

## Research on Digital Music Composition Technology

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**Keywords:** Compute Technology, Digital Music, Composition Technology

**Abstract:** Since the beginning of the Internet era, digital music production has sprung up and developed in China. The emergence of digital music production has brought unprecedented impact on the business model and management mode of traditional music and cultural enterprises in China. This paper gives a detailed explanation of the generation and development of digital music, including the formation process and the latest technology, the theoretical basis and implementation forms of each branch. After the explanation of the basic principles, Chapters 4 and 5 will analyze the impact of digital music on composition.

### 1. Introduction

The computer is a science and engineering discipline and a scientific and technological tool. It began to spread in China in the early 1980s and belongs to science and technology. The music major is an art discipline. Music is an abstract time-time auditory art with a long history and a traditional profession. The music production software produced by computer technology is digital music. Digital music is also called MIDI music and electronic music. Some people call digital music, which refers to the use of digital technology in the production, transmission and storage of music. It is usually divided into online digital music and wireless digital music. The music transmitted directly to the computer via the Internet is called online digital music. The commonly used digital formats are WAV files, MP3 files, AAC files, AWMA files, ra files, etc. . Digital music in China has been popular since the 1990s, and it has been more than 20 years old. Computer music applications have become very common.

### 2. Digital music production

Digital music production is the process of producing and processing music using software such as computer software MIDI technology, audio technology and synthesizer. Since 1983, the MIDI world has been continuously developing and constantly redefining the possibilities in the music creation process. . In the late 1990s, the advent of digital audio sequencers and recorders/editors further expanded the possibilities of modern composers for music creation. These developments in technology have required us to adapt to meet and meet consumer expectations and convenience requirements. Digital music production is a very complicated comprehensive project. It is a comprehensive screening of computer and human brain. As a qualified computer music producer, the following professional courses must be completed in the art department: piano, guitar, composition, symphony orchestration, and acoustics. The preparation of music editing, recording science, and sound collection technology must master the use of various music production software (such as sequencer software, audio source software, audio conversion software, etc.) and maintenance of daily computer faults in computer application technology and skills. With repairs. The application of digital music production technology has penetrated into all walks of life, creating rich material wealth and spiritual wealth for people. It is a popular and avant-garde hot professional in many enrollment majors of higher music and art colleges. Relatives and affections.

Since the world entered the Internet era, with the promotion and dissemination of digital music in the network, it has been deeply loved by music lovers. People use the Internet to start running music, selling music products, downloading music, and enjoying music. A group of music website companies and music producers have been born, such as: Baidu MP3, Sohu Sogou music, cool

music, Tencent QQ music, cool dog music. Traditional record companies have also begun to transform, breaking the traditional publishing and distribution model, operating digital music and online music on the Internet. The whole process of digital and wireless music industry chain is that music producers (music senior technicians) use various software on computers. The process of decorating, processing, and beautifying the raw materials (melody) of the composer. With the rapid development of networking, information and intelligence, with the wide application of 3G\4G mobile smartphones, music production companies and music distribution publishing companies are based on the needs of people, through legitimate online music websites or operators in the network. Sales and promotion, people use mobile Internet to access mobile mobile phone service terminals anytime, anywhere, without the restrictions of the region can get the music works they need, the methods and means of people to acquire and appreciate music has become diversified. A8 Group, which is mainly engaged in the music business on the Internet, has established a comprehensive value-added service platform across multiple fields such as MMS, CRBT, WAP, IVP and Internet. Through the establishment of the WWW.A8.COM website and recording studio for the songs Create a customer to conduct a web publishing service. It is said that this value-added business alone has enabled A8 Music Group to win the "Top 500 Asia-Pacific High-Tech, High-Growth Enterprise".

