
基于单片机的无线病房呼叫系统的设计与实现

摘 要： 由于社会的发展和科技的进步，已经有更多的人开始重视医疗服务产业，如果希望在该产业安定下来，第一，我们应该加强患者与医护人员之间的沟通，使其更加高效、方便。人性化的无线病房呼叫系统不仅提高了医院的工作效率，增强了医院的服务质量，另外，还大大提高了医院的社会影响力，为创建和谐的医院和构建社会主义和谐社会打下了良好的基础。而与此同时，病患的投诉也会相应减少，医院的整体水平将呈上升趋势，

该系统主要是以 STC89C51 为主控芯片，再加上键盘，LCD 液晶显示电路以及 NRF24L01 无线模块构成的病房呼叫系统，从而能够实现病人和医护人员之间的信息无线传递。每当病人需要帮助呼叫时，就能够立即按下呼叫按键，此时信息传输到接收端上，液晶会立即显示出呼叫病房的编号，同时会有蜂鸣器响；若有多人使用时，LCD 液晶显示器会按照呼叫的顺序进行排序后同时显示出来，当医护人员按下“应答”键取消当前第一个呼叫。此系统是能给医院提供高效率、低成本、操作方便和易于维护的快捷系统。

关键词： 无线病房呼叫；LCD1602 液晶；STC89C51 单片机

Design and Implementation of Wireless Ward Call System Based on Single Chip Computer

Abstract: Due to the development of society and the advancement of science and technology, more people are beginning to pay attention to the medical service industry. If we want to settle down in this industry, first, we should strengthen the communication between patients and medical staff to make it more efficient and convenient. The humanized wireless ward call system not only improves the hospital's work efficiency and enhances the hospital's service quality, but also greatly improves the hospital's social influence, laying a good foundation for creating a harmonious hospital and building a socialist harmonious society . At the same time, the number of complaints from patients will decrease accordingly, and the overall level of the hospital will show an upward trend.

The system is based on STC89C51 as the main control chip, plus a keyboard, LCD liquid crystal display circuit and NRF24L01 wireless module ward call system, which can realize the wireless transmission of information between patients and medical staff. Whenever a patient needs help calling, they can immediately press the call button. At this time, the information is transmitted to the receiving end, and the LCD will immediately display the number of the calling ward, and a buzzer will sound at the same time. The LCD liquid crystal display will be sorted according to the order of calls and displayed at the same time. When the medical staff presses the "answer" key to cancel the current first call. This system is a fast system that can provide hospitals with high efficiency, low cost, easy operation and easy maintenance.

Key words: Wireless ward call; LCD1602 liquid crystal; STC89C51 microcontroller

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