Nubert X-Remote App
Automatic room calibration
with X-Room Calibration

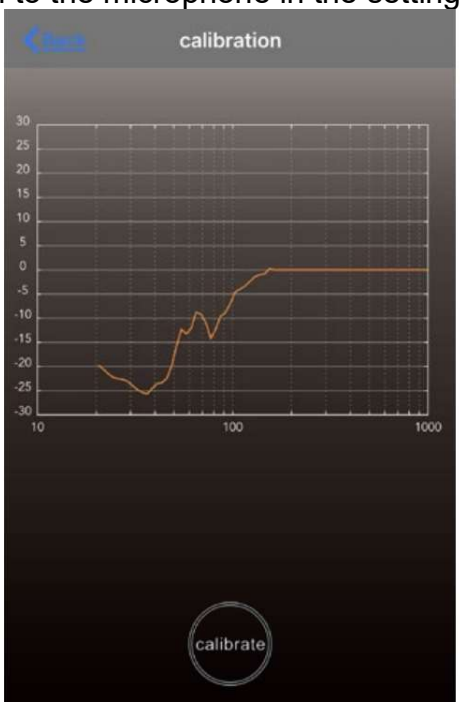
The X-Room Calibration is a part of the Nubert X-Remote App and extends the following devices with the option of automatic calibration:
- nuPro X RC active speakers
- nuPro XS-7500 Soundbase
- nuSub XW subwoofer
- nuConnect ampX Smart amplifier

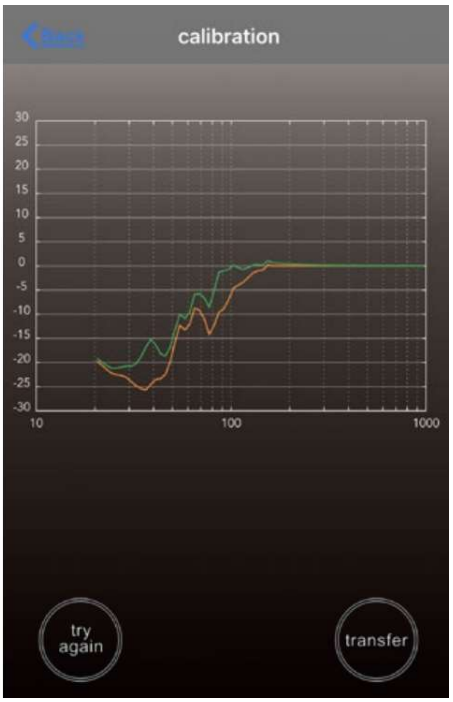
Room influences often cause disturbances such as droning or dips in the low frequency range. X-Room Calibration allows optimization of the frequency response in the low-frequency range between 20 and 160 Hertz and thus ensures an optimal listening experience with a powerful, dry and impulsive bass sound. To do this, simply start the app's calibration procedure of the app from your listening position. Test noise is now played back via your Nubert X device and recorded via the microphone of your smartphone. Based on this measurement data the low-frequency reproduction is adjusted so that you enjoy the optimum sound image at the measured listening position. You can switch the room correction on or off as desired.

The automatic room correction can easily be carried out directly with Apple iOS mobile devices. On Android mobile devices, you need a calibrated plug-on microphone in addition - the Nubert XRC Android Interface from our web shop. More about this below.
- The Nubert X-Remote App supports the automatic room calibration from version 1.2.1.
- Please also note our video clip on Youtube "Nubert explains: Better sound with X-
Room Calibration" https://www.youtube.com/watch?v=P2XLHQ__ucA

Example illustration: Menu of the Nubert X-Remote App when connected to a nuConnect ampX

X-Room Calibration: calibration and optimisation
Please remember to grant permission to the microphone in the settings of your mobile device!