Before the digital music production did not appear, the symphony orchestras above the provincial level and the singing and dancing theaters, higher art institutions and other collectives and composers should bring a large-scale music production to the stage or participate in international music festivals, such as: Music, chorus, dance music, instrumental music, symphony, symphonic poetry, etc., first by the composer to complete the creation and orchestration, and then organized hundreds of large bands to rehearse, the composer based on the performance of the sound effects, and then repeated modifications, Finally, you can move on stage and participate in the competition. It takes a long time to complete a musical piece, and it is expensive, costly, and wastes a lot of resources. There are many professional artists and composers in the professional groups of the prefectures and counties with relatively poor conditions. There are no professional bands and orchestras to audition their original music works. Some people are engaged in life music creation, and there is no way to hear their own. A complete musical piece works out and is written in dumb music. A lot of original music works have become a pile of waste paper, and the beautiful music melody can only be left in the composer's own music mind for life, and is not heard and discovered by the outside world and the music audience. Among the literary and artistic groups in the army, the performance squads to the border defense, plateau, and island whistle to perform music and accompaniment music for the PLA soldiers; the music and accompaniment required for cultural activities carried out by cultural centers, schools, enterprises and other units. At a minimum, you need to organize a small band or a portable instrument such as an accordion, guitar, etc. to complete the accompaniment. In the teaching of composition music in higher music art colleges, especially in the teaching of multi-voice melody writing, in the classroom, the teaching methods of teachers in the past and auditioning original works are mainly done through piano performance. If you are teaching polyphonic or instrumental music works with more than three voices, the teacher cannot use a piano to complete the audition. Since the application of digital music production has been promoted, a digital music producer can perform MIDI sequence production and music editing to meet the needs of the performance unit, complete the tasks that can be completed by dozens or even hundreds of people, and accompany music and music. It is made into a digital format, and the music can be played back by connecting the player through a USB flash drive. It not only saves human resources for the performance units but also saves expenses, which greatly liberates the social productive forces of the literary and art groups. It is convenient for all kinds of music activities organized by literary and art groups at all levels and military literary and art groups to perform at the front line, island, plateau and mountainous areas. It is convenient for higher music art college composing teachers to teach multi-part writing, teachers use digital music production software and multimedia. The equipment technology can display the students' creative exercises and multi-voice original melody and sound effects to the students, which can make the abstract composition theory

course intuitive, lively and vivid, greatly broaden the students' musical vision and active learning. The musical thinking of the person mobilizes and stimulates the enthusiasm of the learner to learn, greatly improves the efficiency of music learning and improves the quality of music teaching. This stimulates students' interest in and interest in composition.

### **3. The essential characteristics of digital music**

The traditional process of composing is actually recorded by the composer in his "Inner Hearing 2", which is recorded in the form of musical scores. There are two problems. First, all the musical score recording methods so far include staves. In fact, they are very simple and not precise enough. The music information conveyed is not sufficient. Second, because the inner hearing is bound to be ambiguous, it always has a distance from the actual music sound. Even the best composer, the music score written is not necessarily the sound he really pursues. Therefore, the work that the composer can accomplish in the traditional way of music transmission is extremely limited. What he left is only the music score of the visual symbol, not the music itself. Therefore, it is necessary to have the participation of the performer and the conductor to restore. Becoming a real music that people can perceive, but for the composer, whether it is really restored to what he has created, it is hard to say. Especially in countries where we are seriously underpowered by music, I believe many composers have this kind of distress. The emergence of digital music has fundamentally changed this situation. We have already mentioned that the information that can be transmitted includes the pitch, rhythm, timbre, etc. of the composer, the strength of the information of the performer, the playing method, the uniform beat change of the conductor's information, the volume control, the balance of the voice, etc. And the audio and video information of the sound engineer, sound control and so on. All of this information can only be fully and perfectly controlled in digital music.

In short, from the musical point of view, the essential feature of digital music is that it can integrate composition, performance, command, and recording. Its overall creative process is such that the first notes are played, the balance of the parts is adjusted, the speed is changed, and the like, and the reverb, sound, and the like are processed in the sound. The inner hearing is externalized to a real listening sound. Therefore, for digital music, composition, performance, command, and recording are inseparable. Creation and production are inseparable. Art and production are inseparable. They are not only inseparable as a whole, but even in the course of specific operations. non-splittable. Digital music has changed the way music has been produced and disseminated along the thousands of years. It has created, performed, and produced music in one furnace, integrating composition, performance, command, and recording. Can truly realize the imagination of the composer, the skill of the performer and the actual listening of the listener.

### **4. Conclusion**

Digital music production is a work mode of "advanced music mechanics" through MIDI sequence production and soft sound source through computer. Due to the high efficiency, low cost and high level of digital music production, the business model and management mode of traditional music are generated. A huge impact and impact has triggered a new technological revolution in the field of music production. With the maturity and application of Internet technology, digital music production has become the preferred mode for music editing by contemporary literary and art groups and cultural enterprises. Computer music production has been infiltrated and applied to different fields of all walks of life in China. Digital music production has created rich material wealth for cultural industries and cultural enterprises. Computer music production has also brought rich spiritual food to people's cultural life.

### **Acknowledgements**

Fund Project:

1) Shaanxi Province 2018 Military-Military Integration Research Fund Project: Research on the

Evolution of Military Song Creation Style (18JMR74);

2) Research Project of Major Theoretical and Practical Issues in the Social Science Circle of Shaanxi Province in 2018: Promoting the Cultural Integration of the Silk Road by Regional Music——Taking the Old Chamber of Huayin as an Example (2018Z046);

3) 2017 General Program of Humanities and Social Sciences in Weinan Normal University; Research on Creative Education Path of Local College Students under the Perspective of Internationalization (17SKYB15).

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