

Two ears are  
better than one.



**Siemens Hearing Instruments**  
*Better hearing is better living.*

**SIEMENS**

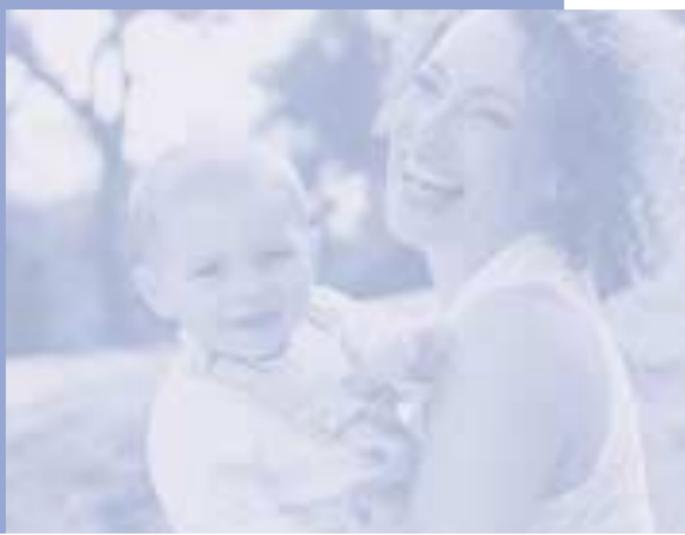
Two ears for a reason.





*Hearing with both ears, as nature intended, is called binaural hearing. It allows us to hear sounds accurately and more naturally. Especially in noisy situations, it gives us a sense of balance and direction.*

*Approximately 80 percent of individuals with hearing loss have hearing loss in both ears. Yet some people only wear a hearing aid in one ear. Amplifying only one ear when both ears have a hearing loss can put you at a disadvantage. It can make it more difficult to hear in noise, understand speech, and detect where sounds are coming from. It can result in straining to hear and cause fatigue. Studies show that even when a hearing loss is worse in one ear, most people with hearing loss in both ears will benefit from wearing two hearing aids.*



## The brain needs two ears for accuracy.

Getting a complete picture of how we hear is a good place to begin to fully understand why binaural amplification, or wearing two hearing aids, is important.



- Sound waves are collected by both the left and right ears, and channeled through each ear canal to each eardrum.
- When sound waves reach the eardrums, the impact creates vibrations, which are transferred through the middle ears. Each middle ear, the left and right, contains a series of three tiny bones: the hammer, anvil and stirrup.
- The stirrup, the third of the tiny bones, is connected to a delicate, snail-shaped structure in the inner ear called the cochlea. Each cochlea, from the right and left ear, is filled with fluid and lined with thousands of microscopic hairs.
- The vibrations of the stirrup set the cochlear fluid in motion, causing the hairs to bend from the waves of the moving fluid. The bending of these hairs sets off nerve



impulses that are then passed through the left and right auditory (hearing) nerves.

- The auditory nerves carry the signals to the hearing centers of the brain. The brain compares the information from both ears and translates the signals into what we perceive and understand as "sound."

This instantaneous process is how we accurately hear in our 3-D world of sound. However, when a hearing loss affects both ears, and only one ear is amplified, the brain only receives half of the information and can misinterpret what is being heard. This can also result in a lack of clarity, an inability to locate the source and direction of the sound, as well as a reduction of sound quality. Wearing two hearing aids can help us hear as nature intended.



## Benefits of two hearing aids

Years of clinical and field trial research have shown the benefits of binaural amplification.

- **Increased Speech Understanding**

When compared to one hearing aid, wearing two hearing aids can result in clearer speech in normal listening situations. Binaural amplification delivers more of the sounds you need, so your brain can process the sounds correctly, making it easier and more comfortable to understand speech in noise.

- **Enhanced Sound Quality**

When hearing through two hearing aids instead of one, sounds have fuller quality and a sense of balance. Because two hearing aids are used, the volume levels of each can be set lower, minimizing the risk of distortion and auditory fatigue that can be caused by higher volume settings. This makes sound and the act of listening more comfortable and natural.







- **Improved Localization**

When hearing with two hearing aids, the brain receives sound from both the left and right ears, making it easier to locate the direction of sounds. Known as localization, this skill occurs automatically for those with normal hearing. Binaural amplification often makes it easier to locate the direction of a sound.

Localization is very important in daily life, an example is the ability to know which way to turn when someone is calling your name or being able to tell from which direction traffic is coming.

## Latest hearing technology

Wearing hearing aids in both ears is more beneficial than ever with the latest hearing aid technology. Directional microphone systems, automatic volume control, and voice activated noise reduction systems all work to improve speech understanding and listening comfort in the many different hearing situations encountered every day.



**A difference you  
can hear for yourself.**

**Hear for yourself the  
difference binaural  
amplification can make.**



Start by talking to your Hearing Care Professional to determine if you are a candidate for binaural amplification. He or she can guide

you through the process of selecting the most appropriate hearing aids for your type and degree of hearing loss and program them specifically to fit your personal requirements.

Compare how you are able to hear wearing just one hearing aid, with wearing two in different situations. Pay attention to differences in:

- Overall sound quality
- Speech clarity
- Your ability to understand what is being said in groups or noisy situations
- Your comfort level while listening
- Your ability to locate sources and directions of sound
- The feeling of having balanced hearing





**Talk to your Hearing Care Professional about wearing two hearing aids and hear for yourself why ... two ears are better than one!**



# A world leader in hearing instruments

For over 125 years, Siemens Hearing Instruments has been dedicated to the research, design and manufacture of hearing solutions so that people with hearing loss can enjoy the world with better hearing and better living.

Technological leadership is a tradition at Siemens. From hearing aids to medical imaging systems, Siemens is the world's number one provider of advanced electronic health care systems designed to support and enhance life.

*Your hearing improvement with any hearing aid depends on the fit of the hearing aid, the type or degree of your hearing loss, and proper diagnostic testing. Of course, no hearing aid can restore normal hearing, and not everyone will benefit equally.*

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For more information on binaural amplification contact:  
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