

Composer Richard Einhorn writes about his sudden hearing loss and how, with his clever uses of existing technology, he continues to work and live well with hearing loss.

Richard Einhorn

No Compromise

Composing and Living to the Hilt after Hearing Loss

I love sound, all sounds—loud sounds, soft sounds, sad sounds, beautiful sounds, funny sounds, glorious sounds. I experience the world primarily through my ears, not through my eyes. Ever since I was 15 when I realized that I was a composer, I have spent nearly every day of my life trying to find ways to hear better, working hard to continue to train my hearing and to keep up with the amazing audio technology of our time.

Forty-two years later, when I suddenly lost most of my hearing, and after I recovered from the shock, I applied my love of sound plus my lifetime involvement with pro audio to the incredibly difficult communication problems caused by my serious hearing loss. True, my hearing is damaged, but I certainly haven't lost the ability to analyze, understand, and improve what I am still able to hear.

I'm still learning a lot, but I've come up with some techniques and devices that work extremely well for me. None of them is perfect, but I've found that by keeping my expectations reasonable; by continuing to experiment and practice; and by piecing together a hearing assistance "kit" with a few

fairly straightforward devices, I can hear reasonably well (but not perfectly) in nearly every situation I encounter in my life, from meals with my family and friends to rehearsals and performances of orchestral concerts of my music.

Obviously, everyone's hearing loss is different, and obviously, everyone isn't that comfortable with modern technology. That said, there is one thing I can say for certain:

It is vitally important that people with hearing loss stop trying to hide their hearing loss. There is absolutely nothing to be gained by doing so, and so much to lose.

I have met no one, including some of the best musicians and most competitive executives I've worked with, who cared a whit that I was obviously using hearing assistance to listen to a rehearsal or to participate in a meeting. Besides, after my sudden hearing loss, it was so obvious that I couldn't hear properly that I realized I couldn't go stealth even if I wanted to. Because my hearing assistance—which I don't try to hide—makes it relatively easy for me to participate as actively as ever at meetings, dinners, and concerts, my very serious

hearing loss has not been permitted to very seriously harm my life.

Although I certainly don't enjoy having a hearing loss—and I know I'm not alone—I did enjoy piecing together my hearing assistance kit and find it invaluable both in my musical and personal life. The first question that came to my mind was:

After my hearing loss, could I still compose music?

I quickly learned that the answer was yes.

Figuring Out My Hearing Loss

Hearing losses are always complicated. Before I could work to improve my hearing, I first had to understand what I was hearing. I began by reviewing my history:

On June 15, 2010—one of the worst days of my life—I woke up to find that my right ear had gone completely deaf, with virtually no warning at all. This is a condition called Idiopathic Sudden Sensorineural Hearing Loss. It's considered a medical emergency, doctors treat it with steroids, and if you're lucky, your hearing might come

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Richard at work at the Peabody Conservatory of Music with vocalists Stephen Campbell, Phoenix, AZ; Rachel Grider, Modesto, CA; and Nola Richardson, Sydney, Australia

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back over the course of two anxious weeks. I wasn't lucky.

However, during those two weeks, I started to notice tiny scratching sounds in my right ear whenever anyone spoke to me in a voice louder than a whisper. These scratchy noises became louder and louder until they were absolutely unbearable. When I listened to speech with my right ear, it sounded like I was listening to an infuriatingly-loud robot from a bad 1950s sci-fi film. Speech was utterly incomprehensible in my right ear.

This problem—inability to hear speech, excessive volume, and extreme distortion—is called “recruitment” or “hyperacusis” and I developed a very severe case of it. I started wearing an earplug in my right ear whenever I ventured outside my apartment.

With my right ear worse than being deaf, I was now dependent solely on my left ear in order to hear the world.

Unfortunately, my left ear already suffered from a middle ear problem called otosclerosis. Everything sounded much too soft. In fact, my left ear was operating at just 30 percent the level of a normal ear. While surgery can correct the problem, it was now too dangerous to perform. No American surgeon as

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would dare to operate on my only hearing ear.

