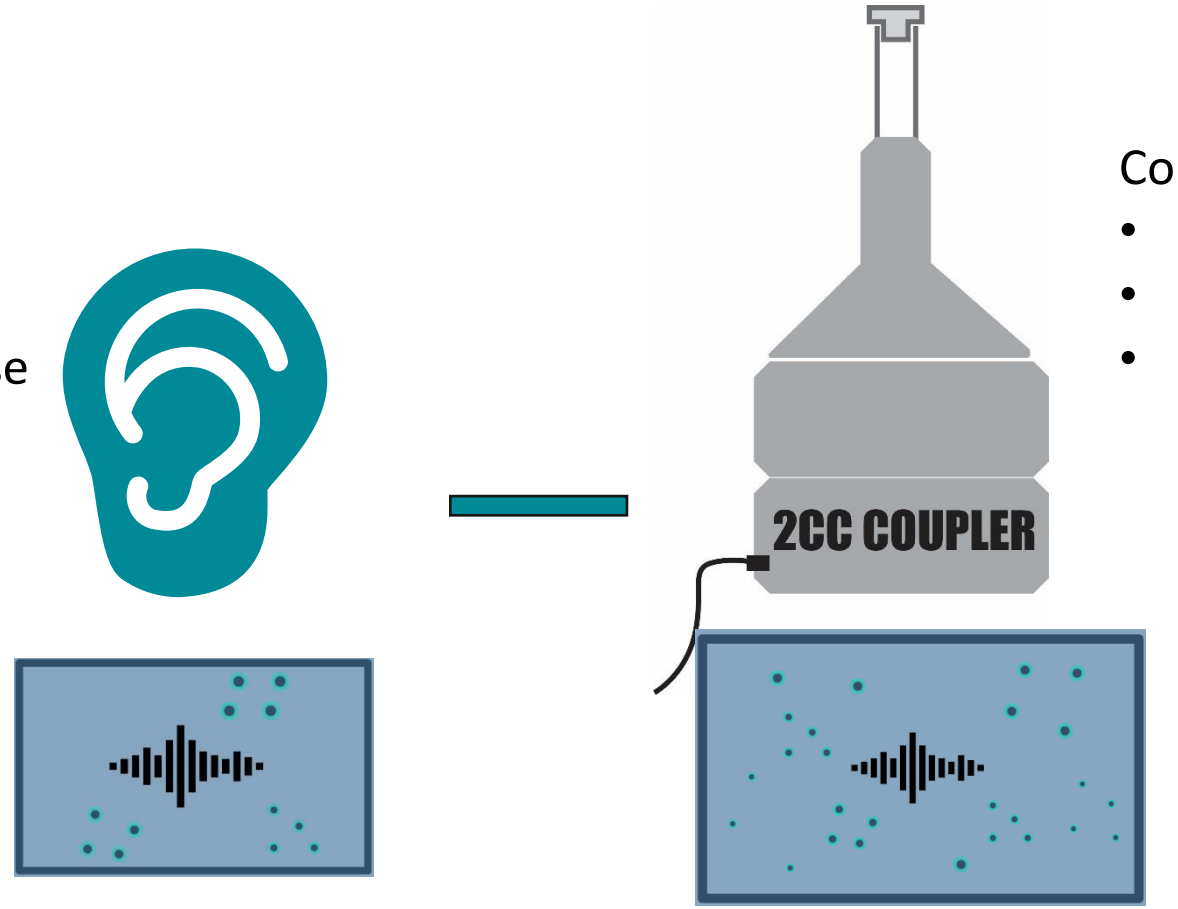
Battery pill port & cable tidy

Aurical HIT: RECD

The RECD Theory

Real Ear:

