

ReSound Tinnitus Management



GN- Bringing people together since 1869





ESTABLISHED
1869

"The development of the world is dependent on communications"

GN founder C.F. Tietgen, 1869

CREATED THE FIRST
TELEGRAPHIC
CONNECTION
BETWEEN ASIA
AND THE REST OF
THE WORLD

HEADQUARTERED IN
DENMARK

MANUFACTURED
IN DENMARK,
UNITED STATES,
CHINA, MALAYSIA
AND THE UK

5,500
EMPLOYEES

Intelligent audio solutions
that let you **hear more, do more**
and **be more** than you ever
thought possible



MARKETS HEARING AIDS
& HEADSETS IN
100 COUNTRIES

RESEARCH CENTERS
IN DENMARK, UNITED STATES, CHINA
AND THE NETHERLANDS

More than **8%** of our **revenue** goes into research and development of **new innovations**



The GN Group proudly builds on over 150 years of innovation

GN



ESTABLISHED
1869



CREATED THE FIRST
**TELEGRAPHIC
CONNECTION**
BETWEEN ASIA
AND THE REST OF
THE WORLD

*"The development of the world is dependent on **communications**"*

GN founder C.F. Tietgen, 1869



The GN Group proudly builds on over 150 years of innovation

GN

Intelligent audio solutions that let you **hear more, do more** and **be more** than you everthought possible

HEADQUARTERED IN
DENMARK

MARKETS HEARING AIDS
& HEADSETS IN
100 COUNTRIES

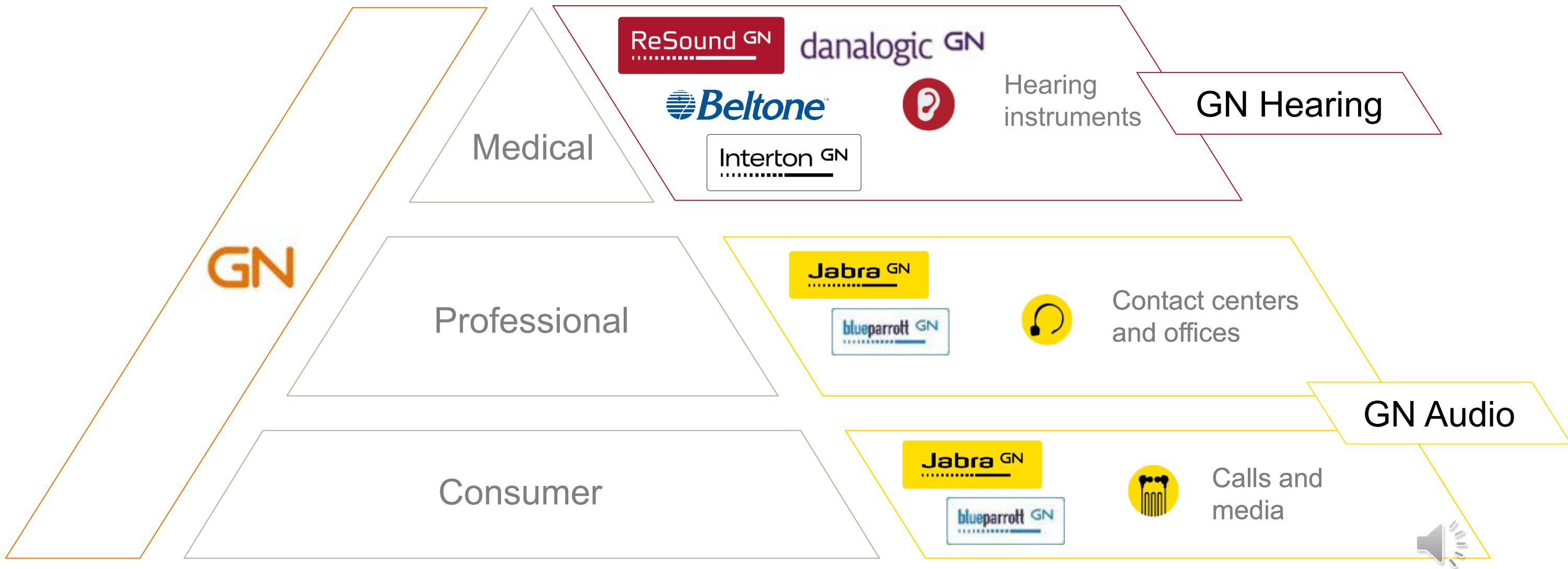
RESEARCH CENTERS
IN DENMARK, UNITED STATES, CHINA
AND THE NETHERLANDS

MANUFACTURED IN
DENMARK, UNITED
STATES, CHINA,
MALAYSIA AND THE UK

More than **8%** of our revenue goes into research and development of **new innovations**



