

REXTON
BICORE
WIND NOISE
CANCELLER

HANDBOOK

JULY 2023

REXTON

INTRODUCTION

When spending time outdoors, many hearing aid wearers encounter an issue they didn't have before wearing their hearing aids: bothersome wind noise caused by turbulent airflow around the hearing aid microphones. Most hearing aids already have wind noise reduction algorithms, but accurately detecting and swiftly reducing wind noise remains a challenge.

In line with the BiCore platform's philosophy, we aim to enhance hearing aid processing by shaping all signals in the wearer's surroundings, allowing them to focus on the important ones. Wind noise, even when reduced, tends to have random fluctuations that dominate our perception, making it noticeable and annoying. According to Zwicker's psychoacoustic annoyance model, the more fluctuating the noise, the more irritating it becomes.

HOW IT WORKS

To tackle this challenge, the upgraded Wind Noise Canceller introduces a precise wind smoothing algorithm that promptly reacts to wind noise fluctuations. It not only limits the amplification of wind noise but also reduces fluctuations in both ears. This results in a smoother wind noise signal, making it softer and less dominated by fluctuations. As a result, the wind noise is pushed to the background, losing its ability to draw the wearer's attention and becoming less bothersome. This allows wearers to better engage in outdoor communication and activities without being disrupted by wind noise.

Figure 1 illustrates the difference between the wind noise when Wind Noise Canceller is turned off vs. on / alternatively shows a recording from a realistic outdoor situation without, with the existing and with the upgraded Wind Noise Canceller.

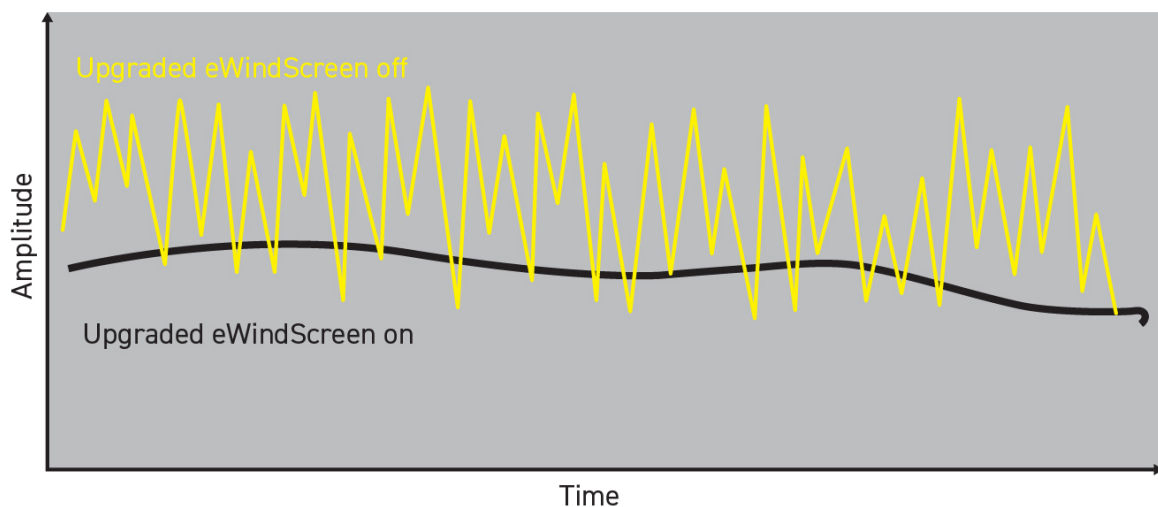


Figure 1: Comparison of wind noise signal with eWindScreen off vs. on.

PREREQUISITES

- Install Connexx RexFit 9.9
- Update firmware of BiCore hearing instruments
- Available for all form factors RIC, SLIM RIC, BTE and ITE on performance level 80 / 60 / 40 / 30

ACTIVATION

To demonstrate the Wind Noise Canceller at the PoS, one can use a fan to replicate wind. Create a program (not Automatic Program) with Wind Noise Canceller activated and another program with Wind Noise Canceller de-activated (you can deactivate Wind Noise Canceller by deactivating "Automatic Noise Reduction" in Connexx which also steers the Wind Noise Canceller). The effect will be clearly audible.

RELY ON REXTON

We believe that nothing hearing related should ever be left to chance, both for the people with hearing loss, and those who depend upon them. We understand their challenges and we meet them with proven hearing technology that is made Lifeproof so it can be counted upon to perform reliably in even the harshest environments. At work, at home, during leisure time, exercise and in all weather, you can always **RELY ON REXTON.**

**GETTING
THE JOB DONE
SINCE 1955**

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