
基于单片机的音乐控制 LED 光柱系统的设计

摘 要

本文研究的内容为音乐控制 LED 光柱系统的设计。本系统所要实现的功能是随着音乐声音强度的变化 LED 光柱点亮的数量不同，展现出不一样的韵律感。想要把声音收集起来根据驻端极体话筒的声音来进行收集是对本系统的很好展现，通过不同的信号放大器来进行模块的声波过滤，然后再进行电路的声波选择，收集起来的信号就可以通过电路盒的方式来进行整体的提高，从而使所有的信号都具备电压的正值，通过模数的改变将负芯片通过 stc 的主芯片来进行管理，发光的电路线就会有不同的机片去控制，这样一来电灯的亮数就会被掌控。

关键词：单片机；OP07；LED 光柱；ADC0832

Abstract

This paper studies the design of music control LED light column system. The function of this system is to realize with the change of music sound intensity, the number of LED beams lit is different, reflecting the beauty of the rhythm of music. Way to realize this system is based on electret microphone sound sampling module, a signal amplification module composed of OP07 amplifier and so on, by filtering filter circuit, again after a sum circuit overall raise the acquisition of signal and guarantee are positive voltage signal, and then by the STC89C52 as main control chip to control the ADC0832, modulus conversion, corresponding level signal generated by the single chip microcomputer to control the light emitting circuit, so as to control the amount of light lamp.

Keywords: Single chip microcomputer;OP07;The LED light;ADC083

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