

# Acoustical recording

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In the early 1900s, a process known as acoustical recording was being implemented. Acoustical recording consisted of artists/musician assembling nearby a cone that confined a diaphragm joined to a cutting needle that, in turn, rested on the recording medium. As the diaphragm reacted to the reverberations produced by the instruments, the needle cut followed an equivalent rhythm into the type of device it recorded on.

In order for the cone to capture the sound, it was crucial for each instrument and/or artist to be in close range at the suitable time it needed to be recorded. This provided difficulties for those bands with large amounts of musicians. If a certain musician and/or instrument were to be highlighted for a specific moment in the recording, this required other musicians to quickly rearrange their seating (or standings) so that the sound from the intended instrument were at a respectable range to the cone with its diaphragm.

According to Encyclopedia Britannica, during the early 1920s, technology developments provided circuits for sine-, square-, and sawtooth-wave generators which designed amplifiers, filter circuits, microphones, and loudspeakers. By 1925, technology developments improved the functions of the microphone. Their usage to capture the sounds for recordings provided musicians with new views on the microphone capabilities.

They realized that the microphones provided them with a clearer and lively sound during recordings and performances while amplifying and learning to modulate their sound. The acoustic recording process, aka "mechanical recording process", had difficulties capturing high amplitude and rapid

arrivals of percussion notes during lower frequencies recordings, which caused complications in the mechanical acoustic process.

From a listener's perspective, an acoustic sound seems to provide an entirely different mood compared to electric. The electric sound seems to bring the listener to a much livelier experience with the music and to the artist(s). The sounds from the instruments provided by the electronic recording brings listener clarity, drawing us closer to the music while submerging us in the playing. Almost as if we were in the recording sessions with the artist(s)/band.

A great example to listen and compare certain differences in acoustic and electric recording is Bennie Moten Band's "Sugar" and "The Moten Swing". During the listen of "Sugar", a track released during 1927, we hear many different instruments. Trumpets, saxophones, banjos, and flutes amongst other instruments can easily be detected while this work of art is being played. "The Moten Swing", which was released in 1932, listener can point out instruments like vibraphone, pianos, trumpets, and saxophones.

Although both listens provide us with similar and different instruments, one thing that also becomes clearer is the quality in the recording. "The Moten Swing", recorded electronic, provided listener with an undeniably clearer, smoother paced, and modern (at the time) sound. While Bennie Moten Band's "Sugar" recording, recorded acoustic, provided listeners with a more clouded sounded. It was easy to notice what seemed to be a far distance in the instruments being played.

" The Moten Swing", gave off a faster, high-energy vibe that seemed more playful and made for fast paced dancing while keeping a prominent upbeat rhythm and artistry with many mixtures of instruments being played. On the other hand, " Sugar" gave off a more structured (maybe even traditional) form of dancing feel. Although, it did give a steady sound loop with an arguable upbeat sound, it was noticeably slower than " The Moten Swing" with its music melody.

Despite the limited equipment available during this time, musicians were able to create trendsetting sounds that not only impacted Jazz but all genres of music across the world. The wide assortment of musical equipment that we are familiarized with today were influenced by these early developments. Musicians uplifted and redefined the music through the revolutionary opportunities presented by these newly developments. Technology has impacted the way musicians and their listeners understand, receive and analyze the sounds and styles of music.