- Smaller than 2CC
- Irregular in shape
- Individual response to stimuli

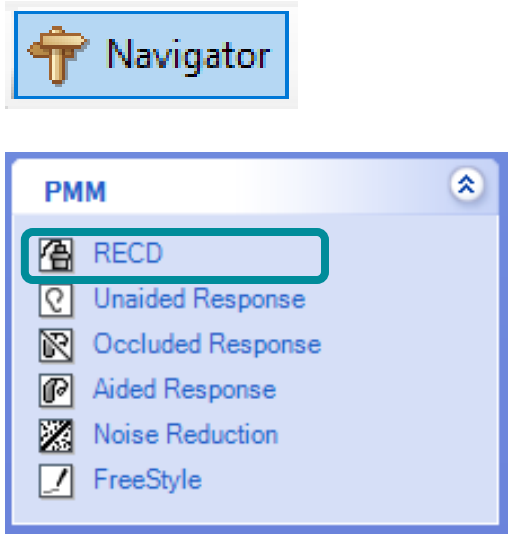


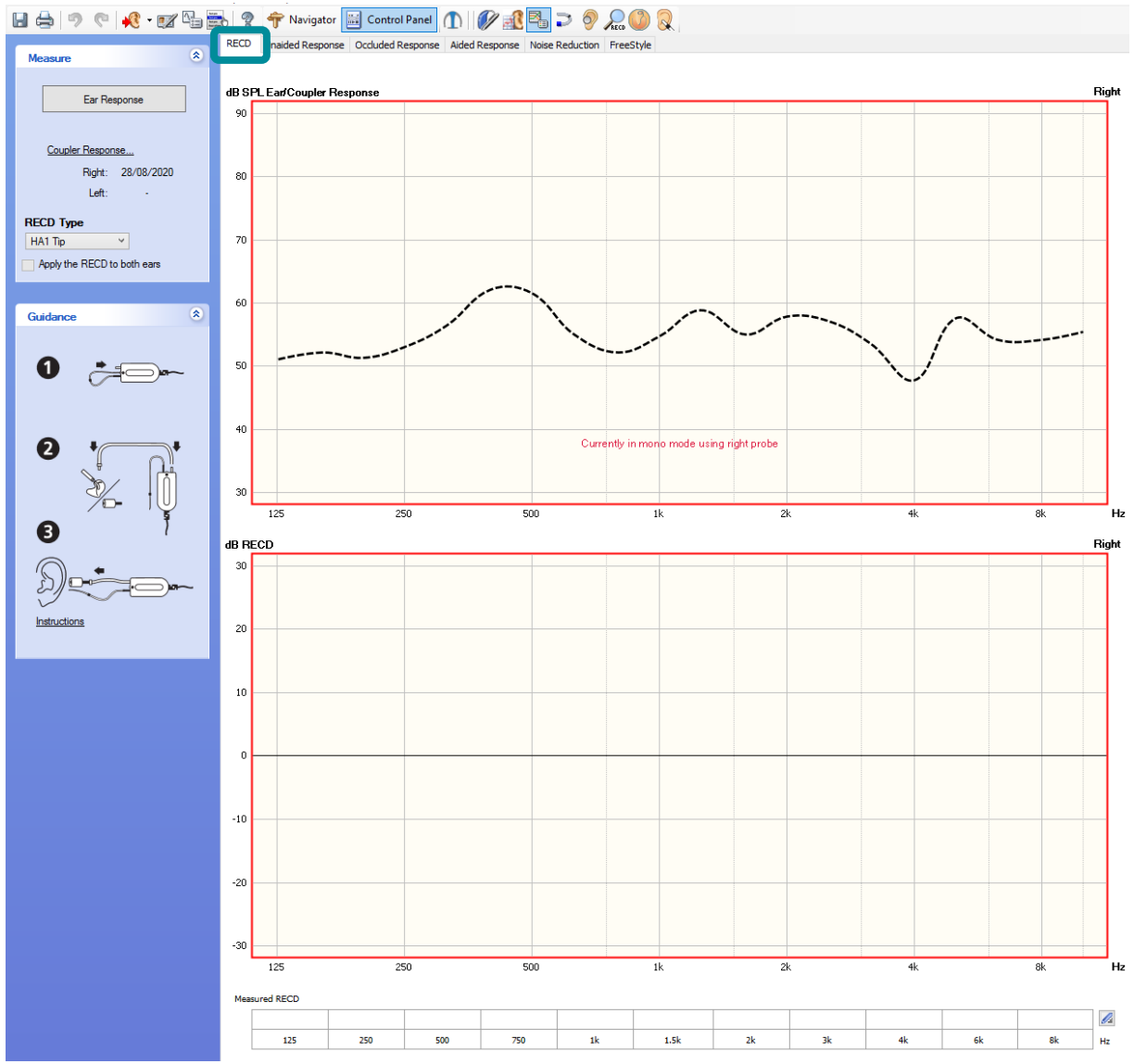
Coupler:

- 2CC volume
- Regular in shape
- Predictable and repeatable response to stimuli

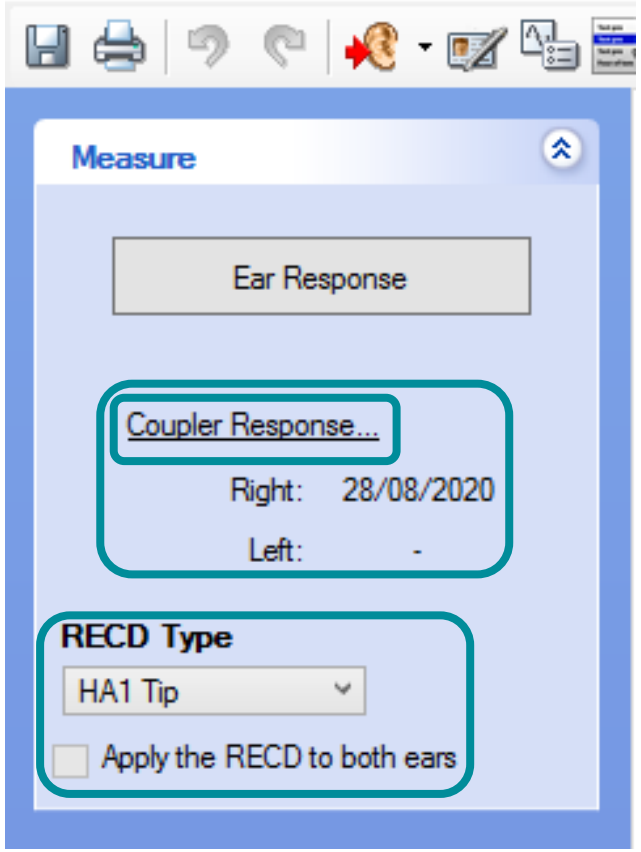
RECD

The RECD


Navigator
PMM
RECD
Unaided Response
Occluded Response
Aided Response
Noise Reduction
FreeStyle
Control Panel


Navigator
Control Panel
RECD
Unaided Response
Occluded Response
Aided Response
Noise Reduction
FreeStyle
Measure
Ear Response
Coupler Response...
Right: 28/08/2020
Left: -
RECD Type
HA1 Tip
Apply the RECD to both ears
Guidance
Instructions
dB SPL Ear/Coupler Response
Right
Currently in mono mode using right probe
dB RECD
Right
Hz
Measured RECD
125 250 500 750 1k 1.5k 2k 3k 4k 6k 8k Hz

