



UNIQUE CHARACTERISTICS OF MUSICIANS WITH HEARING LOSS

- Critical Listeners
- Good Auditory Memory
- Trained Ears
- Tolerate Loud Sounds and Background Noise
- Livelihood May be at Stake

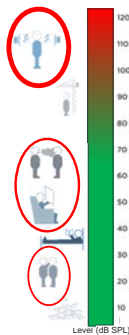


CONSIDERATIONS FOR MUSICIANS WITH HEARING LOSS

- Natural Sound Quality free of Distortion and Artifacts
- Excellent Feedback Control
- Enhanced Dynamic Range
- Wide Bandwidth



MUSIC IS LOUDER THAN SPEECH



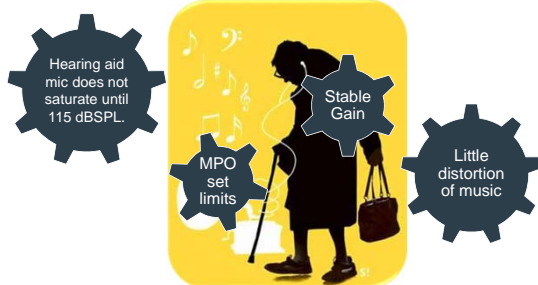
THE IMPORTANCE OF THE DELIVERY OF MUSIC



- Manual Fast-forward and rewind
 - Cassette player
 - Sound Quality



WHY MUSICIANS LIKED LINEAR PROCESSING



WHY ARE MOST DIGITAL HEARING AIDS NOT AS SATISFACTORY FOR MUSIC AS ANALOG AIDS WERE?



THE IMPORTANCE OF THE DELIVERY OF MUSIC



- Cleaner, more accurate sound
 - Real world experience
 - MORE DETAIL

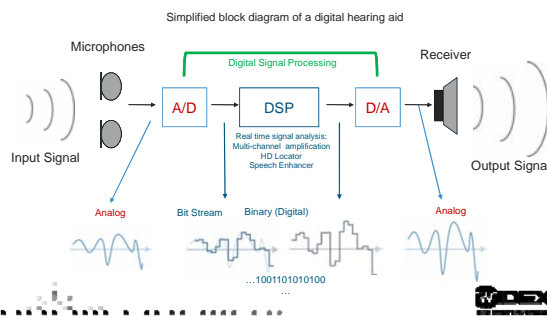


DIGITAL HEARING AIDS

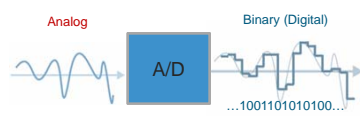


HOW IS DIGITAL DIFFERENT?

The Analog to Digital Converter




THE IMPORTANCE OF A SUPERIOR ANALOG TO DIGITAL CONVERTER



■ Accuracy of the A/D conversion will impact the following:

- Input Range
- Sampling Frequency
- Bit Depth & Dynamic Range
- Internal Noise
- Battery Consumption





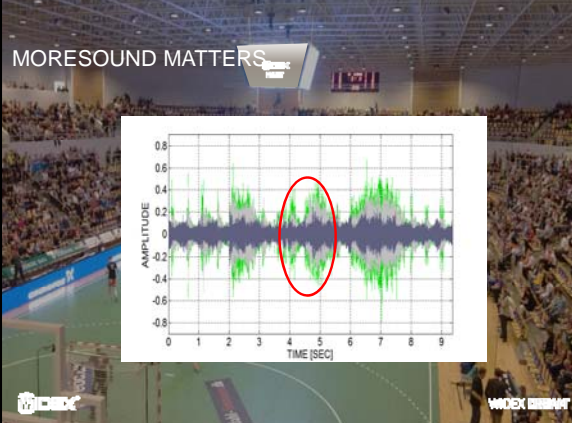
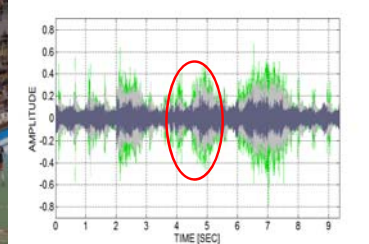


MORESOUND

+

Natural sound QUALITY



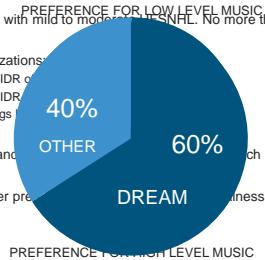

MORESOUND MATTERS

STUDY: A HEARING AID SOLUTION FOR MUSIC

Chasin, Hearing Review. 2014. January: 28-31.