I studied my audiograms and, while useful, I've found that my own ability to hear is the best judge of what my ears are doing. Emotionally, it was heart-wrenching to listen coldly and clinically to what my damaged ears were producing—I used to hear so well!—but I shoved aside my sense of being treated terribly unfairly by life and just listened, and then listened some more. Then I tried to understand, on my own terms, what was going on. Here, oversimplified, was what I was dealing with:

My right ear was totally dead, worthless, there was no usable sound. My left ear was down 70 percent in terms of volume. Without hearing assistance, I was now functionally deaf. But the closer I listened to my left ear, the more I realized that its frequency response was still relatively flat. That is, I could still hear high sounds equally as

well as lower sounds. I could still hear far below and—crucially—far above every note on a piano keyboard. As I knew many people with hearing loss who couldn't hear the top range of the piano at all, I counted myself extremely fortunate.

Now, what would I have to do to hear better? What kind of gadgets would I need? From my long experience working in sound, I knew immediately that one solution would not fit all. I would need multiple techniques, multiple devices.

The Composer Analyzes Sound

Composing has always been a central part of my life; it is the means by which I orient myself to the world and express my deepest thoughts and feelings. I've always used whatever current technology I could find to help me write. Like many music composers, I rarely use a piano but work instead on computers and digital simulations of musical instruments. I then copy the music out—on my computer, of course—and give the parts to musicians to perform.

Would all this equipment—some of the most advanced audio technology available today—be flexible enough, and powerful enough, to be able to work around my hearing loss? After all, it had been designed for people with great hearing, not for people who needed serious hearing assistance!

I used to love listening to music over loudspeakers. After numerous tests, I was disappointed to discover that I would have to use earphones instead of my beautiful-sounding (and very expensive) recording studio speakers in order to hear well enough to write. The room ambience of my studio simply muddied up the sound now; also, the volume needed for listening irritated my right ear recruitment. I would simply have to use some kind of headphone for my left ear. My right ear, I decided, was beyond hope.

Over the years, I'd purchased a fairly large collection of headphones and earphones in a variety of styles. I quickly noticed that I could easily tell the difference between the sound of cheap phones, like the Apple earbuds, which I just threw away, and a more expensive pair. I



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Richard Einhorn (right) works with students from the Peabody Conservatory of Music: from left: Nicholas Dogas, Stephen Campbell, Rachel Grider and Nola Richardson

also realized that a sealed, in-ear design delivered by far the best sound for me.

Since I wanted to hear as well as I possibly could, I researched high-end earphones. I raided my bank account and bought an “in-ear monitor” for my left ear. It was manufactured by a company that caters to top rock stars. It was not cheap and required that I go to an audiologist for a custom-fitted ear tip. A few weeks later, an elegant case arrived with a stunningly beautiful earpiece. I plugged it in and was totally amazed; even through my damaged left ear, I knew I was listening to perhaps the single best piece of audio equipment I ever owned.

I figured I’d write a short piece of music to test it out. Instead, I just wrote and wrote and wrote. Using my amazing earphone, it was no harder for me to write with a hearing loss than it had been when my ears were normal. A few months later, the new piece premiered in New York. It was an unusual kind of string quartet, and it was a huge hit. Problem solved. Not only can I compose now, I’m composing as well as ever.

Finding a Hearing Aid

Composing is mostly an act of imagining sounds, not actually listening to sounds. Therefore, hearing enough sound to compose is a fairly straightforward problem—you don’t need to hear that much. On the other hand, hearing well enough in daily life, given the extent of my hearing loss, would be a far harder puzzle to tackle. Understanding speech, which contains meaning in addition as sound, would be especially difficult.

I turned to the Web and started to research a hearing aid for my remaining, but damaged, left ear. Alas, finding useful descriptions, specifications and technical information about hearing aids was much harder than I could have imagined!

Most of the hearing aid websites featured large pictures of smiling grandfathers, happy grandmothers, and little else. Digging into the “professional” areas of the sites provided me with a lot of information on different styles, all designed to make the hearing aids

invisible. There was very little truly detailed information about how hearing aids processed sound (but plenty of vague assurances that hearing aid X had the best sound). This seemed backwards: all I wanted to do was to hear well! I couldn’t have cared less about the style, let alone the color.

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Since I couldn’t easily find much objective, unbiased information on sound quality, I shopped instead for features. Finally, I met with my audiologist and bought a hearing aid that offered Bluetooth connectivity to a variety of devices, including my smartphone and television. It cost nearly ten times as much as that expensive earphone I use for composing and, of course, it wasn’t covered by insurance.