The RECD – Coupler Response



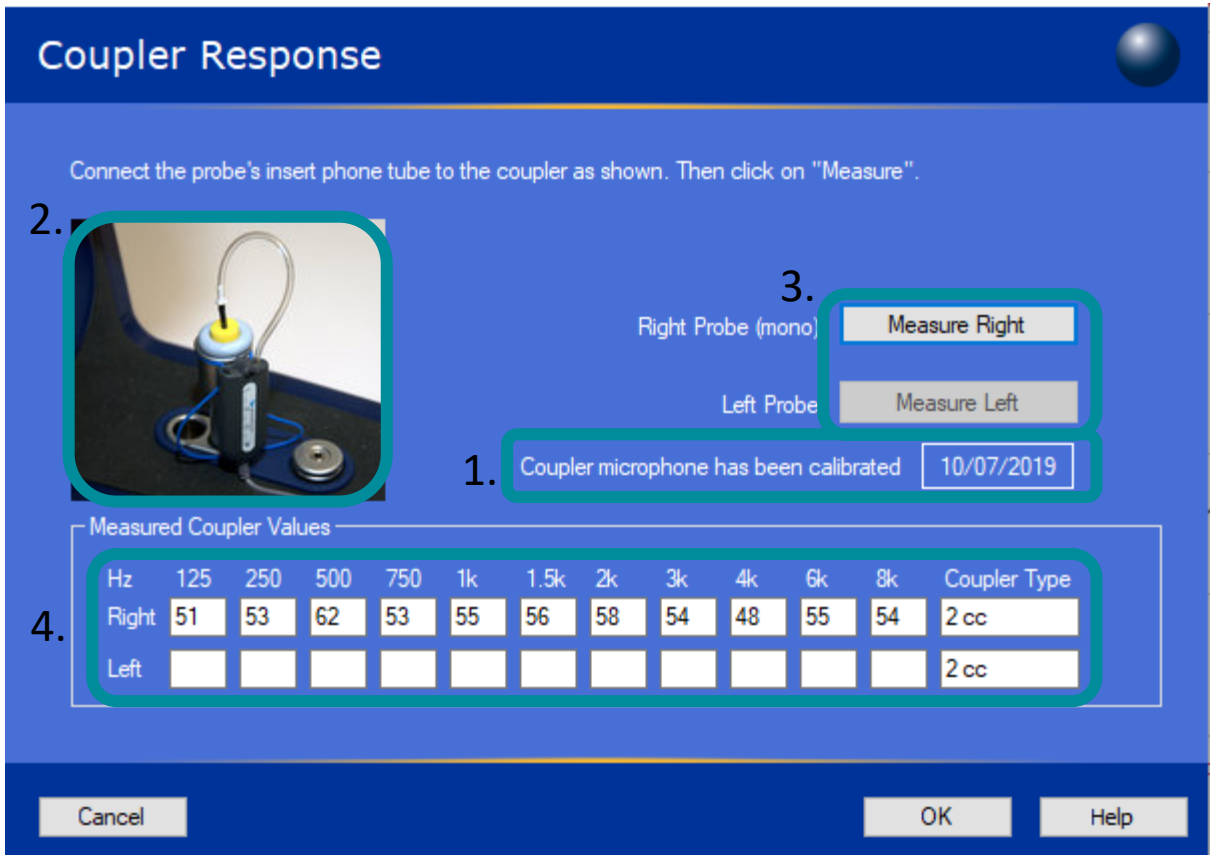
Coupler Response:

- Coupler responses are stored in the probe instead of in the HIT Box or PC.
- The date of the last coupler response will be displayed here.

- Select the type of RECD you want to perform and click the "Coupler Response…"

- In this example we have chosen HA1 Tip.

The RECD – Coupler Response



Coupler Response:

1. The Coupler Response dialogue box will remind you when the coupler microphone was last calibrated.
2. Depending on the type of RECD you selected it will display the correct visual guide.
3. Buttons to measure right and left probes
4. RECD results filled into the table below

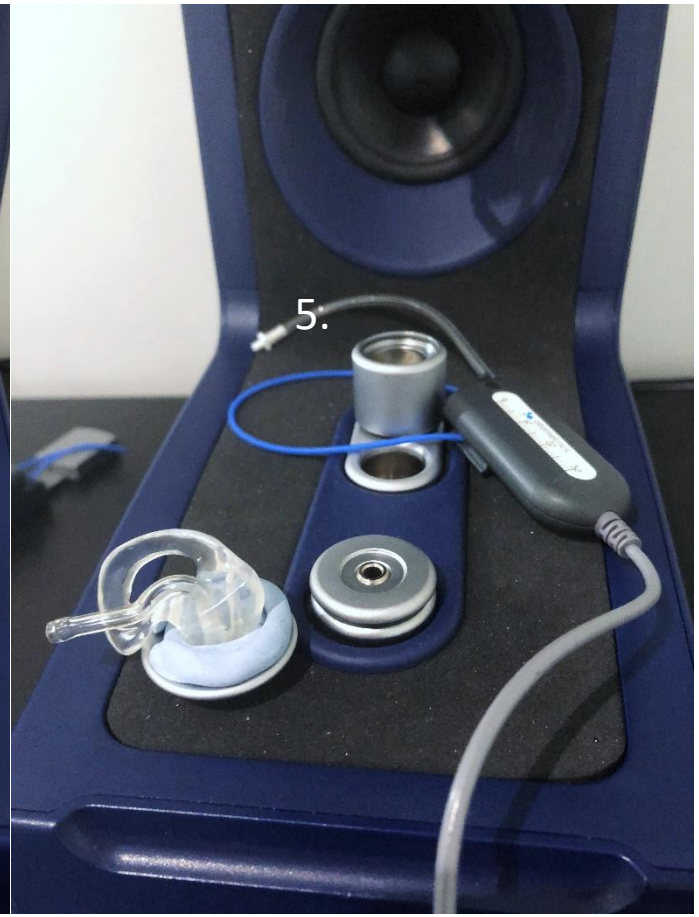
Once complete, click OK.

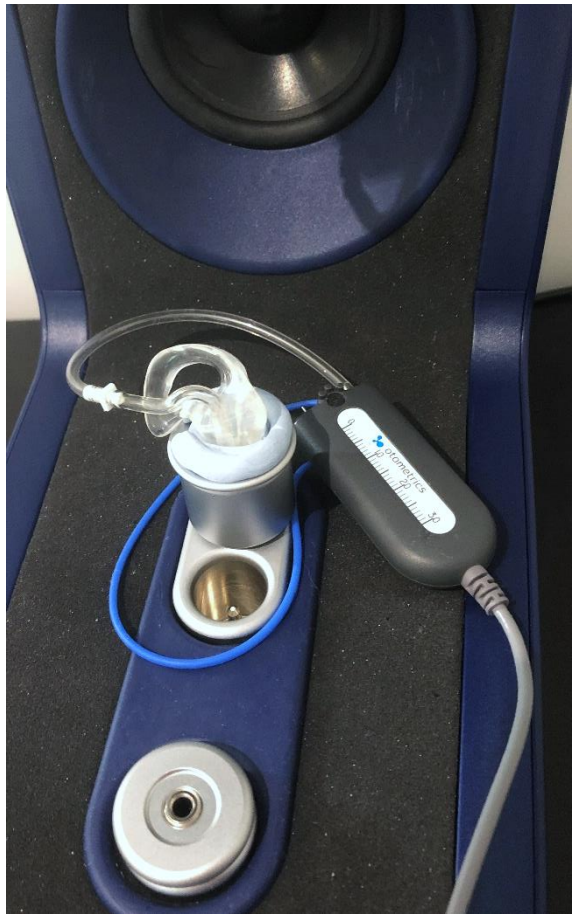
The RECD – HA1 Tip Coupling Guide

HA1 Tip Coupling:

1. Transducer tube and ear tip
2. HA1 Adapter
3. 2cc Coupler and coupler mic
4. Acoustic putty

The RECD – HA1 Mold Coupling Guide

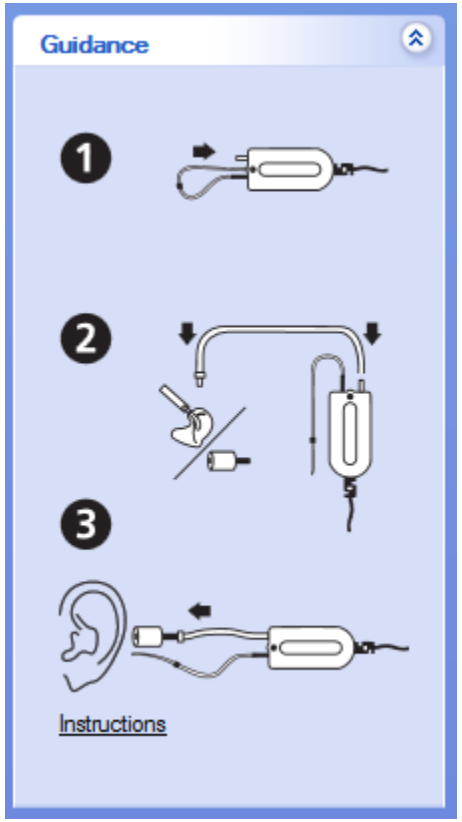




HA1 Mold Coupling:

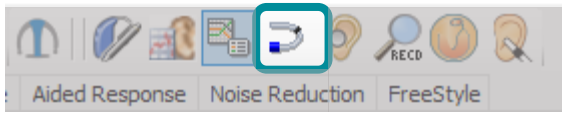
1. Patient's Earmold
2. HA1 Adapter
3. 2cc Coupler and coupler mic
4. Acoustic putty
5. Transducer tubing

The RECD – Real Ear Response

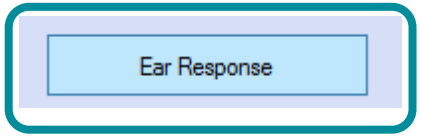


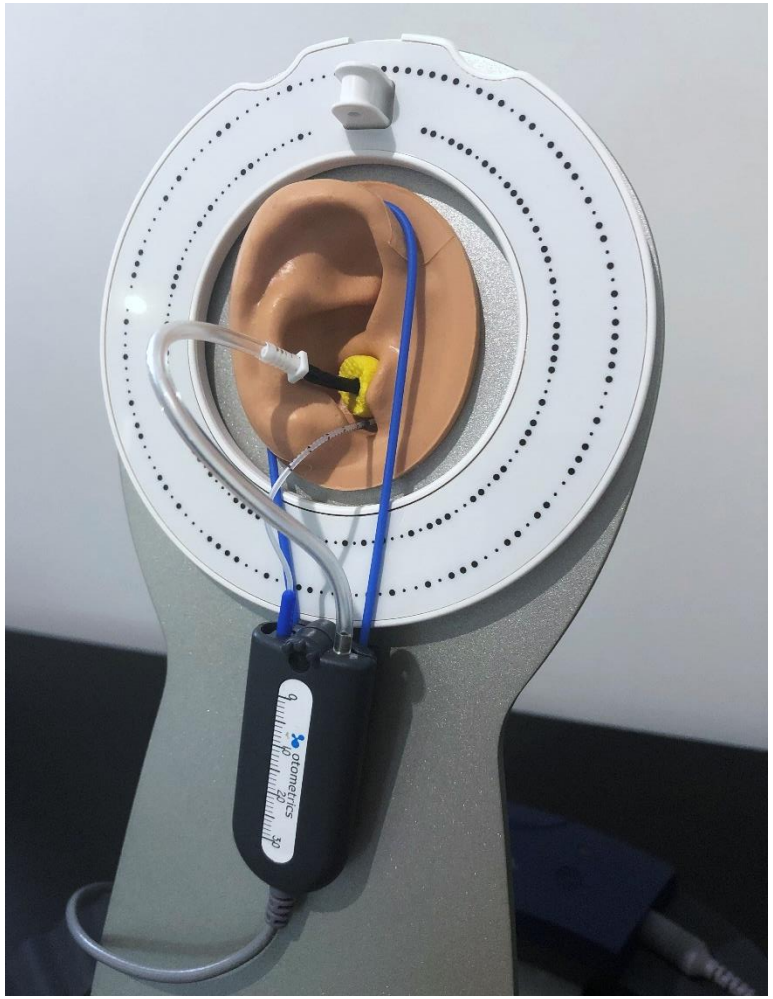
You will then need your real ear response:

- Detach the probe from it's coupling with the HIT box.
- Calibrate a probe tube using the probe tube calibration wizard.



