The Use of Consumer Electronics as a Medium for Music Composition

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ABSTRACT

The Nintendo Entertainment System produces sound through the Ricoh 2a03 microprocessor. This 8-bit processor is limited to creating two square-waves, a triangle-wave, and a noise track. While the 2a03 is limited, it is what gives the NES its distinctive and memorable sound.

METHODS

Writing for the NES differs greatly from writing for acoustic instruments. Everything is crisp and changes of tempo are difficult. However, with the NES you have a very large range and can rapidly shift from high to low. I first wrote the music using traditional notation. I used the program, FamiTracker to sequence the music for the NES.

CONCLUSIONS

Due to the tedious nature of sequencing the music for the NES, I did not stray far from my original draft written in traditional notation. Once all the notes had been sequenced and all levels, oscillations, and vibratos set, I flashed the NES music file to a blank Nintendo Cartridge. The NES then reads the file from the cartridge and renders the audio in real time using the 2a03.

REFERENCES


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INTRODUCTION

The NES produces sound through the Ricoh 2a03 microprocessor. This 8-bit processor is limited to creating two square-waves, a triangle-wave, and a noise track (which I opted not to use). While the 2a03 is limited, it is what gives the NES its distinctive and memorable sound. Through experimentation, I discovered how the early composers of video game music made their iconic sounds. Instead of directly quoting Mario and other famous video game songs, I decided to use their familiar sounds as part of a musical line. I am Three Years Old makes use of familiar sounds from Mario, Mega-Man, and features a Pac-Man bassline.

RESULTS

Please scan QR code or visit http://nes.whitemoosemusic.com to listen to I am Three Years Old performed on a 1989 Nintendo Entertainment System.