World leading sound and audiology expertise – all under one roof



ReSound Tinnitus Management

Tinnitus affects around 10% of the population, with 3-5% suffering from clinically treatable tinnitus. As hearing loss diagnosis increases, this trend is likely to continue growing. ReSound offers an advanced combination unit of hearing aid and Tinnitus Sound Generator (TSG), providing fitting flexibility for clinicians and an innovative TSG solution for patients.



Understanding Tinnitus

Definition

Involuntary perception of sound originating in the head (McFadden, 1982) , often described as 'ringing or buzzing sounds'

Characteristics

Can be constant or intermittent, with varying perceptual characteristics like clicking, chirping, or pulsing

Causation

Exact mechanism unknown, but cochlear damage and psychological factors play significant roles



Tinnitus Treatment Approaches

Sound Therapy

Introduction of external sounds to reduce tinnitus contrast against background. ReSound TSG (Tinnitus Sound Generator) combination unit offers hearing aid features and tinnitus sound generator capabilities.

Tinnitus Retraining Therapy (TRT)

Educes clients on neurophysiologic foundations of tinnitus, aiming to provide better understanding and control over reactions to tinnitus. Sound therapy is a vital component of TRT.



ReSound TSG Combination Unit Features



Frequency Shaping

Customizable white noise signal with low and high cut controls for individualized comfort



Amplitude Modulation

Fluctuation in noise signal level with adjustable attenuation and speed options



Environmental Steering

Automatic volume control adjusting white noise level according to the listening environment





Paul Harrison

[Home](#)[Catalog](#)[Resources](#)[Update](#)[Preferences](#)

