

Freqtric Drums

Tetsuaki Baba*

Graduate School of Design Kyushu University

Kiyoshi Tomimatsu†

Faculty of Design Kyushu University

1 Introduction

Today, telecommunications penetrate our daily life, like the telephone, e-mail, chat on the Internet, etc. Certainly it is convenient and necessary to use these electronic ways of communication, which offer a certain proximity in distance. However, face-to-face, moreover, body-to-body communication is also necessary for human life to recover its inherent sensitivity. Especially, skin contact and sounds have an original power of communication. This kind of primordial communication is characterized by the corporal presence of each other and an interaction of bodies through skin contact, auditory contact like voice, singing, music, and body's movement in presence like gestures or dance etc., which are absent from a virtual space communication. Freqtric Drums is a new musical corporal-electronic instrument, which enables us not only to recover the face-to-face communication, but also to enhance the possibility of our body-to-body communication, so that our self-consciousness based on our closed proper body can receive significant change, being open to another body and becoming a part of another body. This electronic device is also a sort of toy providing a place for the encounter and the play of bodies known or unknown to each other, and for the discovery of the materiality of our existence in relationships with each other.

2 Freqtric Drums



Figure 1: A Snapshot of a Live Performance with Freqtric Drums

Freqtric Drums is a device that turns audiences around a performer into drums. The performer, as a drummer, can communicate with audiences, as one set of drums (figure 1). The device requires human contact to conduct a signal that triggers drum sounds generated from MIDI through wires. Freqtric Drums has two types (figure 2). One is Freqtric Drums Live, which is designed for live performance. It has ring interface and sensor that is so sensitive and responsive in order to express drummers' performance to its most delicate nuances. Another is Freqtric Drums Home, which is designed for

home use. It has a knob interface, a wireless MIDI module, an A/D Converter, and a voice change function. These features make it useful, portable and more familiar to use.

EDA (Electro Dermal Activity) and human skin resistance are used to detect skin contact. The circuit of this device regards the human body as a conductor for intra-body transmission (figure 3).. For example, the body fat scale uses this principle. In order to make a sound of drum set, "Freqtric Drums" has a MIDI OUT port.

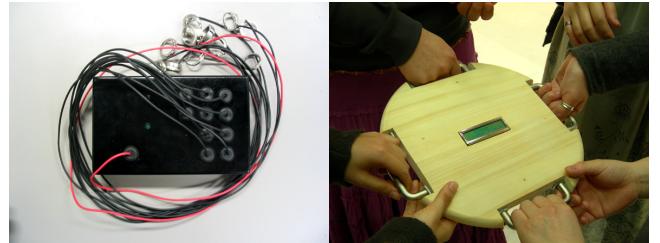


Figure 2: Freqtric Drums Live (left) and Freqtric Drums Home (right)

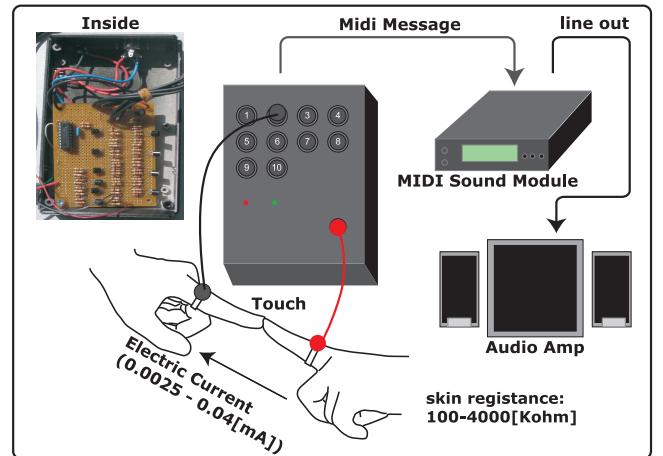


Figure 3: An Overview of Freqtric Drums System

3 Future Work

Our goals of this project are to complete "Freqtric Drums" as an interface for a musical instrument. In electronic musical devices, we investigated various types of interfaces, and the interface of human skin contact has never been used before. Through the digital technology of "Freqtric Drums", we can enjoy music and skin contact at the same time. We believe this is a new and specific way of expression of music.

*e-mail: baba@gsd.design.kyushu-u.ac.jp

†e-mail:tomimatu@design.kyushu-u.ac.jp