

# Troubleshooting Guide

Thrive Technology



## Patient's Own Voice

### Voice Sounds

- In a barrel/tunnel
- Echoes
- Hollow
- Like they have a cold/ears plugged

### Inspire X Adjustments

- Decrease gain using the Occlusion Control
- Decrease Low Frequency Gain
- Decrease Moderate Gain at 1000 Hz and/or 1500 Hz

### Other Considerations

- Occlusion may be due to the physical presence of the hearing aid and not because of amplification; to test, turn off the hearing aid and have the patient speak
  1. Report persists—issue is occlusion; address with acoustic modifications
    - Enlarge vent diameter
    - Shorten and/or taper canal
    - Remake hearing aid or earmold with different canal length
  2. Report resolved—issue is amplification; address with response adjustments

### Voice Sounds

- Muffled

### Inspire X Adjustments

- Increase Moderate Gain at 1000 Hz and/or 1500 Hz
- Increase Loud Gain
- Increase Maximum Output
- Increase High Frequency Gain
- Decrease Low Frequency Gain

### Other Considerations

- Occlusion may be due to the physical presence of the hearing aid and not because of amplification; to test, turn off the hearing aid and have the patient speak
  1. Report persists—issue is occlusion; address with acoustic modifications
    - Enlarge vent diameter
    - Shorten and/or taper canal
    - Remake hearing aid or earmold with different canal length
  2. Report resolved — issue is amplification; address with response adjustments

### Voice Sounds

- Distorted
- Crackles
- Unnatural/like a megaphone

### Inspire X Adjustments

- Decrease Moderate Gain at 1000 Hz and/or 1500 Hz
- Decrease Loud Gain
- Decrease Overall Output

### Other Considerations

- If decreasing Overall Output worsens sound quality, consider increasing Overall Output

## Hearing in Noise

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### Patient has Difficulty

- Understanding speech in background noise

### Inspire X Adjustments

- Verify Adaptive Directionality is enabled via Sound Manager screen
- Enable Directionality Plus via Sound Manager screen Details link
- Consider enabling a Fixed Directional microphone response
- Increase Speech in Noise Control via Sound Manager screen
- Increase Overall Gain at 1000 Hz and/or 1500 Hz, then higher frequency gain
- Decrease Soft Low Frequency Gain
- Turn Immersion Directionality off if soft speech sounds are muffled

### Other Considerations

- If device does not have directional microphones, consider recommending a directional device
- Consider enabling Edge Mode via the User Control screen
- Consider 2.4 GHz Remote or Thrive Hearing Control app with Comfort Boost engaged to make the Speech in Noise control more aggressive
- Consider 2.4 GHz remote microphone options to improve signal-to-noise ratio
- Consider turning Speech in Noise off for severe-to-profound hearing loss

### Patient Hears

- Voices at a distance better than near

### Inspire X Adjustments

- Increase Overall Gain at 1000 Hz and/or 1500 Hz
- Increase Overall Soft Gain
- Decrease Speech in Noise setting via the Sound Manager screen

### Other Considerations

- If device does not have directional microphones, consider recommending a directional device
- Consider enabling Edge Mode via the User Control screen
- Consider 2.4 GHz Remote or Thrive app with Comfort Boost engaged to make the Speech in Noise control more aggressive
- Consider 2.4 GHz remote microphone options to improve signal-to-noise ratio

### Patient Reports

- Low tolerance for noise
- Background noise too loud

### Inspire X Adjustments

- Decrease Overall Output
- Verify Adaptive Directionality is enabled via Sound Manager screen
- Click on the Details link to enable Directionality Plus via Sound Manager screen
- Increase Speech in Noise setting via the Sound Manager screen
- Increase Transients setting via Sound Manager screen

### Other Considerations

- If device does not have directional microphones, consider recommending a directional device
- Consider enabling Edge Mode via the User Control screen
- Consider 2.4 GHz Remote or Thrive app with Comfort Boost engaged to make the Speech in Noise control more aggressive
- Consider 2.4 GHz remote microphone options to improve signal-to-noise ratio

## Intelligibility

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### Reports

- I hear better without my hearing aids
- Speech is unclear/unnatural
- Speech in quiet is not clear
- TV/Radio is not clear

### Inspire X Adjustments

- Increase Overall Gain at 1000 Hz and/or 1500 Hz
- Decrease Speech in Noise setting via the Sound Manager screen
- Set Speech and Noise for Less Activity via Sound Manager screen
- Increase Low Frequency Gain for Streamed Memory