- N = 10 Musicians with mild to moderate SNHL. No more than 40 dB at 1000 Hz.
- 2 Blind Randomizations
 - A/D convertor IDR on
 - A/D convertor IDR off
 - All other settings
- Listened to high and low level music
- Analysis of listener preference

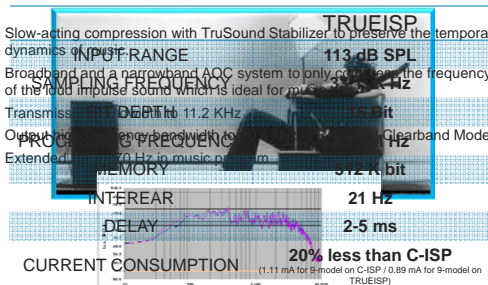


PREFERENCE FOR HIGH LEVEL MUSIC



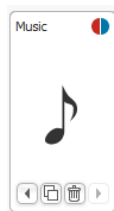
IS THE A/D CONVERTOR THE ONLY ASPECT IN REPRODUCING HIGH FIDELITY MUSIC?

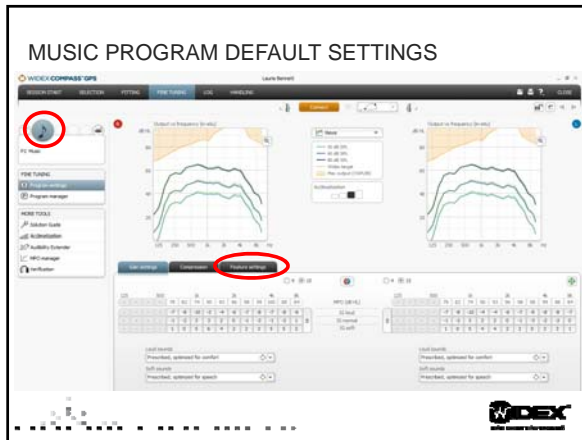
- Slow-acting compression with TruSound Stabilizer to preserve the temporal dynamics
- Broadband and a narrowband AOC system to only compress the frequency of the loud impulse sound which is ideal for music
- Transmitted bandwidth 11.2 KHz
- Output frequency bandwidth 10 KHz
- Extended bandwidth to music program