To get used to it, I wore my new hearing aid all the time for about two weeks before doing any kind of critical evaluation. The sound quality was only fair at best but the Bluetooth connectivity turned out to be quite useful, if somewhat unreliable.

Although I realized my hearing aid enabled me to hear somewhat better in many situations, I was still having tremendous problems understanding speech in restaurants and at parties, let alone movies and concerts. Hoping it would help, I bought the Bluetooth microphone accessory the company offered. It sounded terrible, was badly designed, and most of the time, didn’t make speech any easier to hear.

Technology: Innovative Ways to Hear

I realized I was going to need more help than a hearing aid could provide or I would have to stop going out or speaking with people. Since withdrawal from

my life was never an option, I would just have to develop ways to hear better in public. I chose to concentrate on restaurants first.

My long experience as a recording engineer and producer told me that in a noisy environment like a restaurant, a microphone that is even just two

feet away from another person’s voice might pick up so much background noise as to significantly blur speech. The mic in a hearing aid may be even farther away from a speaker’s mouth—four feet or more, sometimes, depending on the distance across a table. Therefore, I simply wasn’t going to be able to hear well unless I could get mics very close to people’s mouths and then get that sound delivered directly to my ear. I found two solutions.

A great company called Etymotic Research, Inc., made a listening system, for up to four people, called the Companion Mic. I was able to obtain a set and it works beautifully.

Three of my friends each wear one of the Companion Mics and I wear a receiver. We look like trendy spies, a tiny golden dot of light glowing from the mic we’re wearing around our necks. All I do is take out my hearing aid, put a decent-quality in-ear earphone in my ear and plug it into my receiver. Many times, it’s as if I didn’t have a hearing loss at all. No one’s ever objected to wearing one of these mics. In fact, most people think wearing the Companion Mic is very cool!

Unfortunately, the Companion Mic model I have was discontinued, but hopefully, Etymotic will release a new, updated version of the “Comp-Mic” soon.

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As good as the Companion Mic was, I needed an alternative system for the many times I'm with more than three friends at a restaurant. After a lot of experimenting, I finally came up with a very useful set-up that I use when I'm at a restaurant or party. It consists of:

1. an iPhone
2. a pair of high quality in-ear earphones (from a company like Shure, Etymotic, or Sennheiser)
3. a directional mic called the Blue Mikey which clips onto the iPhone and is available at music stores and online
4. a hearing assistance app like soundAMP R

I plug the earphones into the earphone jack on the iPhone. I snap the Blue Mikey onto the power jack of the iPhone. I open up soundAMP R, the hearing assistance app. I take my hearing aid out and insert the earphone into my ear. Then, I simply point the Blue Mikey/iPhone at the person I want to listen to and raise the volume of the mic by adjusting the fader in soundAMP R. When someone else talks, I simply point the device at that person. When a lot of people are talking, I try to find a spot for the mic that includes as many of them as possible. I move the device around as needed.

Using my iPhone with the directional Blue Mikey, I am able to hang out with my family and friends at any restaurant, and participate fully in the conversation—and I often feel I am hearing better than my fellow diners! At parties, I carry the iPhone rig at about waist height and point it up at the people with whom I'm speaking.

Is it perfect? Of course not, but it is far preferable to not understanding what is going on, to refusing to go out, or to living an unnecessarily reduced life.

Note: You can buy an inexpensive and separate device that is custom-made for hearing assistance that does a comparable job to my iPhone rig; for example, a PocketTalker—but I'm

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relatively comfortable with technology and already have an iPhone. I don't want to carry around extra equipment if I don't have to.

What about Concerts, Plays, and Movies?

I quickly learned that the assistive listening systems that are usually available in theaters typically not only sound terrible, but are often dirty, very uncomfortable to wear, leak sound that disturbs your neighbors, and are so ugly that even I—who don't embarrass easily—wince when I put one around my neck. No wonder hardly anyone uses them.

There has to be a better solution for public hearing assistance. And there is: hearing loops. In a nutshell, loops have three extremely important advantages over every other public assistive listening technology:

- Loop systems are dignified, convenient, and easy for people with hearing aids to use; all you need to do is to flip a switch to activate the telecoil on your hearing aid or cochlear implant.
- Loops are flexible—they can be used in a lot of situations that are all but impossible for every other assistive technology.
- Loops provide the opportunity to hear sound in your hearing aids that is customized for your hearing loss and no one else's.