### Other Considerations

- Consider a customized TV memory via the Thrive app
- Consider adding a 2.4 GHz TV Streamer
- Consider enabling Edge Mode via the User Control screen
- Consider 2.4 GHz Remote Microphone options to improve signal-to-noise ratio
- May need to counsel on fact that poor speech clarity may be due to poor speech discrimination

### Speech Sounds

- Muffled even when in quiet

### Inspire X Adjustments

- Decrease Quiet setting via the Sound Manager screen
- Ensure Immersion Directionality is Off via Sound Manager screen Details link
- Increase Soft and Moderate Gain

### Other Considerations

- Quiet adjusts expansion and low-level noise reduction to ensure the hearing aids are quiet in quiet environments
- Consider enabling Edge Mode via the User Control screen

# Streamed Input

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## Reports

- Streamed input doesn't have enough bass

## Inspire X Adjustments

- Ensure a Stream Boost memory is enabled
- Ensure Auto Streaming is enabled in the Thrive app for 2.4 GHz products
- Increase Gain for Low Frequencies
- Increase Output for Low Frequencies

## Other Considerations

- Consider a customized TV memory via the Thrive app
- Consider adding a 2.4 GHz TV Streamer
- Consider enabling Edge Mode via the User Control screen

## Reports

- External environment is louder than the streamed signal

## Inspire X Adjustments

- Mute the hearing aid microphones

## Other Considerations

- Consider adjusting the streamed vs microphone input ratio via the Thrive app
- Consider enabling Edge Mode via the User Control screen

# Loudness

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## Overall Too Loud

- Voices too loud
- All sounds too loud
- Harsh/too loud

## Inspire X Adjustments

- Change Experience Level to provide less gain (3 to 2 or 2 to 1)
- Decrease Overall Gain above 1000 Hz
- Decrease Gain using Occlusion Control
- Decrease High Frequency Loud Gain

## Other Considerations

- May need to start with lower gain settings than the prescriptive target recommends
- Patient may be unaccustomed to amplification or may be accustomed to lower gain devices
- May need to consider a different fitting formula
- Compression ratios are increased as the curves move closer together; decreased as the curves move farther apart

## Loudness Comfort

- Sounds are painful
- Clattering dishes too loud
- Running water
- Other environmental sounds too loud

## Inspire X Adjustments

- Increase Transients setting via the Sound Manager screen
- Decrease High Frequency Loud Gain
- Decrease Overall Output
- Decrease Overall Loud Gain
- Increase Machine Noise setting via the Sound Manager screen

## Other Considerations

- Ensure Best Fit is using e-STAT fitting formula
- Enter pure tone UCLs for at least 500 Hz and 3000 Hz to personalize and help optimize the output settings
- Utilize Speech Mapping to identify frequencies causing discomfort
- Compression Ratios are increased as the curves move closer together; decreased as the curves move farther apart

## Overall Too Soft

- Voices too soft
- All sounds too soft
- Hearing aids too soft

## Inspire X Adjustments

- Increase Overall Gain
- Increase Overall Output
- Increase Overall Soft Gain
- Increase Overall Moderate Gain
- Increase Low Frequency Overall Gain
- Decrease Quiet setting via the Sound Manager screen

## Other Considerations

- Utilize Speech Mapping to verify audibility
- Patient may not perceive the aid as being loud enough depending on previous hearing aid experience
- Compression Ratios are increased as the curves move closer together; decreased as the curves move farther apart
- Quiet adjusts expansion and low-level noise reduction to ensure the hearing aids are quiet in quiet environments

## Noisy

- Hearing aids are noisy
- Refrigerator hum too loud
- Hearing aids are noisy in quiet environments

## Inspire X Adjustments

- Increase Quiet setting via Sound Manager screen
- Decrease Soft Gain at 750 Hz and below
- Decrease Overall Soft Gain

## Other Considerations

- Quiet adjusts expansion and low-level noise reduction to ensure the hearing aids are quiet in quiet environments

## Noisy

- Hearing aids noisy in quiet venues like a library or quiet cafe

## Inspire X Adjustments

- Increase Quiet setting via Sound Manager screen
- Decrease Soft Gain at 750 Hz and below
- Decrease Overall Soft Gain

## Other Considerations

- Quiet adjusts expansion and reduces low level noise to ensure the hearing aids are quiet in a quiet environment
- Consider enabling Edge Mode via the User Control screen

## Pumping

- Hearing aids cut in and out
- Hearing aids cut in and out when patient speaks
- Loud sounds fade in and out

## Inspire X Adjustments

- Increase Overall Loud Gain
- Decrease Compression Ratios
- Decrease Machine Noise setting via Sound Manager screen

## Other Considerations

- Compression Ratios are increased as the curves move closer together; decreased as the curves move farther apart
- Adjust time constants for Machine Noise to slower, if available