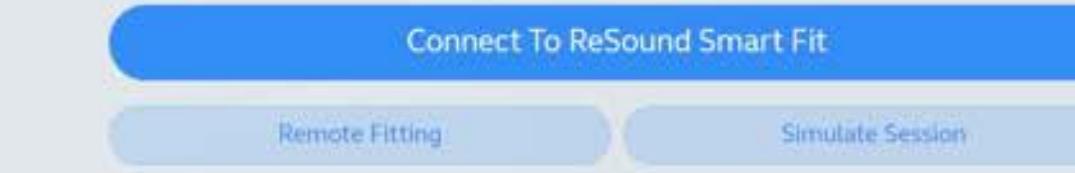
Right



Left



ReSound Nexia 9
NX960S-DRWC
MP Receiver
SN: 2387120866



ReSound Nexia 9
NX960S-DRWC
MP Receiver
SN: 2387120871



Patient Information ^

Tutorial

ReSound 2.0

First Time User - Onboarding

Instruments ^

Connect

● Right Not Connected
 ● Left Not Connected

 NX960S-DRWC
 RIE 2 MP Receiver

 NX960S-DRWC
 RIE 2 MP Receiver

 All-Around Hear in Noise Outdoor

Media Player ^

Collapse Sidebar

 Tinnitus Sound Generator On Off

 Nature Sounds On Off

Stereo Off

Show Advanced Settings



Breaking Waves



Water Creek



Calming Waves



Beach surf



Ocean



Shoreline

 Ear to Ear
Synchronization

On Off

 Tinnitus Sound Generator On Off

 Nature Sounds On Off

Stereo Off

Show Advanced Settings



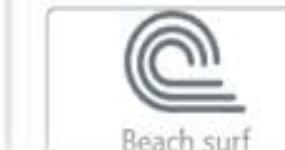
Breaking Waves



Water Creek



Calming Waves



Beach surf



Ocean



Shoreline

ReSound GN

Calibrate DFS

Save

Patient Information ^

Tutorial

ReSound 2.0

First Time User - Onboarding

Instruments ^

Connect

 Right Not Connected  Left Not Connected



NX960S-DRWC
RIE 2 MP Receiver



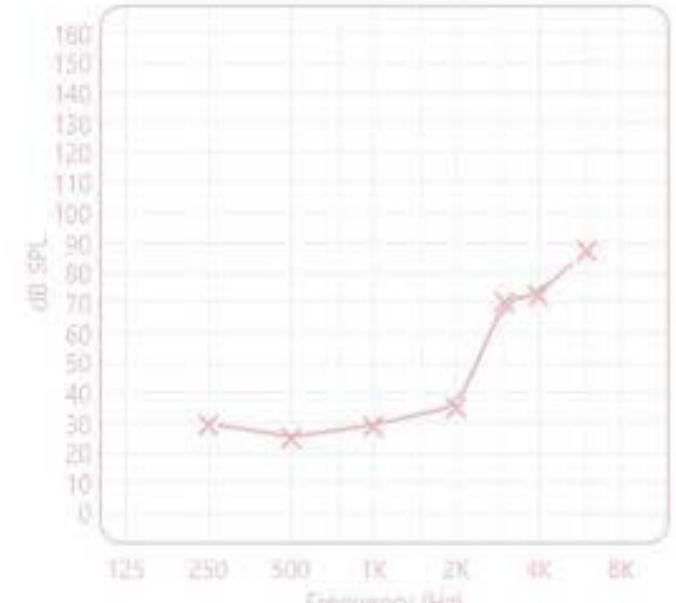
NX960S-DRWC
RIE 2 MP Receiver



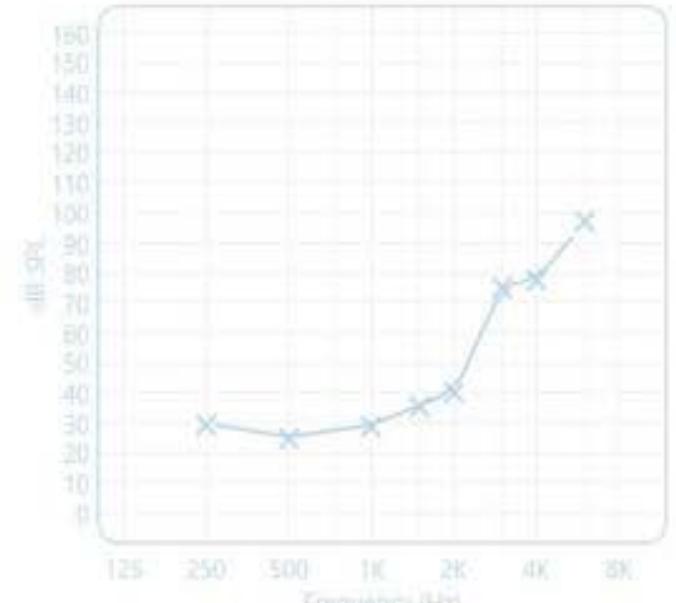
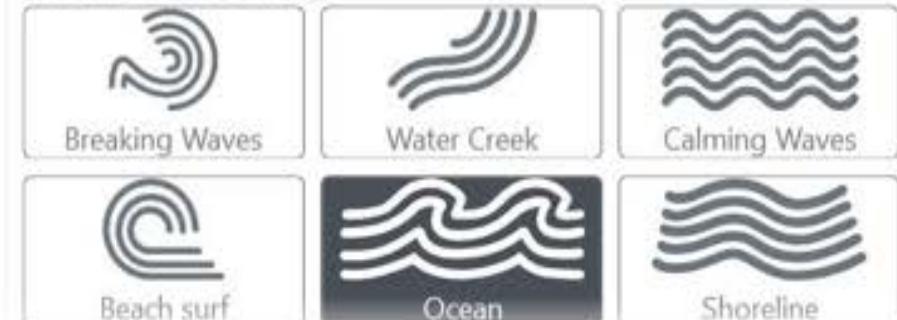
Media Player ^

Collapse Sidebar

ReSound GN

[Patient](#) [Instrument Set-Up](#) [Gain Adjustments](#) [Advanced Features](#) [Device Controls](#) [Finalize](#)
Menu 
[Speech](#) [Comfort](#) [Tinnitus Sound Generator](#) [CROS](#)


