



How Assistive Listening Systems Support Courtroom Interpreting

Courtrooms are challenging listening environments, even for people without hearing loss. That's why ensuring all courtroom participants can hear and understand is critical to a fair and efficient trial.

By Mikey Shaffer

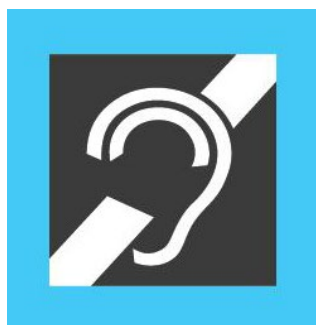


Figure 1: Universal signage for assistive listening systems

Courtroom interpreters need to know about assistive listening systems. Whether they're new to courtroom interpreting or veterans of this specialty, they've likely seen the universal signage for assistive listening systems (see Figure 1) or worked in courtrooms where people were wearing/using assistive

listening receivers. Read on to learn what assistive listening systems are, how they work, why they're necessary, and how interpreters can use them to facilitate their own work and communication.

What Are Assistive Listening Systems?

Assistive listening systems use technology to deliver

audio from a source to an assistive listening device. The device might be a cochlear implant, hearing aid, or a portable receiver that a user borrows from a venue. Audio sources include microphones, video screens, and speakers. There needs to be a transmitter to send the sound from the audio source and some sort of receiver that listeners wear or carry. Listeners can hear audio from the receiver via connected headphones or earbuds. If they have hearing aids equipped with a telecoil (a small copper wire built into the hearing aid), a portable neck loop (also called an induction loop) can be used to transmit audio from the receiver directly to the hearing aids. (See Figure 2 on page 16.)

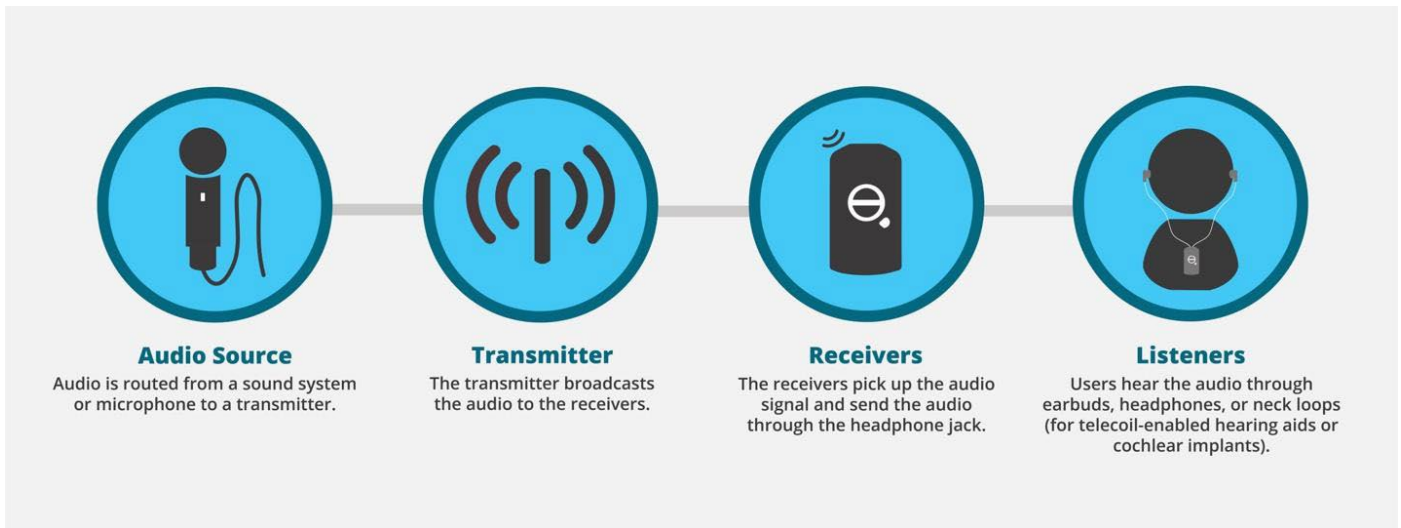


Figure 2: An illustration of how assistive listening systems work

The purpose of an assistive listening system is to deliver clear audio (free of background noise) to the listener’s ears.

Making the Case for Assistive Listening Systems in Courtrooms

Hearing loss is real and on the rise. According to the [National Institute on Deafness and Other Communication Disorders](#), approximately 13% of people in the U.S. aged 12 or older have hearing loss in both ears. Disabling hearing loss, defined by the World Health Organization as hearing loss [greater than 35 decibels in the better-hearing ear](#), affects [roughly 5% of adults aged 45-54](#). For adults aged 60 and older, the number of people with disabling hearing loss increases to 25%. Hearing loss is also not just an issue in the U.S. The World Health Organization estimates that by 2050, [nearly 2.5 billion people will have some degree of hearing loss](#), and “700 million will require hearing rehabilitation.”