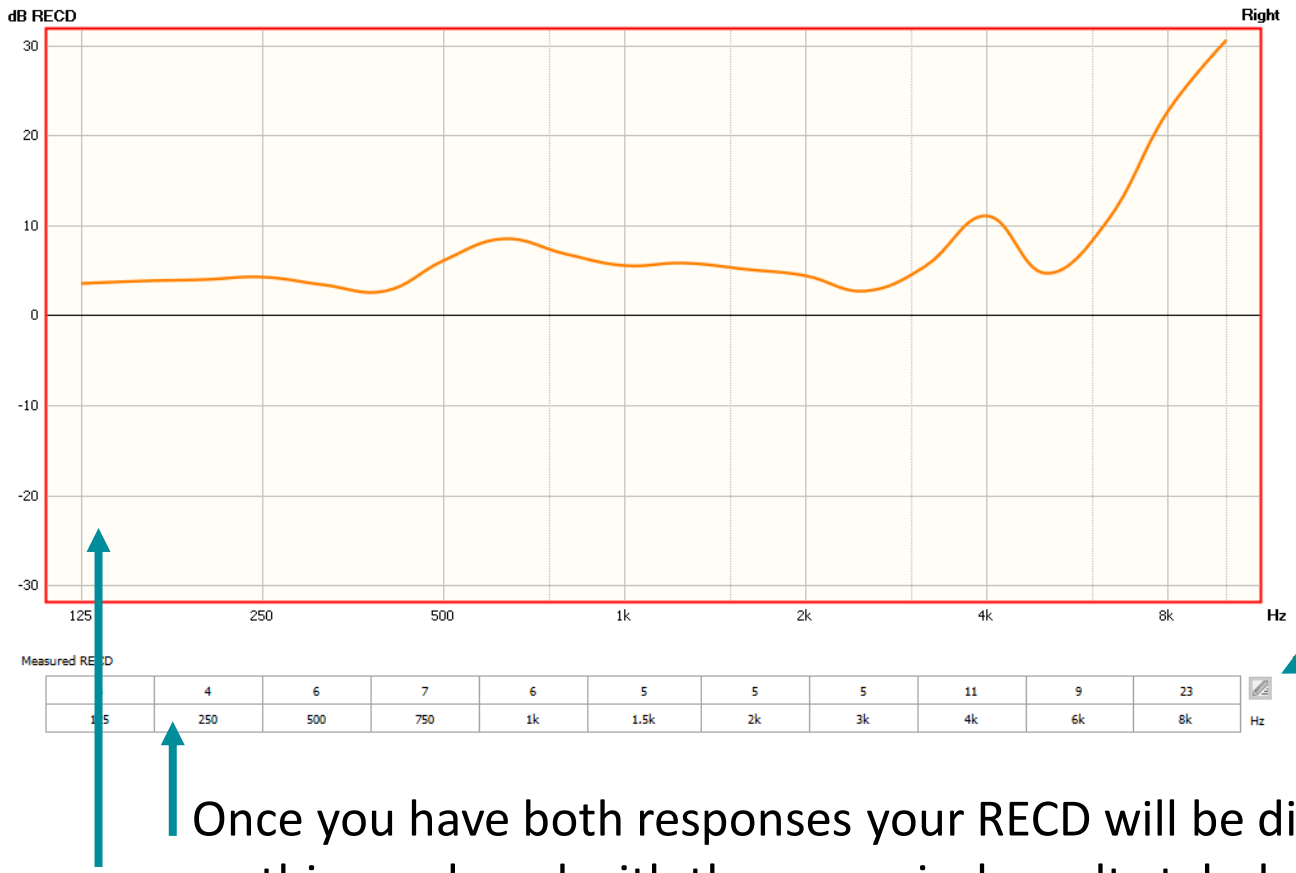
- Insert the probe tube i.e. 5mm from the TM and insert foam tip / earmold.
- Click "Ear Response"





This is a demonstration ear, make sure you use your patient's ear!

The RECD – Expected Results



If you only manage to capture a response for one side, you can apply it to both sides with **Edit > Apply RECD to both ears**.

If you have an RECD for a patient and want to manually enter it you can do so using the icon of a pen to the right of the RECD box.

Once you have both responses your RECD will be displayed on this graph and with the numerical results tabulated.

The RECD – Expected Results

Real ear responses should be positive and usually peak toward high frequencies.

<u>Troubleshooting</u>

Real Ear lower than coupler at Low frequency:

- Poor fitting to real ear, sound leaking.
- Possible perforated TM.

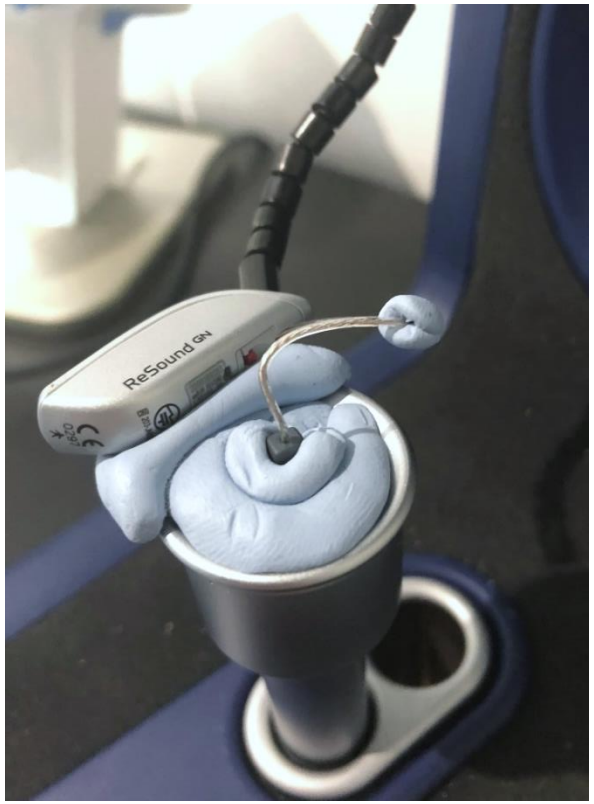
Real Ear too low at High Frequency:

- Too shallow probe tube placement

Aurical HIT: Verification on the Coupler

Hearing Aid Coupling in HIT Box

RITC / Thin tube – Coupler mic in raised position.