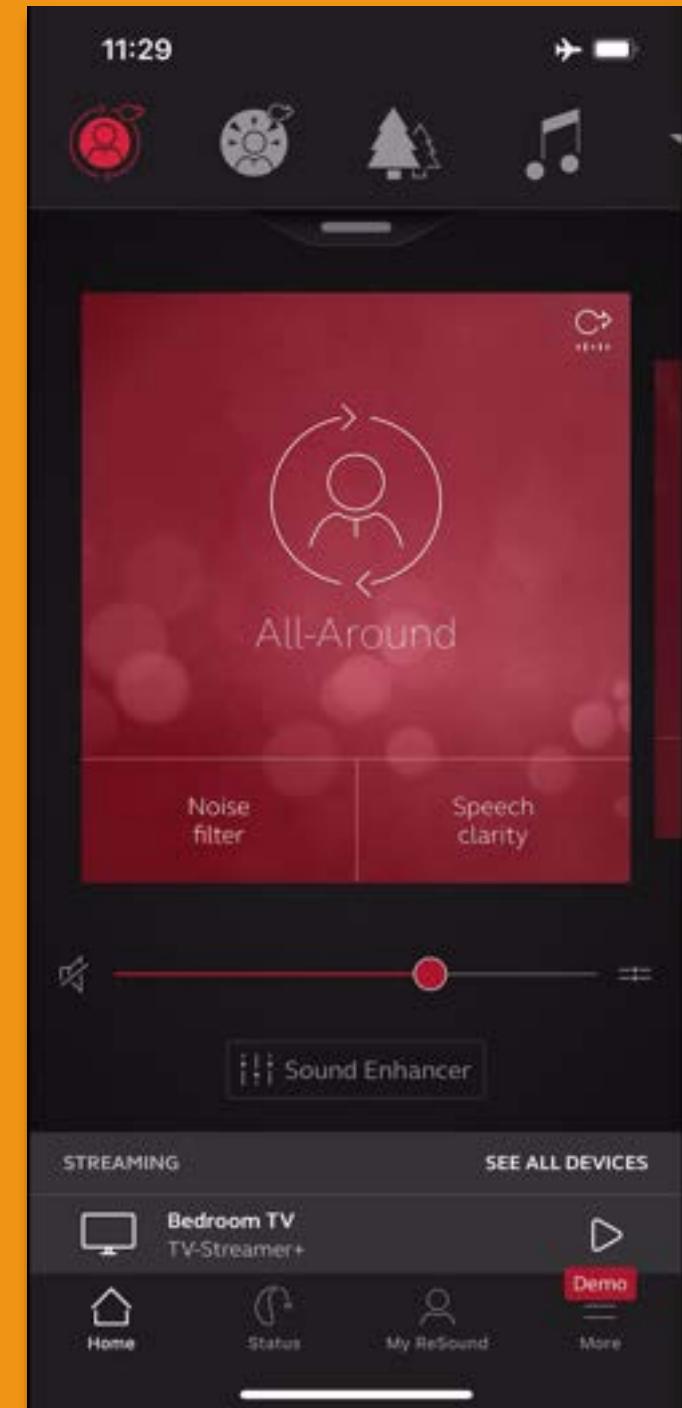
 dB SPL
 dB HL


[All-Around](#) [Hear in Noise](#) [Outdoor](#)  
Tinnitus Sound Generator  On  OffNature Sounds  On  OffStereo Off Show Advanced Settings Ear to Ear
Synchronization On  OffTinnitus Sound Generator  On  OffNature Sounds  On  OffStereo Off Show Advanced Settings 

Calibrate DFS

Save

ReSound Smart 3D App and TSG



White Paper

- [Features Explained - GN Hearing UK](#)
- <https://www.gnhearing.com/en-gb/research/features-explained>

ReSound Tinnitus Management: ReSound TSG and Tinnitus Management

Michael Piskosz, M.S., Board Certified in Audiology
Snehal Kulkarni, Au.D.

Tinnitus is a concern for many people, and affects around 10% of the overall population, with approximately 3-5% of the population suffering from [clinically treatable tinnitus](#) (McFadden, 1982). As hearing loss is increasingly identified and diagnosed, this trend is most likely to continue and grow (Vernon, 1998). Clinicians and people affected by tinnitus have struggled finding flexible tinnitus treatment devices that are suitable components of a tinnitus treatment and counseling support program. ReSound offers an advanced combination unit of hearing aid and Tinnitus Sound Generator (TSG), that provides fitting flexibility for clinicians, and an innovative TSG solution for. It can be used as a combination unit to address both hearing loss and tinnitus.

WHAT IS TINNITUS, AND WHAT CAUSES IT?

