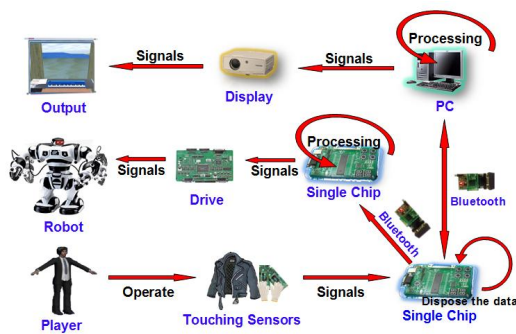# 1. Introduction

No one would deny the truth that music is an indispensable component of our modern elegant lives. In spite of the truth that most of ordinary people are incapable of playing a specific instrument, we still hold our dreams of showing the melody in our mind. This piece of work is exactly designed for this purpose. With our cartoon, special made gloves, robot and an ordinary personal computer, we guarantee you the dream will come true spontaneously. After a wholly tired working day, our production will gives you a newly massage of life.

2. System Description

(System structure)

A. We have installed a touching module on the gloves. In this module there are two touching sensors which include 16 touching buttons, which are used to produce touching information to microprocessor instantaneously.

B. Microprocessor sends the touching information, which received from the touching buttons, to robot microprocessor and PC via Serial port-Bluetooth.

C. In robot module, a drive device is designed on robotøs body. According to the touching information that received, the robot will dances in different ways.

D. The brilliant animation characters are perfectly exhibited by Virtools which is installed on PC. VirTools is an interactive 3D software which is designed to run in real time. We use it to implement virtual reality into the PC.

3. Introduction for Use

A. Make sure that you have already put on the clothes and gloves in the correct way.

B. According to the PC notes, begin to enter either of the two patterns, the exercise pattern or the performance pattern.

C. In the exercise pattern, you could choose any music you like on the list to begin, then a pair of hands will be shown on the screen to instruct you how to touch the buttons to play the melody one by one.

D. In the performance pattern, you could play freely as long as you know the music book. At the same time, the scenery out of the window would change according to the melody that you play.

E. Whenever you play music, the robots in PC and reality will dance in the same way in accordance with the buttons you press at intervals.

4. Object Applicable

õMusic Experienceö is a leisure production which is suitable for adults as well as children.

5. System Requirements

Hardware

- Desktop PC (CPU>2.0 GHz, RAM>1GB, one serial port at least)
- Two C8051f020 Single Chips
- Two Serial Lines
- Four Serial port-Bluetooth modules
- Two Touching Sensors
- One robot (Seven Electric motors, Drives)
- One Chinese Clothes
- A pair of gloves

Software

- Windows XP
- VirTools4.0
- Microsoft Visual Studio .NET 2003
- Keil uVision2.0
- 3ds Max 2008
- DirectX10.0

6. Conclusion

We hope that "Music Experience" can reduce the burden of people's tired work, then bring people to a pleasant, relaxed and high quality life, and ultimately make the customersø elegant life even better.