## Shutting Down

- Hearing aids shut down with loud sounds
- Hearing aids cut out when patient speaks
- Loud sounds fade in and out

## Inspire X Adjustments

- Decrease Transients setting via the Sound Manager screen
- Decrease Compression Ratios
- Increase Overall Output/MPO
- Increase Overall Gain
- Increase Overall Soft Gain
- Increase Overall Loud Gain

## Other Considerations

- Compression Ratios are increased as the curves move closer together; decreased as the curves move farther apart

## Transient Sounds are

- Bothersome

## Inspire X Adjustments

- Increase Transients setting via Sound Manager screen

## Other Considerations

- Consider turning off for severe-to-profound hearing loss

## Transient Sounds are

- Too Soft/Unnatural

## Inspire X Adjustments

- Decrease Transients setting via Sound Manager screen

## Other Considerations

- Consider turning off for severe-to-profound hearing loss

## Sound Quality (Continued)

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### Sounds are

- Hollow
- Muffled

### Inspire X Adjustments

- Decrease Loud Gain at 500 Hz and 750 Hz
- Increase Moderate Gain at 1000 Hz and/or 1500 Hz
- Increase Moderate High Frequency Gain

### Other Considerations

- Increase Vent Size and update Acoustic Options to match hearing aid

### Sounds are

- Sharp
- Tinny

### Inspire X Adjustments

- Increase gain between 2000 Hz-4000 Hz, then increase gain at 750 Hz
- Increase Low Frequency Gain
- Decrease Overall Output above 1000 Hz
- Increase Speech in Noise
- Increase Compression
- Change Experience Level to provide less gain (3 to 2 or 2 to 1)
- Consider enabling the Automatic feature within Experience Manager

### Other Considerations

- Utilize Speech Mapping or Verify Comfort to identify areas of sharpness
- Compression Ratios are increased as the curves move closer together; decreased as the curves move farther apart
- Consider Best Fit using a different fitting formula
- Patient's auditory perception may be distorted due to long-standing high-frequency hearing loss; counseling is key

## Music

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### Background Music

- Not full/robust enough

### Inspire X Adjustments

- Increase the Auto Music setting via Sound Manager screen

### Other Considerations

- Consider creating a dedicated Music Memory for improved music sound quality
- Consider use of 2.4 GHz streaming accessory
- Consider enabling Edge Mode via the User Control screen

### Background Music

- Too dominant
- Unexpected fluctuations

### Inspire X Adjustments

- Decrease the Auto Music setting via Sound Manager screen

### Other Considerations

- Consider creating a dedicated Music Memory for improved music sound quality
- Consider use of 2.4 GHz streaming accessory
- Consider enabling Edge Mode via the User Control screen

### Music Sounds

- Too tinny in the Music Memory

### Inspire X Adjustments

- Decrease treble via QuickFit screen
- Increase bass via QuickFit screen

### Other Considerations

- Consider the Fine-Tuning screen for patients who require very discrete frequency-specific adjustments
- Consider use of 2.4 GHz streaming accessory
- Consider enabling Edge Mode via the User Control screen

### Music Sounds

- Too much bass in the Music Memory

### Inspire X Adjustments

- Decrease bass via QuickFit screen
- Increase treble via QuickFit screen

### Other Considerations

- Consider the Fine-Tuning screen for patients who require very discrete frequency specific adjustments
- Consider use of a 2.4 GHz streaming accessory
- Consider enabling Edge Mode via the User Control screen

## Hearing Aids

- Whistle
- Chirp

## Inspire X Adjustments

- Initialize feedback cancellation with hearing aid in the ear
- Reduce Adaptive Feedback Cancellation Sensitivity (High to Low or Low to Off) via the Feedback Cancellation screen
- Reduce Overall Gain

## Other Considerations

- Manage acoustic options for better fit and positioning of the hearing aid in the ear
- Utilize Speech Mapping to identify feedback peak and decrease gain at peak
- Feedback cancellation needs to be re-initialized any time the acoustic characteristics of the hearing aid are changed (e.g. shell modification, new earmold)

## Hearing Aids

- Sound warbly with own voice or other inputs

## Inspire X Adjustments

- Initialize feedback cancellation with hearing aid in the ear
- Reduce Adaptive Feedback Cancellation Sensitivity (High to Low or Low to Off) via the Feedback Cancellation screen

## Other Considerations

- Manage acoustic options for better fit and positioning of the hearing aid in the ear
- Utilize Speech Mapping to identify feedback peak and decrease gain at peak
- Feedback cancellation needs to be re-initialized any time the acoustic characteristics of the hearing aid are changed (e.g. shell modification, new earmold)