Tinnitus is an involuntary perception of sound that originates in the [head](#) (McFadden, 1982). It is most commonly referred to as 'ringing in the brain', but can take on a number of perceptual characteristics, such as [clicking, chirping or pulsing](#). It can be constant and steady, or it can be intermittent. The perception of tinnitus can greatly vary from person to person.

fied and recognized as noise, even in the absence of auditory input. This noise is recognized as [tinnitus](#) (Figure 1).

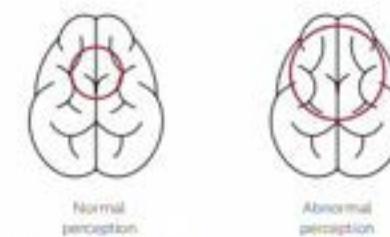


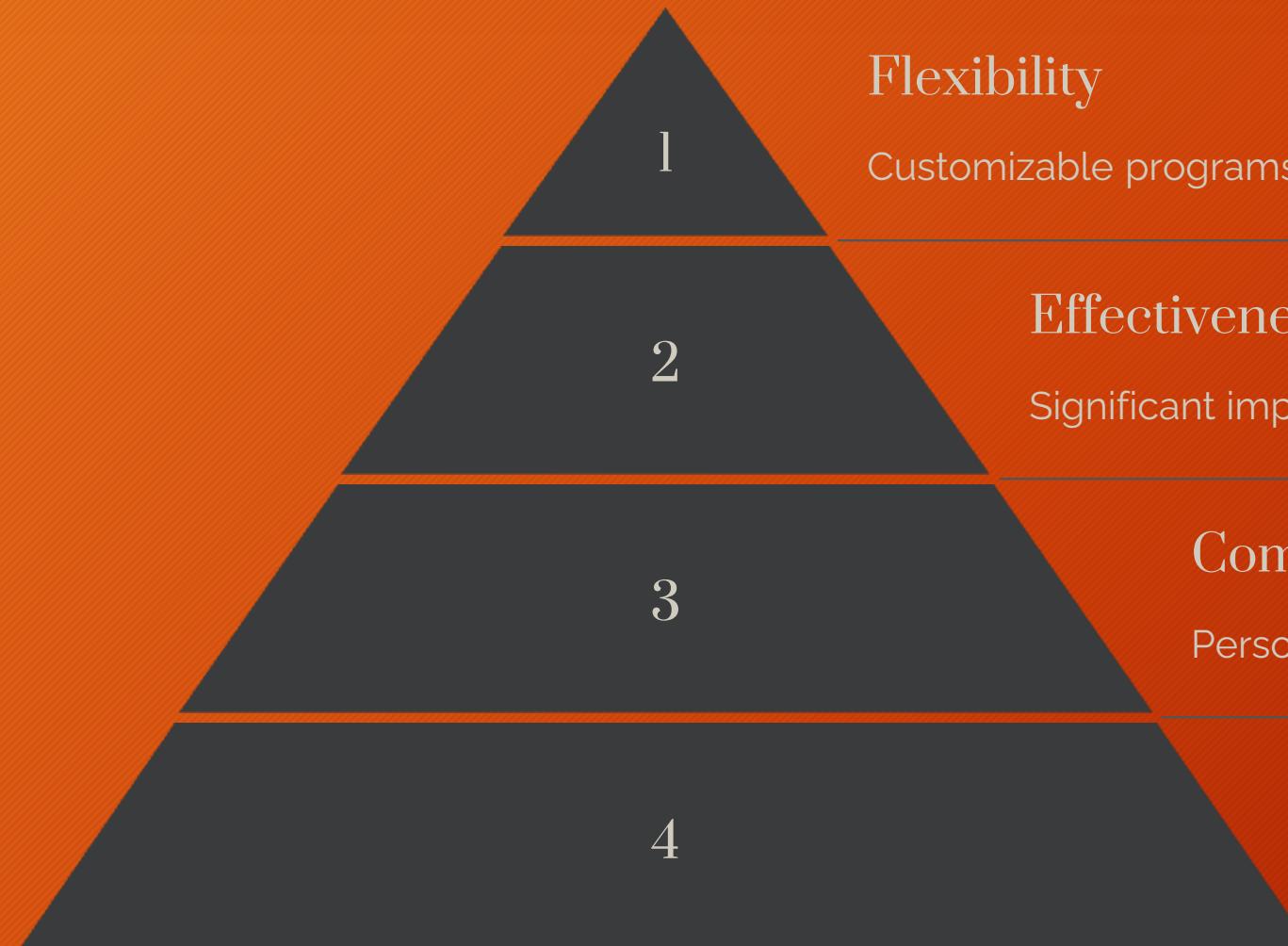
Figure 1. Abnormal tinnitus perception due to outer hair cell damage.

