北京联合大学

毕 业 设 计

题目：基于单片机的电子密码锁设计与实现

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摘　　要

近年来，随着改革开放的深入发展，电子电器的飞速发展。人民的生活水平有了很大提高。各种高档家电产品和贵重物品为许多家庭所拥有。然而不法分子也是越来越多，原因在于大部分人防盗意识还不够强，造成偷盗现象屡见不鲜。越来越多的居民家庭对财产安全问题十分担忧。因此，出于安全方便等方面的需求，电子密码锁相继问世。

本设计是以单片机 AT89S51 为主控芯片，并结合外围液晶显示 LCD1602、存储芯片 AT24C02、红外遥控 HS0038，以及键盘输入、复位、电源等电路组合而成。系统能够完成开锁、报警、修改密码等基本功能，还能够通过红外来控制单片机的开锁，以及掉电储存密码的功能。整个设计在 Keil 开发环境下，用 C 语言编写主控芯片的控制程序来实现具有多功能的电子密码锁。

关键词：密码锁 AT89S51 储存 显示 红外

Abstract

In recent years, with the deepening of reform and opening-up, with the rapid development of electronic appliances.The people's living standard has been greatly improved.A variety of high-grade household electrical appliances and the valuables have for many families.However criminals are also more and more, because most people security awareness is not strong enough, causing steal phenomenon it is often seen.More and more households in property safety is concerned about.Therefore, for the safe and convenient and other aspects of the demand, electronic password lock in succession.

The design is based on SCM AT89S51 as main control chip, and the combination of peripheral LCD1602 liquid crystal display, memory chip AT24C02, infrared remote control HS0038, and keyboard input, reset, power circuit assembly.The system can complete the lock, alarm, modify passwords and other functions, can also through infrared to control chip lock, and power-down save password function.The whole design in the KEIL development environment, using C language master control chip control procedures to achieve multifunctional electronic cipher lock.

Key Words: Password lock AT89S51 Storage Display Infrared