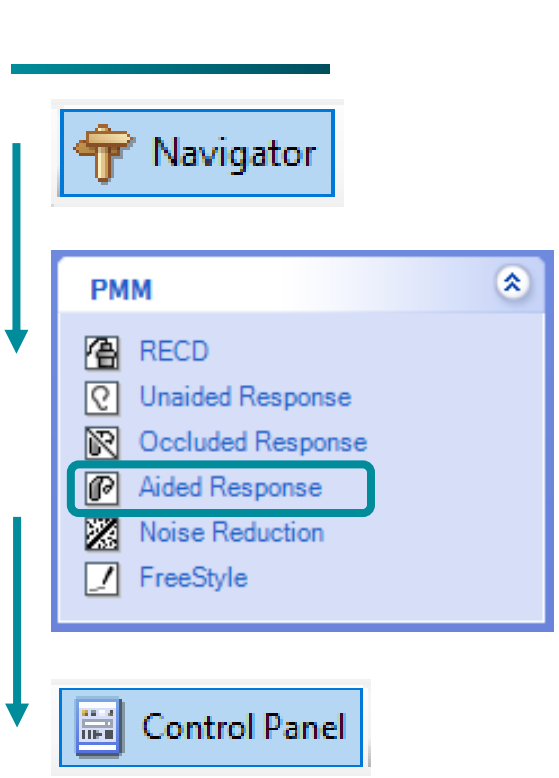


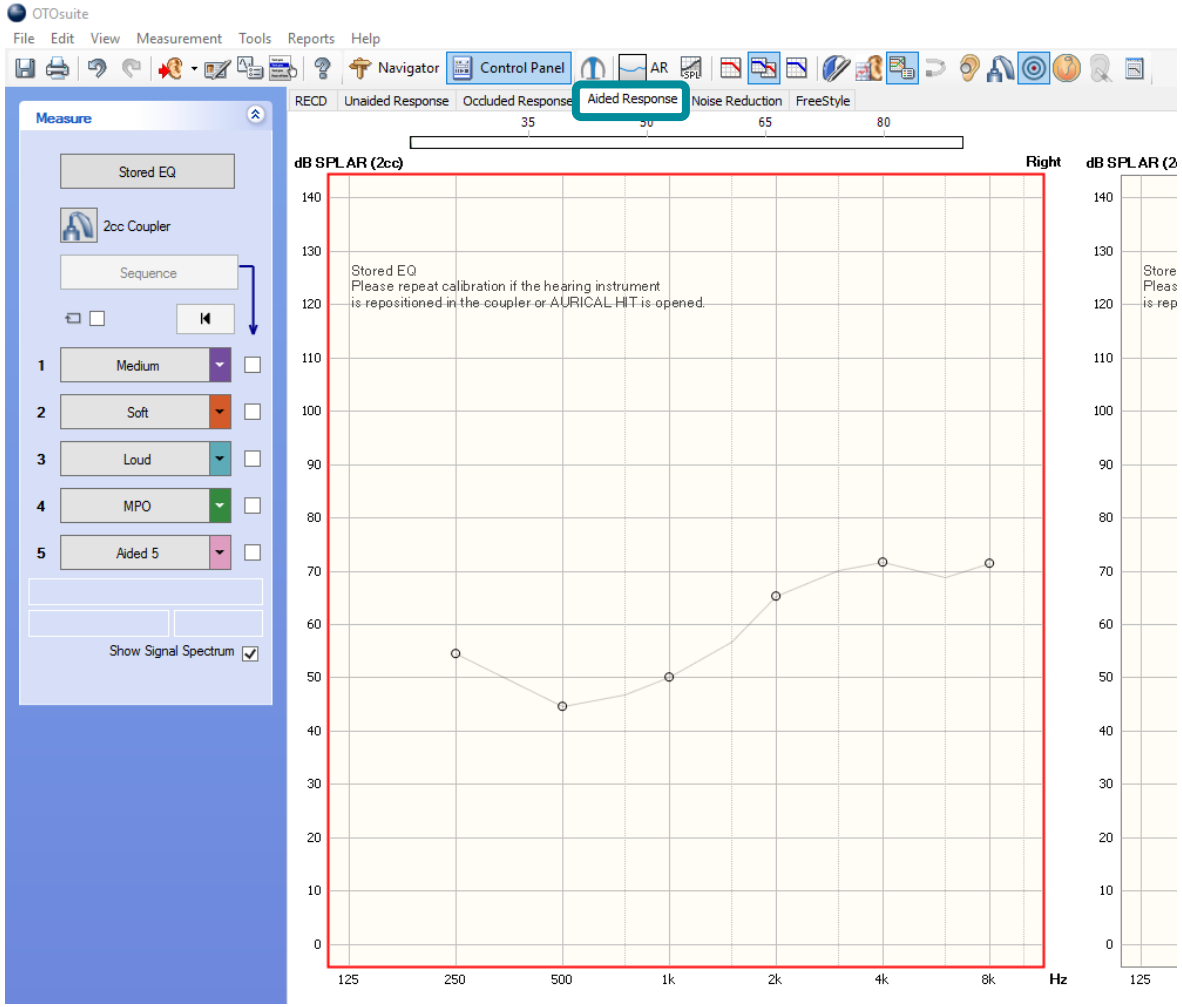
Use acoustic putty to create a seal with the HA1 adapter, taking care not to block the opening of the hearing aid tube/receiver.

Place the adapter on the coupler. Place a small amount of putty on the receiver wire/ tube to reduce the risk of acoustic artefact.

Secure the aid in place with putty, orientate the aid with front facing mic pointing toward the loudspeaker and position the reference mic close to but not touching the hearing aid mic.