For the life of me, I can't understand why loops aren't mandated at every concert hall, movie theater, sports stadium and house of worship in the United States. Hearing loops should be in all buses and trains, planes and air terminals, points of sale, and in the homes of everyone diagnosed with mild to moderate/severe hearing loss. For

years to come, it is unlikely that any other public hearing assistance technology I know of—not FM, not Infrared, not Bluetooth—will be as dignified and as flexible as loops. (You don't need hearing aids to use a loop system—you can use receiver/earphone combo similar to FM/Infrared headsets.)

Hearing Via a Loop System for the First Time

I first heard via a loop system while attending the HCAA Convention 2011 in Washington, D.C., a temporary installation during a performance of *Wicked* at the Kennedy Center. It was exactly a year after my sudden hearing loss and I despaired of ever enjoying a live performance again. But when I switched my hearing aid to the telecoil and heard the music in my ear—so clear, so present that it sounded as good as a CD—I burst into tears. It actually was possible to enjoy live concerts again. And all I'd done was flip a switch! I forgot I was dealing with a hearing loss. I had simply become engrossed in *Wicked's* amazing performances and compelling story.

At the Convention the next day, I introduced myself to David Myers, a well-known psychology professor and author who is also a leading advocate for hearing loops in the United States. I told him I was a composer and classical record producer who had developed a serious hearing loss and I wanted to do what I could to encourage the wider use of hearing loops. He was, as he always is, warm, gracious, and encouraging. He and others suggested I write a letter to Kennedy Center urging they permanently install a loop system. I did so and the letter

went viral. I was becoming known as a loop advocate.

While I spent the next few weeks learning as much as possible about loops (I would eventually take a course in the technology), an article proposal from Dr. Myers was passed on, by sheer accident, to a reporter friend of mine at *The New York Times* who knew I had a hearing loss. My friend e-mailed me, we met for lunch (yes, I used my iPhone rig!), and asked me what I thought about loops. I said loops were an extremely important, underused technology that could be of great benefit. My friend then passed Dr. Myers' proposal plus additional material I'd given him to *Times* science writer John Tierney, who decided to pursue a major article.

John knew me from a previous story he'd written about my music and he decided to begin the article on my epiphany at Kennedy Center. The article became the most e-mailed story of the week and the second most e-mailed story of the month! Interest in hearing loops—and the number of loop installs—has surged. In addition to Dr. Myers and John Tierney, many people worked hard to make the article so successful, including Brenda Battat, Pat Kricos, Janice Schacter, Juliëtte Sterkens and Linda Remensnyder.

There is much that can be done to improve assistive listening in theaters, none of it terribly hard to do or very expensive. It is my firm belief that by properly using hearing loops along with other technologies, millions of people with moderate and even moderately-severe hearing loss will be able to better enjoy films, live music and theater than at present, and be able to hear as well as their ears will allow with both dignity and comfort.

Conclusion

I am fortunate that my personal background allowed me to cope with some of the problems caused by my serious hearing loss. I can compose my music without compromise. I can go out with my family and friends to restaurants and participate in their conversations. I can attend live performances and go to the



Richard Einhorn at the equator in Ecuador with his daughter Miranda and wife Amy Singer

movies, and will attend many more once there are more loop systems installed.

True, no single solution will work everywhere and nothing available at present will restore my hearing. But since I understand that it is futile to hide my hearing loss, I've found numerous ways to deal with it. I can still live a rich, productive, and fulfilling life, even after hearing loss.

And right now? I'm composing full time. And in my spare time, I'm searching for even more ways for me to hear better. I will never stop trying to improve my hearing. 🎧🎧

Composer Richard Einhorn lives in New York City with his wife Amy Singer and their daughter Miranda. Richard's "opera with silent film" Voices of Light has been

called "a great masterpiece of contemporary music" and "a work of meticulous genius." It has been performed more than 200 times by major orchestras all over the world, including two recent performances with Baltimore Symphony Orchestra, Marin Alsop conducting.

His oratorio, The Origin, recently received audience and critical acclaim for its European premiere in Bremen, Germany. Richard also devotes his time to advocacy for people with hearing loss and has been featured in The New York Times and elsewhere. Read The New York Times article at <http://bit.ly/EinhornNYTimes>.

More information about Richard and his music can be found at www.richardeinhorn.com. Voices of Light and other music by Richard are available on iTunes and www.amazon.com.

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