Consider these statistics within the context of a bustling courtroom. Imagine the ambient noise in this environment—HVAC systems, testimony, side conversations, footsteps, coughing—all reverberating on hard surfaces, creating din, and making it difficult to focus, hear, and understand what a judge or witness is saying. Add distance, multiple speakers, unfamiliar terminology, distractions, language, and remote participants on video conferencing platforms to the mix and it’s easy to see why courtrooms are challenging listening environments, even for people without hearing loss.

Ensuring all courtroom participants can hear and understand is critical to a fair and efficient trial. It’s also a requirement under the [Americans with Disabilities Act \(ADA\)](#). The ADA requires courts to provide accommodations such as assistive listening systems to individuals who have hearing loss or are hard of hearing.

Types of Assistive Listening Technologies

Interpreters may encounter diverse types of assistive listening systems in courtrooms. Each system helps listeners hear better by delivering clear audio directly to their ears, but the technology used to achieve that goal can vary. Popular assistive listening technologies in courtrooms include:

Infrared (IR): Infrared assistive listening systems broadcast sound from transmitters to receivers via infrared light. A listener wears a small receiver on a lanyard around their neck that connects to wired headphones. Audio from a microphone or other designated source is transmitted through infrared light to the receiver. If the person leaves the room, the audio cannot reach the receiver since light cannot pass through walls. For this reason, infrared systems are common in courtrooms, judges’ chambers, and

Assistive listening systems use technology to deliver audio from a source to an assistive listening device.

other environments where confidentiality is critical.

Audio Over Wi-Fi: This type of assistive listening system lets listeners stream courtroom audio to their smartphone or a venue-provided receiver. If listeners choose to use a smartphone, they download and open a free app on their phone, access the court's Wi-Fi network, select an audio channel, and listen to audio via headphones or earbuds connected to their smartphone. If listeners wear Bluetooth® enabled hearing aids or cochlear implants, they can stream audio from their smartphone directly to those devices. To maintain confidentiality, courtroom managers may require listeners to enter passwords to access audio channels. Some audio over Wi-Fi systems feature beacon technology that triggers audio to play automatically when a person enters a space where the beacon is located and stops when they leave the space.

Portable Two-Way Communication: An assistive listening system featuring transceivers (a combination transmitter/receiver) can be used for assistive listening and two-way communication. A presenter wears a transceiver with a headset and microphone and the listener can use either a transceiver or a receiver to hear the audio. This type of system is portable (not installed in the courtroom), which may appeal to interpreters looking to purchase and use their own equipment in courtrooms and other environments where they provide interpreting services.

Assistive Listening Systems Facilitate Interpreting

Being able to hear is essential to successful interpreting. Interpreters need to listen closely to a speaker or presenter, hear what they're saying, summarize the message, and speak it in the preferred language of their clients/listeners. Assistive listening systems can help interpreters hear clearly and minimize distractions. This may be especially important when conversation is moving quickly, more than one person is speaking, speakers have accents, or there is new or unfamiliar terminology.

Assistive listening systems also facilitate the delivery of an interpreter's words to listeners. Infrared and audio over Wi-Fi-based assistive listening systems have more than one audio channel, meaning the systems can be used for assistive listening or to deliver interpreting. Listeners select the channel to support their needs.

Interpreting Remotely and Inside the Courtroom

An interpreter may be in a booth or space outside the courtroom listening to a presenter who is speaking inside the courtroom. The interpreter hears what the presenter is saying and relays the message in the preferred language of their listeners via a microphone. Listeners borrow an assistive listening receiver from the courtroom manager or use their own smartphone as a receiver (if an audio over Wi-Fi system is available), select the interpreting channel for their language, and hear the interpreter.

Multiple channels mean more than one interpreter could be speaking live to listeners in different languages. Interpreters may be in multiple separate rooms listening to courtroom presenters and relaying content in their respective languages to listeners. However, having multiple interpreters in one space, or even just one interpreter providing whispered interpreting to a client in a courtroom, is often a more likely scenario and can make it challenging for interpreters and listeners to hear clearly. This is where a portable two-way communication system can help.

This type of all-in-one group communication system uses paired transceiver units to send and receive audio. An interpreter pairs their transceiver unit—the “leader” unit—to the presenter's unit (the presenter might be the presiding judge, a witness on the stand, a lawyer presenting closing arguments, etc.) and to the transceiver units of others in the group (i.e., the individuals for whom they're interpreting).

The system delivers audio directly from the presenter to the leader or interpreter. The interpreter hears the audio in their headset and relays the content to the group by speaking into the integrated microphone. The group hears the interpreter through headphones attached to their transceiver units. In this way, interpreters and their listeners/clients can block background noise and distractions and hear only what they wish. The interpreter hears the

According to the National Institute on Deafness and Other Communication Disorders, approximately 13% of people in the U.S. aged 12 or older have hearing loss in both ears.