Verification on the Coupler



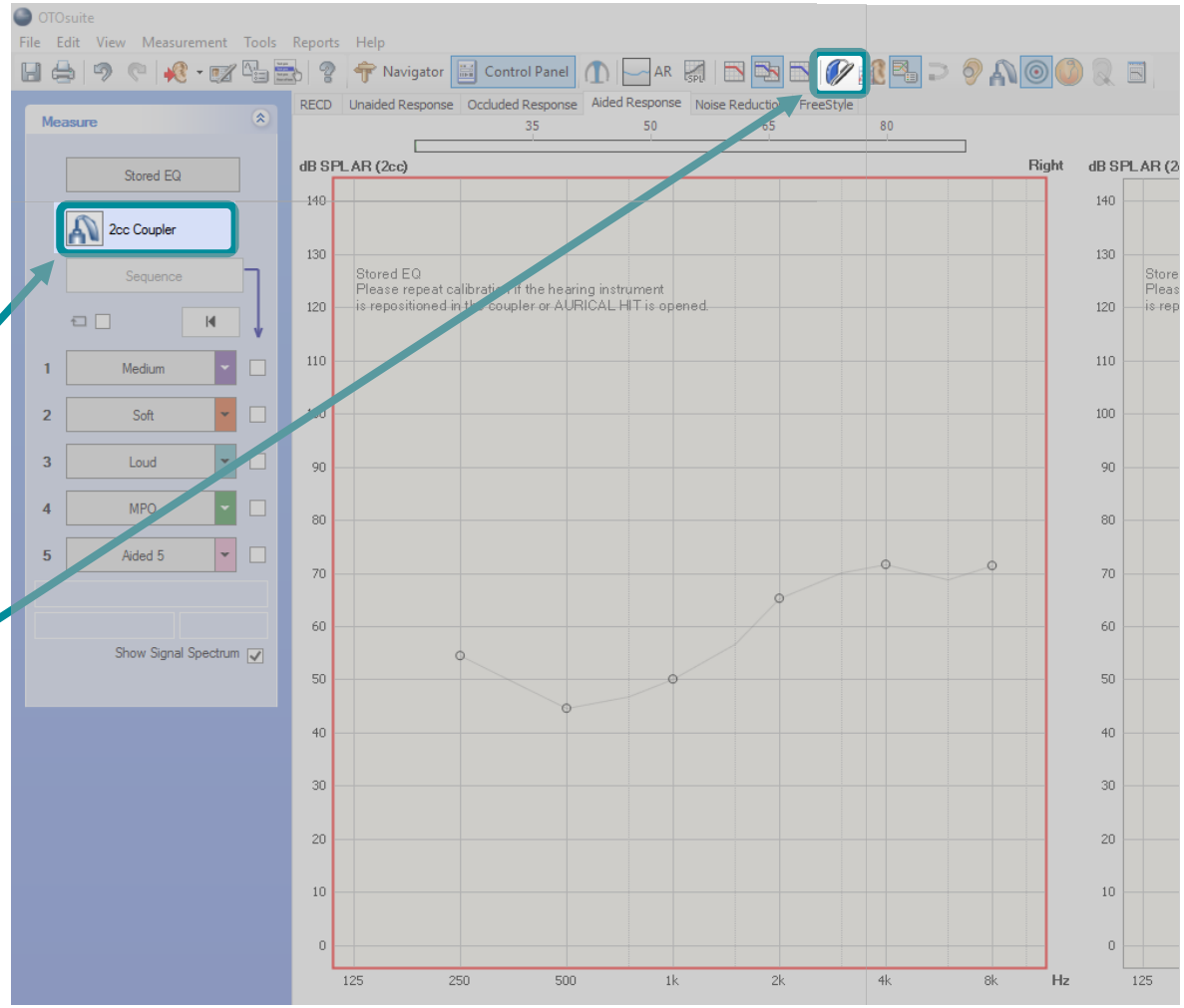


Verification on the Coupler

Performing verification on the coupler in Otosuite is much like performing a REM, with some differences to be aware of.

Ensure that the Aided Response tab is set to 2cc Coupler mode using this button.

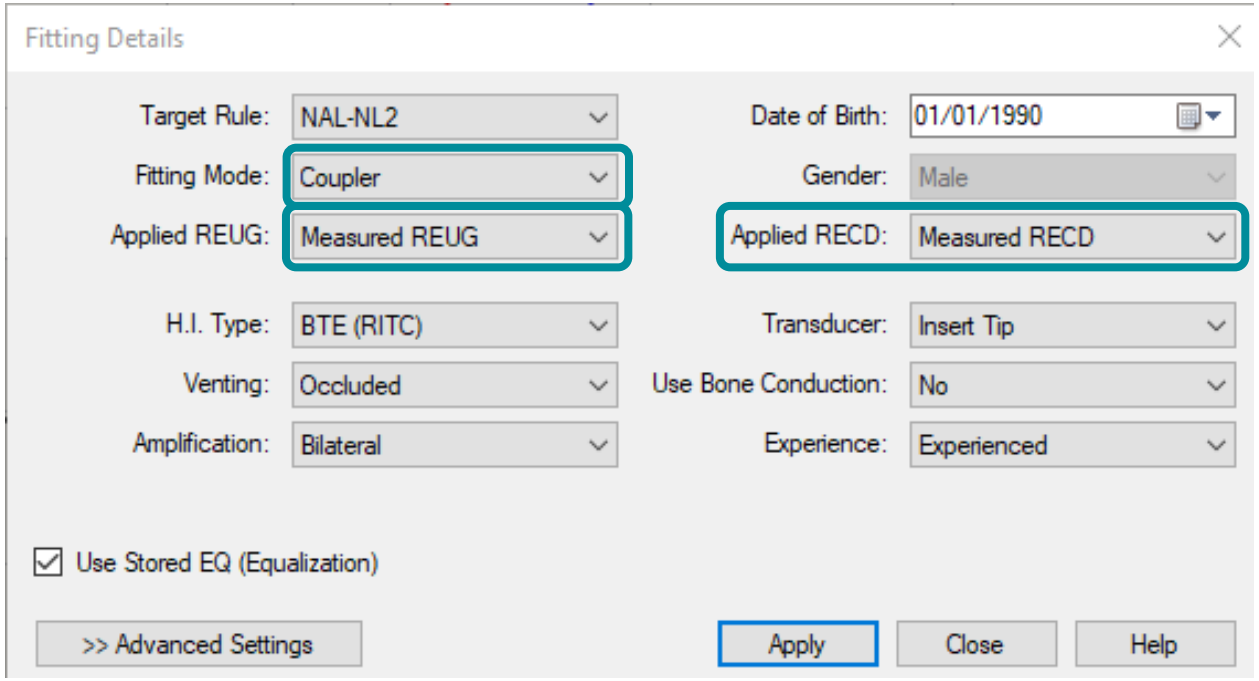
Then open up the fitting details dialogue box to check the parameters of the verification.



Verification on the Coupler

Fill in the fitting details box as usual for a REM, i.e. patient's target, HI Type etc.
ensuring that you select:

- Fitting mode: Coupler
- Applied REUG: Use measured REUG if you have a previously measured REUR.
- Applied RECD: Measured RECD if you have a previously measured RECD.

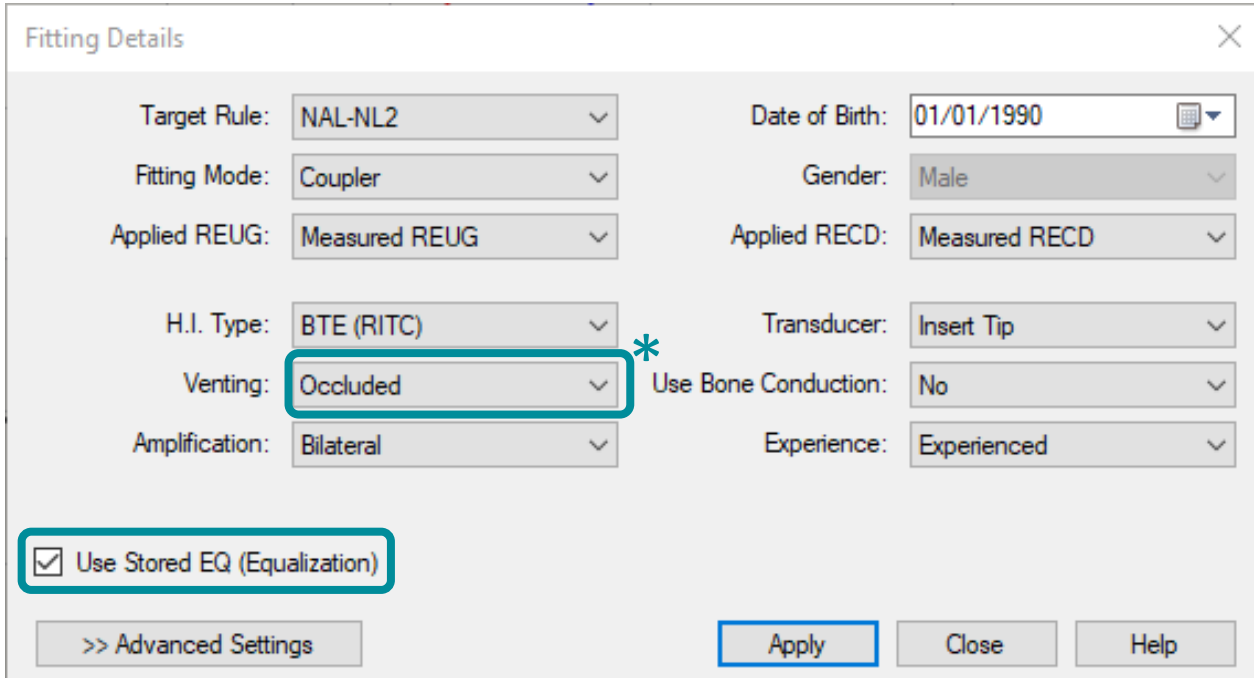


Verification on the Coupler

It is also worth noting that you should select the venting option for the patient based on their hearing aid fitting.

