
基于单片机的篮球比赛计分器设计

摘要

近几年智能技术的发展占据着主导地位，其涉及到的领域非常众多，其中主要包括了人工智能、电子智能科技，并且还运用到物理、化工、机械、材料、光学、动力等领域。然而基于单片机的篮球比赛计分器设计，则是该方面的最佳首选。

此次篮球比赛计分器设计主要由单片机系统控制，采用了 7 段液晶屏来当作显示装置。连接一个四位一体七段共正 LCD 液晶显示器和四个七段共正 LCD 显示器。前者用于记录比赛日程时间，这里有两位是用来表示分钟，两位用来表示秒。而后者则用来表示 A 队和 B 队的比赛分数，两队共用一个 LCD 液晶显示屏，它的显示范围高达 3 位数，即 0-999 分。记录比赛的方式是倒计时，当比赛开始时开始倒计时启动，直到时间走光归零。为了更好的配合定时器和记分器来调整校对比赛的分数和时间，在此次设计中特意设置了不同的按键对应来实现不同的功能，如改变分数，还有控制开始和暂停功能。该篮球比赛计分器系统是由单片机进行控制的，其优点主要有操作渐变，液晶屏幕显示，体积小安装携带方便。篮球比赛计时记分装置旨在解决篮球比赛中准确、方便、灵活的计时记分问题。此次设计主要实现了计时、记分功能。除此之外，还详细介绍了各部分的硬件选取和软件设计等过程。根据实际情况该设备可以随时修改比赛成绩，正确显示比赛剩余时间。

关键字：单片机；LCD 显示；计时计分器

Abstract

During these years, the development of intelligent technology has dominated. It involves many fields, not only artificial intelligence, electronic intelligence technology, and more widely used in machinery, optics, physics, power, chemicals, materials and other fields. However, the design of basketball game scoring device based on single-chip microcomputer is the best choice in this field. The design is based on the single-chip basketball timing scoring device, the use of a total of 7 LCD screen as a display device. In this design, a four-in-one seven-segment co-positive LCD liquid crystal display and four seven-segment co-positive LCD displays are connected. The former is used to record the time of the race schedule. Here are two for minutes and two for seconds. The latter is used to represent the scores of teams A and B, which share an LCD liquid crystal display with a display range of up to three digits, or 0-999 points. The way to record a race is by counting down the minutes until the clock strikes zero. In order to better match the timer and scoring device to adjust the score and time of the match, I specially set up 4 keys to change the score, 2 keys to control the start and pause function. The key operation of the system is controlled by single chip microcomputer, easy to operate, liquid crystal display and installation side. The goal of basketball game timing and scoring device is to solve the accurate, convenient and flexible timing and scoring problem in basketball game. The device uses a single-chip AT89C52 to complete the timing, scoring function. In addition, the hardware selection and software design of each part are introduced in detail. According to the actual situation, the equipment can modify the competition results at any time, the correct display of the remaining time of the competition.

keyword: Single chip microcomputer; LCD display; chronograph

以上内容仅为本文档的试下载部分，为可阅读页数的一半内容。如要
下载或阅读全文，请访问：

<https://d.book118.com/525241122021011303>