

THE HISTORY OF ELECTRONIC MUSIC IN A CONCISE OVERVIEW

Electronic music is music that employs electronic musical instruments and electronic music technology in its production. The electronic musician is the person who composes and/or performs such music. In general, we can make a distinction between sound produced using electromechanical means and sound produced using electronic technology. Examples of electromechanical sound producing devices include the telharmonium, Hammond organ and the electric guitar. We can achieve purely electronic sound production using devices such as the Theremin, sound synthesizer and computer.

The first electronic devices for performing music in the history of electronic music, were developed at the end of the 19th century. Shortly afterward Italian Futurists explored sounds that had previously not been considered musical. During the 1920s and 1930s, electronic instruments were introduced and the first compositions for electronic instruments were composed. By the 1940s, magnetic audio tape allowed musicians to tape sounds and then modify them by changing the tape speed or direction. This led to the development of electroacoustic tape music in the 1940s in Egypt and France. *Musique concrète*, created in Paris in 1948, was based on editing together recorded fragments of natural and industrial sounds. Music produced solely from electronic generators was first produced in Germany in 1953. In the beginning of the 1950s people in Japan and the United States also created electronic music .

An important new development was the advent of computers for the purpose of composing music. In 1951 in Australia the first algorithmic composition took place. In America and Europe, the pioneering of live electronics started in the early 1960s. During the 1970s to early 1980s, the monophonic Minimoog became once the most widely used synthesizer at that time in both popular and electronic art music.

In the 1970s, electronic music began having a significant influence on popular music. Genres such as krautrock, disco, new wave and synthpop emerged. They adopted polyphonic synthesizers, electronic drums and drum machines. In the 1980s, electronic music became more dominant in popular music. Popular music relied more and more on synthesizers, programmable drum machines and bass synthesizers. Digital technologies for synthesizers including digital synthesizers became popular in the early 1980s. A group of musicians and music merchants developed the Musical Instrument Digital Interface (MIDI).

Electronically produced music became prevalent in the popular domain by the 1990s, because of the advent of affordable music technology. Contemporary electronic music includes many varieties and ranges from experimental art music to popular forms such as electronic dance music. Today, pop electronic music is most recognizable in its 4/4 form. It's vastly more connected with the mainstream culture as opposed to its preceding forms which were specialized to niche markets.

At the turn of the 20th century, experimentation with emerging electronics led to the first electronic musical instruments. These initial inventions were not sold, but were instead used in demonstrations and public performances. The audiences were presented with reproductions of existing music instead of new compositions for the instruments. While some were considered novelties and produced simple tones, the Telharmonium accurately synthesized the sound of orchestral instruments. It achieved viable public interest and made commercial progress into streaming music through telephone networks.

Critics of musical conventions at the time saw promise in these developments. Ferruccio Busoni encouraged the composition of microtonal music allowed for by electronic instruments. He predicted the use of machines in future music, writing the influential *Sketch of a New Esthetic of Music*. Futurists such as Francesco Balilla Pratella and Luigi Russolo began composing music with acoustic noise. Thus, they wanted to evoke the sound of machinery. They predicted expansions in timbre allowed for by electronics in the influential manifesto *The Art of Noises*.

Developments of the vacuum tube led to electronic instruments that were smaller, amplified and more practical for performance. In particular, the Theremin, Ondes Martenot and Trautonium were commercially produced by the early 1930s.

From the late 1920s, the increased practicality of electronic instruments influenced composers such as Joseph Schillinger to adopt them. They were typically used within orchestras. Most composers wrote parts for the Theremin that could otherwise be performed with string instruments.

Avant-garde composers criticized the predominant use of electronic instruments for conventional purposes. The instruments offered expansions in pitch resources. Advocates of microtonal music such as Charles Ives, Dimitrios Levidis, Olivier Messiaen and Edgard Varese, exploited these. Further, Percy Grainger used the Theremin to abandon fixed tonation entirely. But Russian composers such as Gavriil Popov treated it as a source of noise in otherwise-acoustic noise music.

Developments in early recording technology paralleled that of electronic instruments. The mechanical phonograph was the first invention of means to record and reproduce audio. This was in the late 19th century. Record players became a common household item. By the 1920s composers were using them to play short recordings in performances.

Increased experimentation with record players followed the introduction of electronic recording in 1925. Paul Hindemith and Ernst Toch composed several pieces in 1930 by layering recordings of instruments and vocals at adjusted speeds. Influenced by these techniques, John Cage composed "Imaginary Landscape No. 1" in 1939 by adjusting the speeds of recorded tones.