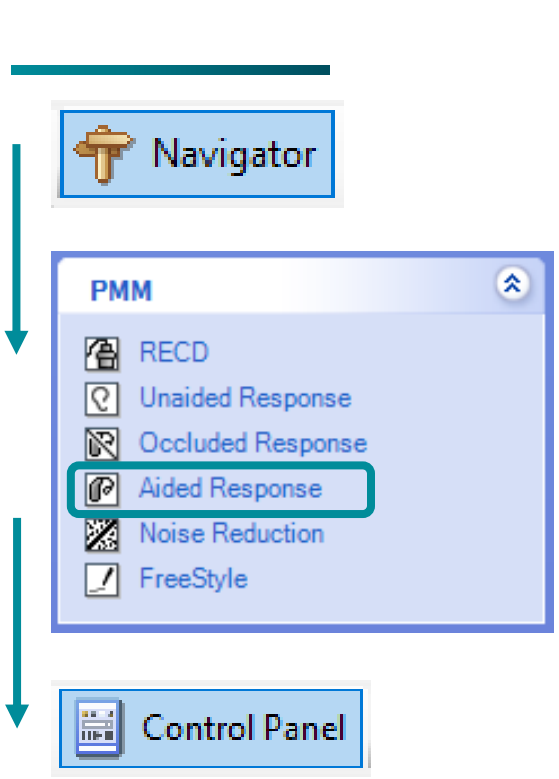
You can also select stored EQ, as conditions in the test box are very controlled.

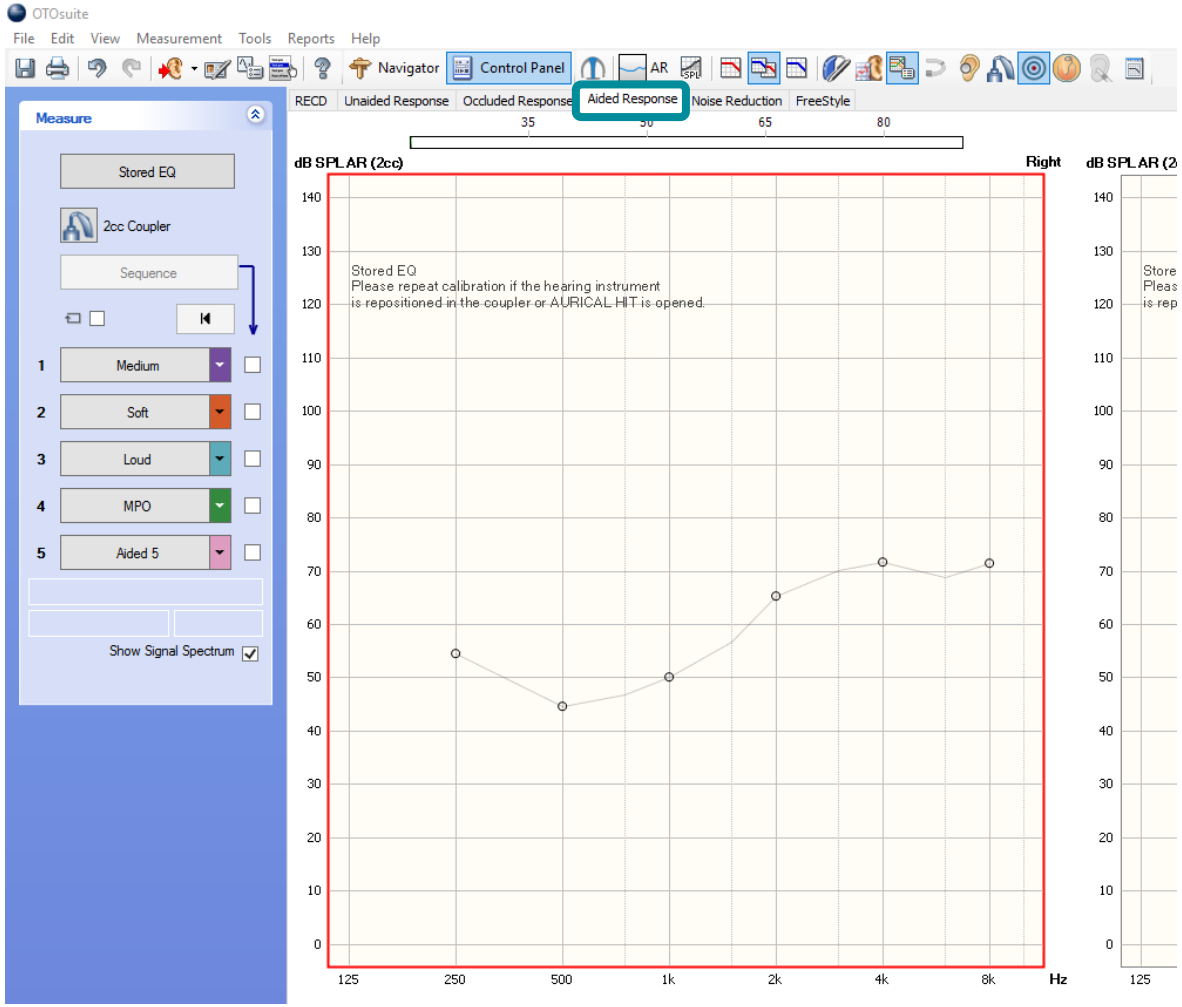
(Re-running the stored equalisation is required when set-up in the test box changes)



*Please see notes on performing RECDs on open fittings.

Verification on the Coupler





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Thank you for listening.

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