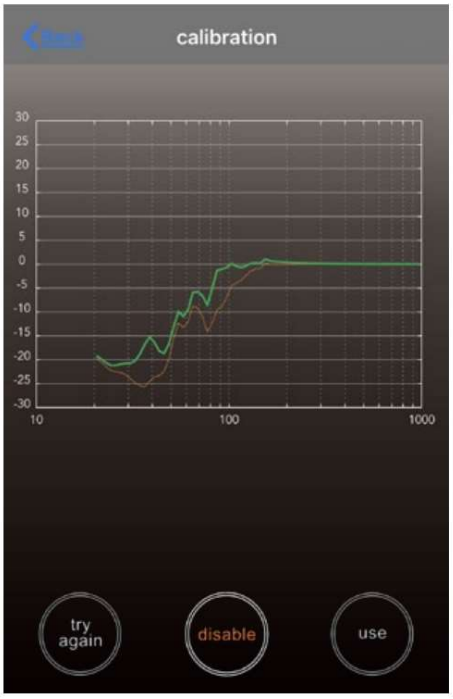


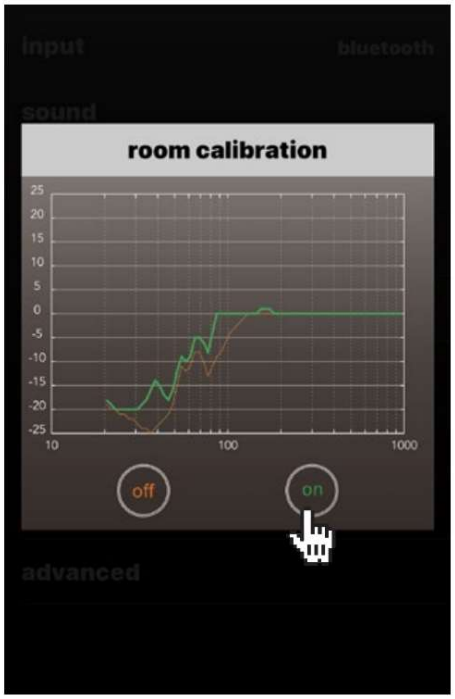


1 Hold the iPhone/iPad in the desired position you want and start the measurement process by tapping start. If the measurement is to be averaged over a larger zone, move your device from place to place in this listening zone. A measurement duration of five seconds per listening position is usually sufficient to obtain accurate results. End the measurement by pressing the stop button.

2 The app now shows you in **orange-red** the result of the measurement, still **without optimisation**. If you now press calibrate, X-Room Calibration calculates an optimized frequency response.

3 The **optimisation** calculated by X-Room Calibration is now displayed in **green**. You can repeat the measurement (*try again*) or transfer it to the DSP of your Nubert X device (*transfer*).





4 After the transmission, you have the option to listen to the **optimisation**. You can activate the optimisation (*enable*) or deactivate (*disable*). If you are satisfied with the optimisation complete the calibration process by tap the *use* key. Otherwise carry out the process again, by selecting *try again*.

5 In the menu item room calibration enabled, you now have the option to activate or deactivate the optimisation:
on → optimisation activated

...or
off → Optimisation deactivated

How does X-Room Calibration work?

After the calibration and pressing the transfer button, the optimised curve is transferred to the respective device and then in the nuConnect ampX amplifier, the XS-7500 soundbar, the nuPro X RC active speakers or the nuSub XW subwoofer.

X-Room Calibration sets ten fully parametric equalizers in the bass range from 20 Hz to 160 Hz that work right there where the algorithm due to the measurement data of the microphone determines their necessary adjustments. The app calculates a possible most linear target curve, which is reached by corresponding reductions or increases. To avoid overdriving of the digital signal processor in combination with other tone controls, the control range of the X-Room Calibration is limited to ± 6 dB. When it comes to minimising negative influences on the bass range, X-Room Calibration is an easy to use and effective tool to bring audible improvements!

It may well be that the situation in your listening room with X-Room Calibration alone cannot be solved and that further other optimisation measures, such as absorbers or a change of loudspeaker placement, etc. becomes necessary. In this case, please consult our advisors:

X-Room Calibration on Apple and Android Mobile Devices - Notes and Practical Tips

Simple and direct with Apple iOS
All loudspeaker manufacturers who want to realize room calibration via mobile devices and apps need measurement information from comparable, validated microphone data. Only Apple can do this with its standards and operating systems. X-Room Calibration therefore works optimally and directly on all Apple iOS mobile devices!

Android mobile devices require an additional a Nubert XRC Android interface
The multitude of Android mobile device manufacturers and modified Android operating systems makes comparable recording data virtually impossible. With the Nubert XRC Android Interface, we offer a calibrated USB plug-in microphone for Android mobile devices, which enables the X-Room Calibration function on these devices as well. Our Nubert XRC Android Interface can be found in the Nubert web shop.

What to do without an Apple mobile device or
Nubert XRC Android interface? Simply ask an Apple user in your friends or acquaintances to install the Nubert X-Remote app and ask them to perform an X-Room Calibration for you. After the calibration and optimisation, we strongly recommend save the presets! Save a preset in your Nubert X-unit for preset for activated calibration and one for deactivated calibration. This way you can switch on or off the optimisation without the app.