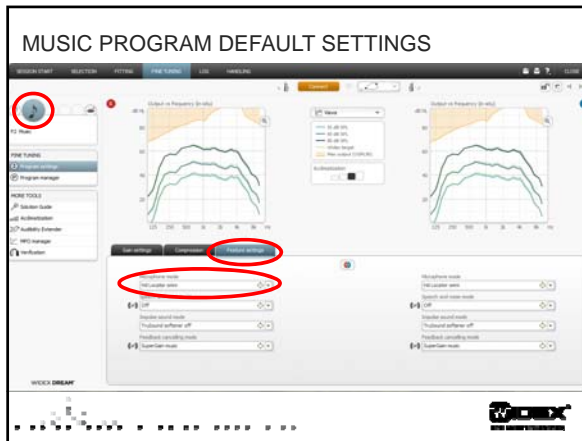


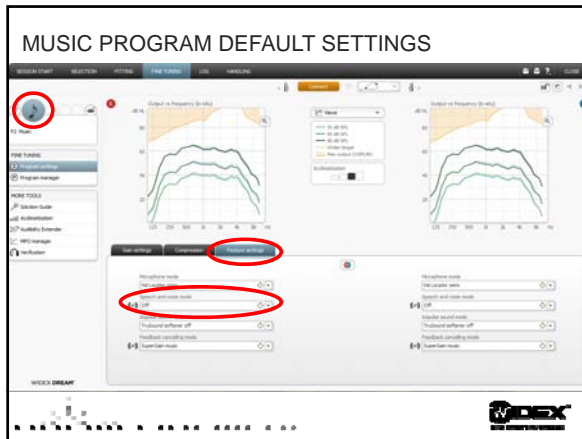
WIDEX MUSIC PROGRAM

Defaults to settings that creates natural sound quality for music







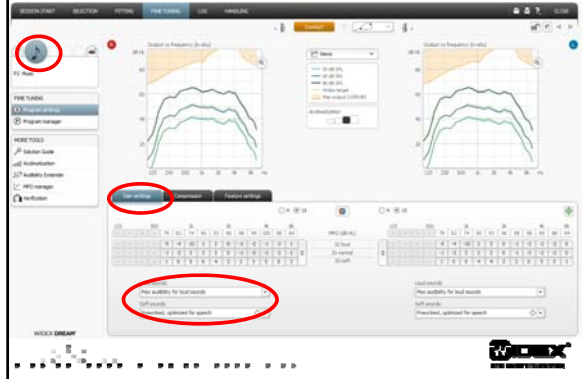




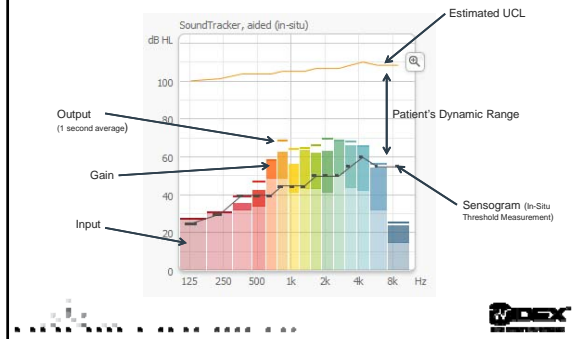
MUSIC PROGRAM FITTING AND FINE TUNING



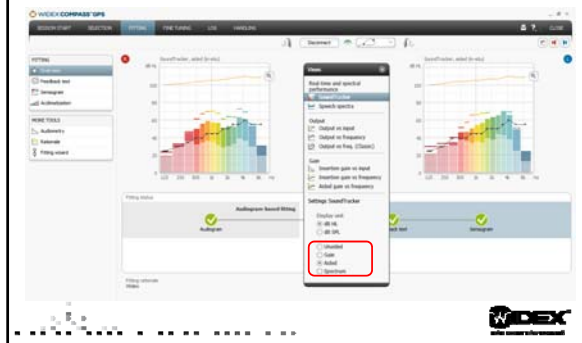
MUSIC PROGRAM FINE TUNING



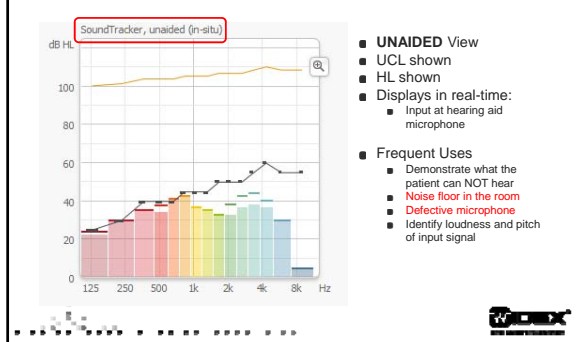
WIDEX SOUNDTRACKER



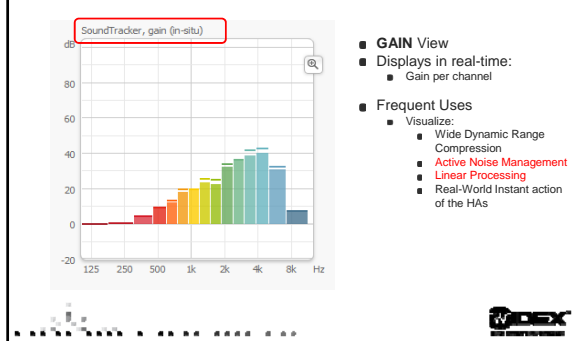
WIDEX SOUNDTRACKER – (4 DIFFERENT VIEWS)



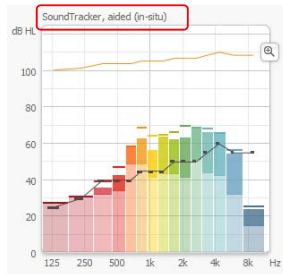
WIDEX SOUNDTRACKER



WIDEX SOUNDTRACKER



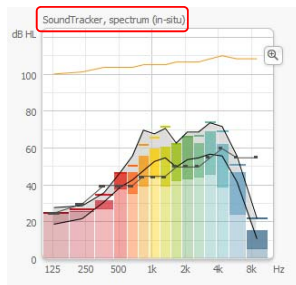
WIDEX SOUNDTRACKER



- **AIDED View**
- UCL shown
- HL shown
- **Displays in real-time:**
 - Input at hearing aid microphone
 - Gain applied to above input
 - Output (1 second average)
- **Frequent Uses:**
 - Visualize Sensation Level
 - Visualize real-time audibility



WIDEX SOUNDTRACKER



- **SPECTRUM View**
- **Frequent Uses:**
 - Average amplification overtime
 - Displays real-time functioning of the hearing aid



DREAM FAMILY



DEX DEVICES FOR MUSIC



SUMMARY

- Musicians have unique needs for amplification
- Natural sound quality is possible with Widex Dream technology
- It is easy to fit and fine tune Dream for musicians



For questions or more information, please contact
AOInquiry@widex.com or 1-800-221-0188.