

# Recording technology in music



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There have been dramatic advances in music technology; this has led to the use of technology in music being far greater and wider spread. There has been a dramatic impact on musicianship. The music recording process is defined as the act of composing, rehearsing the piece and physically making the recording, through to doing final editing and mastering to perfect the recording. The first music recording was made by Emile Berliner in 1884, this was recorded on a tin foil coated cylinder, but since then recording technology has vastly improved and editing techniques have become easier and more advanced. Through the transition from recording on wax cylinder, analogue tape, compact disc and digital download. These developments have had many effects, both positive and negative. There has been a lot of debate related to these developments.

One of the main areas in which recording technology has affected musicianship is that advances in recording technology, thus the music that the end listener hears is hardly ever what the musician originally played, as recording and editing technology advances, this is becoming more apparent, and edited songs are drifting further away from what the musician had performed. This idea has created a lot of controversy with the listener, as they are unsure of what the artist is capable of, and what parts of the music have been manufactured artificially during the editing stage. Some people argue that these advances are an advantage as it means that the music that they listen to is of a higher quality, and has a higher musical accuracy and is free of performance errors, this is due to advances in technologies such as pitch correction, which allows for sections in the performance that are out of tune to be corrected, it also allows for new sections of a song to be written

by adjusting the pitch of a single note, to give samples of a range of other notes that can then be arranged to construct new melodies for the piece. In a similar fashion sections of music can now be speeded up, slowed down and moved through time in order to allow a artists performance to be corrected if he or she falls out of time during there performance. Both of these techniques are product of improved recording technology, and a lot of listener's appreciate that music is of a higher quality and more enjoyable to listen to.

In the contrary there is a group of people that think these improvements in technology are a disadvantage, due to the fact that the final edited version of a piece of music that the listener hears is often extremely different to the original recording that the musician actually performed. It is also criticized that how anyone can become a pop star due to the increased use of technology, which means that you don't have to have any musical knowledge or talent as any errors that are made can now be corrected.

These opinions are reflected by Neko Case who says:

I'm not a perfect note hitter either but I'm not going to cover it up with auto tune. Everybody uses it, too. I once asked a studio guy in Toronto, " How many people don't use auto tune?" and he said, " You and Nelly Furtado are the only two people who've never used it in here."

This shows that despite people like Neko's protest against the use of these editing techniques they are used in almost every piece of music nevertheless. These technologies have also given way to new genres of computer based music.

Developments in recording technology, recording moving on to computer based systems has also largely effected musicianship, as now that most recording systems are computer based a lot of editing techniques are far simpler, and no edit or process is final, as all processes can be undone with the press of a button, where as in more traditional tape based recording systems undoing processes required a lot of manual work, or may even be unachievable. An advantage of this development is that music producers are able to experiment with different edits and processes, in order to find an outcome that they are satisfied with, if they try any processes that they are not happy with the piece can easily be reverted to its former state. When traditional tape recording methods where used editing involved cutting the tape up, then sticking it back together again, this means that it requires far more skill than using a modern computer systems. When using a traditional tape system undoing edits is far more difficult, so producers may be discouraged from experimenting with edits as it would require more work. In the other hand the same factors have disadvantages, such as the fact that producers may make edits on a traditional system that do not sound quite right, but it may be impossible or ineffective to rectify this, these small flaws would add character to the piece, which would not happen when using a modern computer systems, as any small imperfections can easily be removed without any bother. These facts about how recording and editing require far less skill is explained by David Williams and Peter Webster:

When computers where large and delicate and required trained system operators, and when the first sound devices relied on complicated

procedures to connect one element to another, you needed to know a great deal about technical things. This has all changed.

This has given way to home recording which has enabled a lot more musicians to be able to produce their own pieces and become well known as home recording equipment is readily available.

As recording technology has developed sound quality of recordings has improved dramatically. The initial recordings that were made on wax cylinders had a lot of hiss and crackling in the recording, a low signal to noise ratio, this made the music in the recording very hard to make out and the recording unpleasant to listen to, whereas in modern recordings these noises have almost been eliminated. An example of this improvement in sound qualities is shown in this news article regarding new microphone technology: 'new high-performance MEMS microphones enable dramatic advancements in sound quality.' This has made listening to music far more pleasant. Which has improved musicianship as it has made it easier for musicians to listen to others' performances and use them as inspirations for their own pieces. This has also allowed backing tracks to be produced to help musicians learn pieces which they can use to make their performances sound more realistic when they are playing solo or in small groups.

As recording technology has developed and new distribution mediums have become available, music has become more portable, more widely available, and in general a higher quality. This has improved musicianship, as it has made it easier for musicians to listen to others' performances, and use them to motivate and inspire themselves. In general this has improved

musicianship but it has also had some detrimental effects such as sound quality being lost, particularly when music became digital in 1982 with the release of the compact disc that would replace the vinyl record. Many people argued that the use of digital data to represent audio led to a severe loss of quality in the music, as some of the sound is lost due to compression and digital sampling, which can give digital recordings a dull tone compared to the brighter tone of analogue recordings, one person that says this is Wayne Ellis Lee who says that: 'vinyl has a warmer, fuller sound while CD has a digital, mechanical sound.' In the contrary a digital compact disc recording can be played an infinite number of times without a loss in quality, but with an analogue recording some of the quality is lost, and you get a noticeable hiss if it is played repeatedly.

Modern mp3 technology and internet downloading of music also has both positive and negative effects on musicianship. A negative effect is that due to internet downloading and peer to peer networks, it has become a lot easier for individuals to obtain free copies of an artist's music illegally, this is expanded by Mark Katz who says: 'While there is nothing illegal about MP3 and P2P technology per se, it is illegal to download or distribute digital files of copyrighted recordings without the permission of the copyright holder.' These illegal downloads mean that the artist is not getting the royalties for their song that they deserve, and may be discouraged from producing their own music because it is not financially feasible for them.

When music was distributed on a physical medium it was more difficult for listeners to obtain illegal copies of a recording. Consumers were also encouraged to purchase an artist's product due to the fact that they were

obtaining a physical copy of the song. Where with modern music downloading the listener gets a virtual file containing the music performance, the fact that the music is not in a physical form is also an advantage, as musicians and listeners are now able to have much larger music collections. The music retailers can offer a wider selection as they are not limited by the physical space needed to store the music.

In conclusion there have been many advances in recording technology that have affected musicianship, most of these developments have made it easier for musicians to record, market and improve their performances, but these developments have also produced many disadvantages for both the musician and the listener.