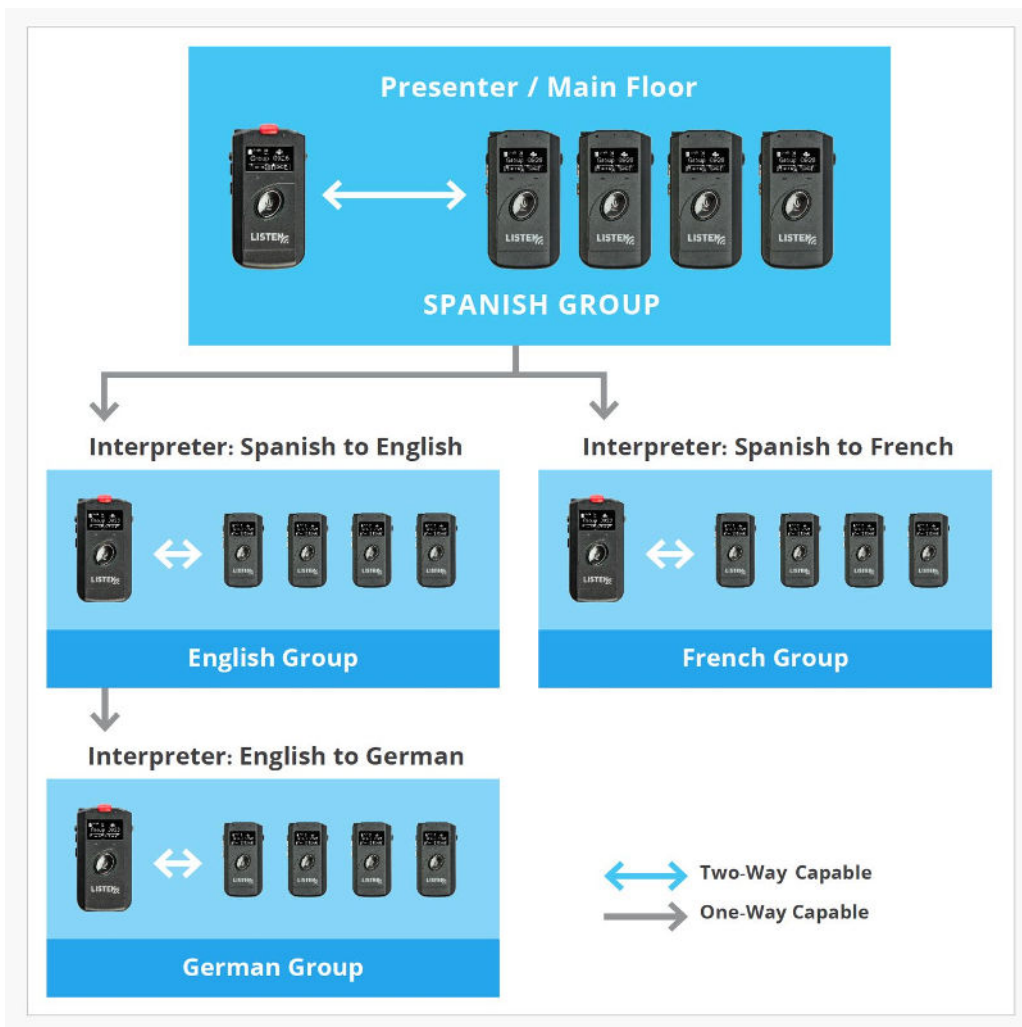


Figure 3: An illustration of relay interpreting

presenter and listeners hear the interpreter.

This system is also a simple solution for relay interpreting, allowing two interpreters to work in tandem. For example, one interpreter may listen to a presenter speak in English and relay the message to another interpreter in French, who, in turn, relays the message to a group in German. (See Figure 3 above.)

Video Conference Platforms and Assistive Listening Systems

Courtroom interpreters should be aware that audio from video conferencing

platforms is not always fed into the in-courtroom sound system that captures audio for delivery to assistive listening transmitters. This means people in courtrooms who rely on assistive listening systems to hear or facilitate interpreting may not hear remote presenters through the assistive listening system. The audio from remote presenters may only reach those in the courtroom through a soundbar or speakers.

Interpreters providing services for listeners in the courtroom via video conference should confirm

with courtroom managers and AV coordinators that there is an audio output feed to direct sound from the conference platform into the system that supports assistive listening.

Courtroom interpreters play a critical role in the

The World Health Organization estimates that by 2050, nearly 2.5 billion people will have some degree of hearing loss, and “700 million will require hearing rehabilitation.”

justice system, so it’s essential that everyone in legal proceedings and depositions can hear and understand. Assistive listening systems support the work interpreters do. When interpreters and their clients utilize assistive listening systems, clients hear the words of the interpreter in their ears without the background noise and distractions common in courtrooms that can cause listeners to miss parts of the interpreter’s speech or misunderstand what they are saying. ^{ATA}



Mikey Shaffer is senior sales director at Listen Technologies, a leading provider of advanced wireless listening solutions for 26 years. She has worked in the assistive technology industry for 10 years and is a passionate advocate for inclusion. She joined Listen Technologies in 2016 and most recently was consultant liaison. Before Listen Technologies, she was a telecommunications equipment specialist at Relay Utah, where she worked to provide telecommunications solutions to individuals from disadvantaged communities who are deaf or hard of hearing. mikey.shaffer@listentech.com