Tinnitus does not seem [to be limited to OHC damage alone](#), as it seems [IHC damage can also play a role in the generation of tinnitus](#). This suggests that there are additional mechanisms that are also responsible [in tinnitus generation beyond OHC damage](#) (Jastreboff & Hazell, 1993). There are other theories as to the mechanisms that may be causing tinnitus, but it is not the intention of this paper to discuss all of them.

The strength of a person's tinnitus is not only due to cochlear damage, but to the focus that one puts on the tinnitus. [This is called 'prioritization'](#). The more focus, or priority, a

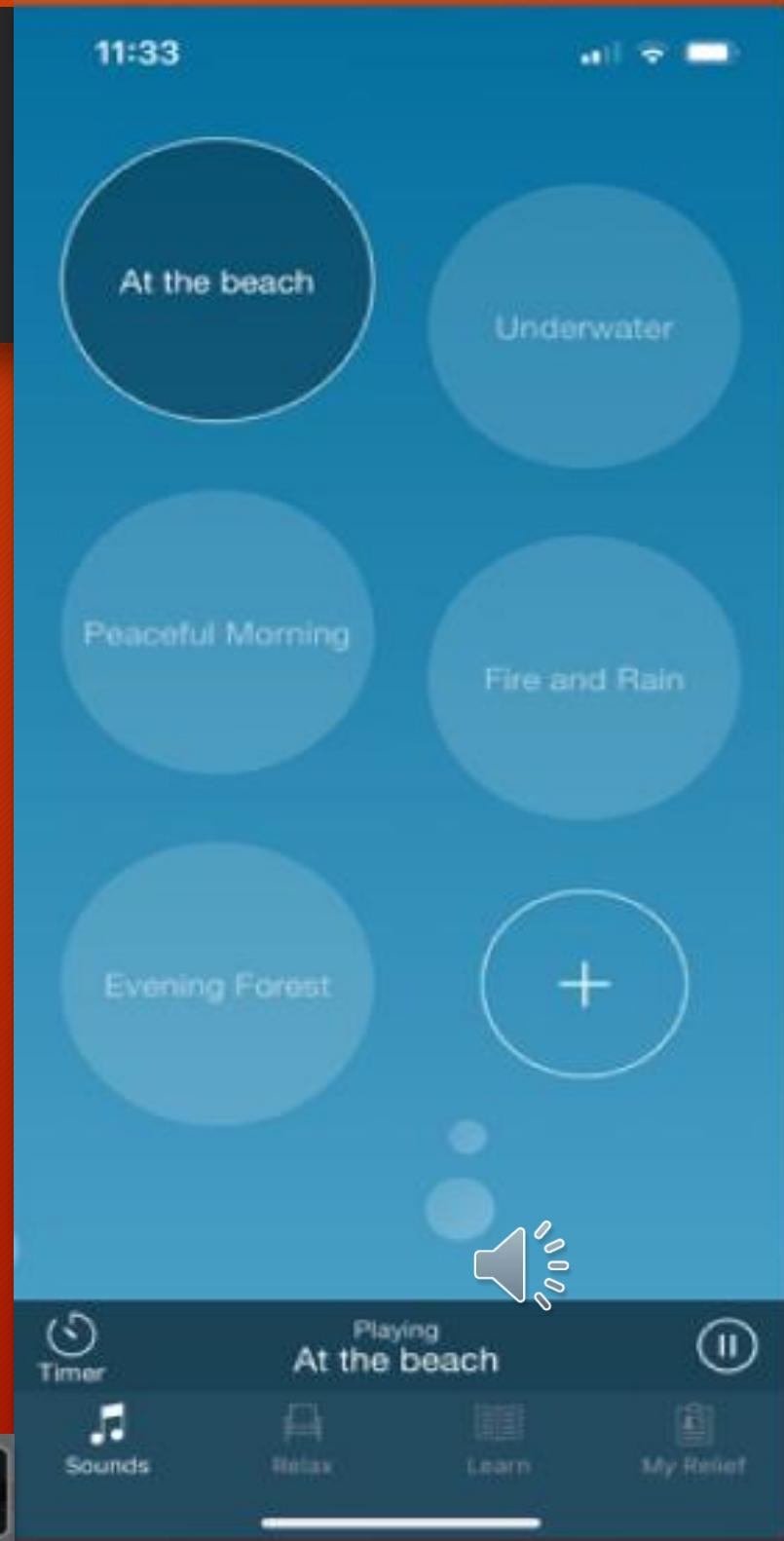


ReSound TSG Combination Unit Benefits

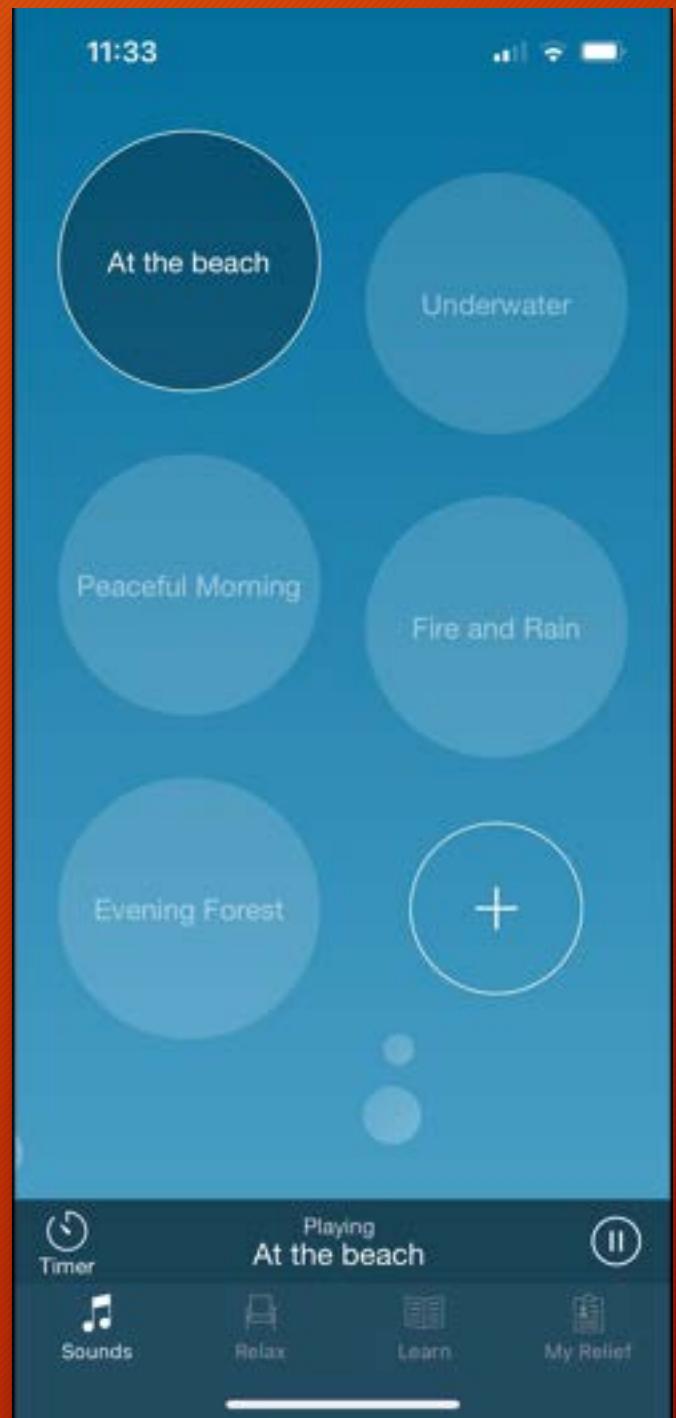
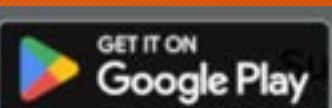
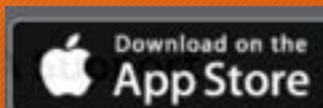


