

On-going Adjustment to CI Technology: From Australia: Felicity's Story



Figure 1: Felicity (2009)



Onset of hearing loss: age 16, deaf by age 28

Device use: Sequential implantation 2002 and 2010

Musical interests: college degree in music; pianist, organist, choirs, taught music and played in restaurants prior to hearing loss

I had to relearn to enjoy music after receiving my second device. My second implant had never been particularly good for music. As processing technology was improved for speech (such as more auto suppression/compression), the new technology was better for some things, but not others. For example, if a kettle boiled, or I vacuumed, I could not even hear myself speak, and I became 'deaf' again. More compression can also cut out subtle musical sounds that contribute to music enjoyment.

My audiologist reluctantly removed every possible compression factor and gave me access to sensitivity as well as bass and treble adjustments for my right ear. Through **trial-and-error**, I improved music slightly by reducing sensitivity (not volume) to around half. I also boosted the treble in my right ear.

Nevertheless, when wearing both processors without any auto programs, and with sensitivity reduced, I found my piano notes became totally clear and sweet. I could hear the whole range of frequencies from the lowest to the highest. It took some time and lots of adjustment. I also had to restore my confidence in playing piano.

Here are some strategies I used to improve my CI for music:

1. I experimented with many processors because no two processors gave me the same result.
 - I use many different settings on these processors.
 - I remove all auto programs including wind reduction and the algorithm tweak.
 - Some programs make my piano sound like a honky tonk—it cuts the decay exceedingly short or cuts the sound out altogether
 - In my right ear, I increase the treble by 2 and decrease the bass by 2 (I can't do it in my left ear because the technology of the implant is older).
 - I keep the volume at my normal every-day level for both processors but reduce sensitivity.
 - The level may differ depending upon the environment and reverberation. For example, I used volume setting 2, but then changed to setting 4 when I hung a quilt behind my piano, which absorbed some of the sound and reverberation. Setting 4 gives me slightly better control over loud and soft.

2. I set up numerous programming sessions with my audiologist to try and get better sound.
 - I took a piano recording on my lap top to the programming sessions to see if I can hear the difference.
 - I even asked my audiologist to visit me at home and program me in front of the piano, but that hasn't happened. I was told, 'It's a speech processor, not a music processor.'