

# Recording Beethoven's Broadwood: A Tonmeister's Perspective

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*Inside the Hearing Machine* allows us to cast a glance into the world of sound around Beethoven's Broadwood piano. It gives us insight into the distinctive sonorities of the English instrument on which Beethoven composed what would become key works in the pianistic repertoire of all times. But to me as a Tonmeister—a musically and technically trained recording professional operating at the crossroads between music and the recording arts and sciences—and as someone who has recorded pianos and worked with pianists extensively in the course of the last four decades, this project poses questions about how to understand, interpret, and capture instrumental timbre. It triggers thoughts regarding aspects of the closeness of the recorded sound, of sonic proportions between musical voices, of integration of direct and diffuse sound layers, all within the characteristic sonic realm of a historical keyboard instrument from the beginning of the nineteenth century.

## Backward-reflecting lids and the pianist's perspective

Since the development of concert halls in Europe in the nineteenth century, the preferred position for concert pianos in solo performance has been sideways on an elevated stage. This allows principal elements of the piano sound to be reflected toward the auditorium with the help of an angled piano lid supported by a prop stick.

Since the early twentieth century, the way music sounds in concert halls has become the aesthetic reference for orchestra, solo, and chamber music recordings. To date most Tonmeisters and recording engineers have aimed to capture the manner in which instruments and ensembles sound in a celebrated concert hall from the perspective of a listener in a “good seat”—that is, at some distance from the musical instruments involved in the performance.

When producing piano recordings, Tonmeisters occasionally face questions by performers who express astonishment upon hearing the sound captured by microphones in front of their open piano. The astonishment may be related to their perception of different sound radiation patterns of the instrument, as the sound that reaches the pianist's ears is significantly distinct from the sound that reaches the audience and the diaphragms of the microphones, helped by the sideward projection of the lid, as well as by floor reflections.<sup>1</sup> But it is exactly the audience's impression that recording professionals try to capture in classical music, not

1. Jürgen Meyer, *Acoustics and the Performance of Music: Manual for Acousticians, Audio Engineers, Musicians, Architects and Musical Instrument Makers*, 5th ed., trans. Uwe Hansen (New York: Springer, 2009), 163–66.

the impression of the performing pianist. This creates an interesting position for the Tonmeister, who must mediate between the ideal listener and the performer, while the performer constantly adjusts to the various registers of the piano, trying to create that perfect balance among musical voices. The Tonmeister can help pianists achieve their musical ideal, but pianists also have to adapt nuances of their performance to match the sounds emanating from the side of the instrument that is opened toward the auditorium.

With the present recording we face a different situation. The challenge here is not to present the piano sound as some concert audience member would hear it, but rather to recreate the sound that reaches the ears of the performer—in other words, to convey a clear image of the sound of this particular instrument as heard from the performer's position. Tom Beghin's experience of listening to Beethoven's Broadwood should resemble the acoustic reality of the composer facing the sound of his new English instrument.

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## Recording Beethoven's Broadwood

At the Academiezaal in Sint-Truiden, Belgium, the preparations for the recording included the accurate placement of a number of microphones near the Broadwood piano. Respecting the premise of a performer's perspective required a microphone placement just behind the pianist's ears. Other microphone pairs picked up additional layers of diffuse sound at different distances. These layers of sonic reflections were recorded with the purpose of capturing the ambient character of the sound. But their signals were only to be used sparingly, as the recording needed to reflect the close perspective of the performer, where less ambient sound would be heard.

Tom's choice of hearing machine was musically motivated. The use of the flexible backward-projecting lid for the recording of Beethoven's Opus 109, 110, and 111 on the facsimile of his Broadwood piano enabled a combination of concentrated projections of sound toward the player, as well as a degree of additional sound reflections that managed to exit at the sides and the front of the split lid. These reflections have a mellowing effect on the melodic lines, generating a sense of cantabile that would otherwise remain locked in the closed prototypes of Beethoven's hearing machine.

When Tom performed with the split lid, his reaction was immediate. Auditory contact with the entire spectrum of frequencies contained in the piano created for him a higher degree of musical freedom, which seemed to enhance the artistic quality of his performance. My aim as Tonmeister was to present the three last Beethoven sonatas in a distinct, clear, and vibrant sound, while being guided entirely by musical arguments, independent of any aspects of acoustic research, and to invite the listener to perceive both the detail and the grandness of Beethoven's sonorities through Tom's enticing performance.

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## Technical details

Professional studio microphones employed in this project were the Neumann M150, DPA 4006, and Schoeps CMS6-MK2. We worked with Grace Design microphone preamplifiers M802 and an RME MADI converter ADI-6432 64, using Pro Tools 10 HDX and a DAD-AX32 AD/DA converter. Sampling frequency and bit depth are 88.2 kHz, 24 bit.

## Coda

Separated as we are by two centuries of technological advancement from Beethoven's receipt of his Broadwood, it appears as a paradox that we are presenting this recording dedicated to capturing the most subtle nuances of the sonorities of Beethoven's final piano sonatas on a replica of his Broadwood piano with the use of an idealized hearing machine, while we imagine the great composer struggling against the "demon in my ears" (*der Dämon in meinen Ohren*), trying to grasp even the most basic sonic information from his instrument.<sup>2</sup> Beethoven's words, which I memorized in my childhood, have inspired and influenced me throughout my life. His perpetual fight to "seize fate by the throat" finds expression in the use of the hearing machine as he attempted to combat his deafness with the technological means of his time.<sup>3</sup> In the end, it is the integrity of Beethoven's musical thought and sensitivity that prevails—his greatest gift to humankind.

2. Letter of May 2, 1810, to Franz Gerhard Wegeler, in *Ludwig van Beethoven: Briefwechsel Gesamtausgabe*, ed. Sieghard Brandenburg (Munich: G. Henle Verlag, 1996), 2:118.

3. "Ich will dem schicksaal in den rachen greifen, ganz niederbeugen soll es mich gewiß nicht." ("I want to seize fate by the throat; it should certainly not completely bend me.") Letter of November 16, 1801, to Wegeler, *ibid.*, 1:89.