ReSound Tinnitus Relief App

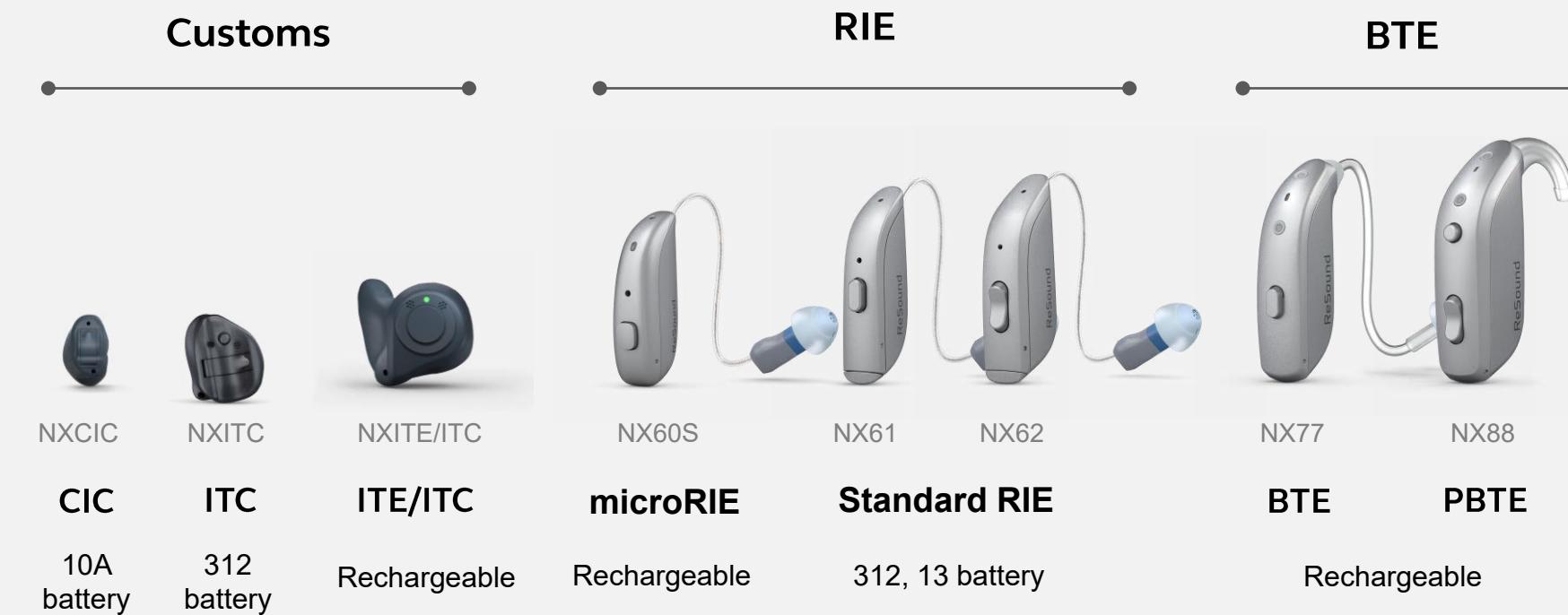
The ReSound Relief app is one of the most useful hearing aid apps in the market for relieving and managing tinnitus. As part of a tinnitus management program, the ReSound Relief app offers a combination of sound therapy, relaxing exercises, meditation, and guidance, whenever you want and wherever you are.



ReSound Tinnitus Relief App



Tinnitus Management Available in ALL STYLES



In price points 9, 7, 5



References

- Carraba, L., Coad, G., Costantini, M., Del Bo, L., Dyrlund, O., Forti, S., Searchfield, G. (2008). Combination open ear instrument for tinnitus sound treatment. Del Bo, L. Jastreboff, M., Parazzini, M., Ravazzani, P. (2008).
- Open Ear Amplification in Tinnitus Therapy: An Efficiency Comparison with Custom Sound Generators.Henry, James A, Jastreboff, Margaret M, Jastreboff, Pawel J, Schechter, Martin A, Fausti, Stephen A. (2002).
- Assessment of Patients for Treatment with Tinnitus Retraining Therapy. J Am Acad Audiol 13: 523-544.Jastreboff PJ, Jastreboff MM. (2000).
- Tinnitus Retraining Therapy (TRT) as a method for treatment of tinnitus and hyperacusis clients. J Am Acad Audiol 11: 162-177. Jastreboff PJ, Hazell JWP. (1993) .
- A neurophysiological approach to tinnitus : clinical implications . Br J Audiol 27 : 7-17. McFadden, D. (1982).
- Tinnitus: facts, theories, and treatments. Report of Working Group 89, Committee on Hearing Bioacoustics and Biomechanics, Washington, DC: National Academy Press.



Thank You!



GN