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## **History of Sheffield—Tale of an Obsession**

Doug Sax and Lincoln Mayorga met in the orchestra of Bancroft Junior High School in Los Angeles. The year was 1950. Doug was first trumpet and Lincoln was the pianist. They played the song “Tenderly” together at the school talent show. Lincoln was impressed with Doug’s heroic classical sound and his feeling for a romantic ballad. Doug was impressed that, at their first rehearsal, Lincoln didn’t need the music because he knew the song by ear.

After junior high, Doug went to Fairfax High and Lincoln to Hollywood High. They renewed their friendship in college and re-discovered their mutual love of music and recordings. Doug introduced Lincoln to fine audio. He and his older brother Bert (Sherwood Sax) had built a component high fidelity set and, in 1956, they introduced Lincoln to his first listening experience with a fine sound system. Long Playing records had been around for a little less than a decade. On the good sounding records, the music was in spectacular monaural. There were no stereo records in those days and there was an enormous range of quality in the recorded sound. The most impressive were the London “ffrr” and the Mercury “Living Presence” records. However, no matter how impressive, Lincoln felt that recordings of piano music on these records were not very realistic or beautiful. The LPs did not compare favorably with earlier 78RPM records, which, despite their scratchiness, yielded more beautiful piano sound. In particular, the Abbey Road (EMI) recordings of pianist Artur Schnabel, recorded in the nineteen thirties, were most realistic and musical sounding.

The LPs had one thing in common. They were transferred from original master tapes. The tape recorder had been introduced in 1948, the same year as the LP. By and large, the 78s were pressed from original disc masters and no transfers were involved. So, Lincoln and the brothers Sax speculated about what could possibly make an older 78 sound better in some respects than an LP. Doug thought that a master tape might possibly have a small amount of unsteadiness, or flutter, that would be audible enough to take away from the bell like quality of piano tone. Doug’s brother Sherwood, who is a brilliant engineer, told us that tape recording introduces phase shift, a subtle change in time between high and low frequencies, something which audio engineers presumed to be inaudible, but indeed might be heard by musicians like ourselves.

Well, Doug and Lincoln had to check it out. At that time, Lincoln was arranging music for The Four Preps, and recording for Capitol. He was familiar with the recording studios around town. One afternoon in 1959 they decided to pay a visit to the oldest recording studio in Los Angeles, Electrovox, which had been operating continuously since 1931. The studio was run by the original owner Bert Gottschalk and his son Allen. Since the studio appeared to be unchanged since the 1940s, Doug and Lincoln asked the Gottschalks if they still had lines from the studio control room to the lathe room where the records were cut, and, without first recording on tape,

would it be possible to cut a record of music played on the studio piano? Mr. Gottschalk said yes. Then came the difficult question: how much would it cost? The answer was ten dollars, and, between them, that was exactly what Doug and Lincoln had in their wallets!

The equipment being used was old and considered obsolete in the industry: An RCA 77 (ribbon) microphone, an RCA cutting head from 1947, and a 1929 Vitaphone cutting lathe and turntable, designed for the earliest sound movies, or “talking pictures.”

So they cut the record, a 16 inch, 78RPM, microgroove (the smaller groove for Long Playing records), lacquer-coated aluminum disc. Lincoln played the Prelude in B flat, Opus 28, by Chopin, a piece with a wide dynamic range and a powerful climax, along with some long single tones to determine how steady the disc medium was.

The boys took the record back to Lincoln’s place where he had a good system that Doug had set up. With suspense in the air, they put the record on.

Silence. They heard silence. Lincoln checked to make sure the amplifier was on. He jiggled the wires to determine if the connection was secure. All of a sudden, piano music came from the loudspeaker, beautiful limpid Chopin, as if the Steinway were in the room, with no audible background noise. It was so realistic that Lincoln literally fell on the floor.

From this dramatic experiment, Doug and Lincoln drew all the wrong conclusions!

“If this old equipment can make such a fine recording,” they speculated, “just imagine what we could do with modern equipment, a Westrex stereo cutter, a Scully lathe, and a Telefunken condenser microphone.” Within a few months, they booked the “hot” studio, Radio Recorders, and a fine concert grand piano. The playbacks came back with low turntable rumble, audible mechanical flutter, low 60hz hum, and distortion from the microphone pre-amp on the musical peaks. It was shocking and disheartening and just the first of a number of failures using the mastering rooms of reputable studios in Hollywood.

Finally, after a few years of frustrations, with empty wallets, Doug and Lincoln came to the conclusion that they would need their own equipment if they were to make the best possible direct recording. They had become familiar with the virtues and defects of the different brands of equipment. Since all of the mastering rooms seemed to have some defect, Lincoln suggested that it might be profitable to start a mastering studio and offer independent producers high quality and flexibility in cutting from their master tapes.

Sherwood Sax had been skeptical about their fanatic endeavors, but when he heard the word “business”, he perked up. The three young men formed a partnership which became The Mastering Lab, the first and still the most respected mastering room in the country. With this facility, they were finally able to make direct disc recordings that met the quality test.

The equipment manufacturers were the ones to discover Sheffield Lab and to bring the recordings to public attention by using them to demonstrate turntables, phonograph cartridges,

amplifiers and speakers. At the beginning, Nancy Mayorga, Lincoln's mother, took on the part time job of filling orders from her home in Santa Barbara, California. Sheffield Drive was the exit off of Highway 101, and Doug and Lincoln liked the British sound of that name and decided to use it for the label, which started off with conventionally recorded classical fare. When they began producing direct-to-disc audiophile recordings, they designated these as Sheffield—Laboratory Series, and soon Sheffield Lab, with the morning glory logo.

The pressure of recording direct to disc in 15 to 20 minute takes brought out the best in the outstanding musicians who were on the Los Angeles scene. Rather than playing cautiously, they rose to the challenge, taking risks and playing vigorously. Over the years many fine engineer/producers brought pop and jazz projects to the company. Bill Schnee, Larry Brown, Al Schmidt, and George Massenberg were some of the talented men who produced and engineered for the company, men who could mix complex music in real time with live performances and discs turning. Their spectacular mixes recorded direct to disc became "The Sheffield Sound", along with the "purist" classical recordings which Doug Sax engineered, the Los Angeles Philharmonic, the Moscow Philharmonic, and smaller ensembles.

Sheffield Lab gracefully entered the digital era with Compact Discs which maintain the same musical and technical integrity, proving that there is more to a great recording than the chosen storage medium. As Sheffield celebrates its 40th anniversary, we invite you to [peruse the catalogue](#) as well as the original sister label which contains many historic recordings, now known as TownHall Records at [www.townhallrecords.com](http://www.townhallrecords.com).