Electrical Projects

Contributed by Liang Chen

Propeller Display

Above: My Patent-Pending AVR Project: Propeller DisplayIntroduction:As you see, the word â€œLiang Chenâ€• floating transparently in the air, emitting dazzling red rays, with a mysterious blue halo around. And the slightly vibration finally make you can not believe that the light is from the earth. The Propeller Display can create a transparent image of picture or text in the air.'Rationale:There were several Light-emitting diodes (LEDs) on an PCB board, which could rotate around the axle at high speed, and LEDs displayed different combination at special angles. Finally, it was able to display pictures by utilizing the phenomenon that the human eye retains an image for a brief moment, like the film which displays coherent images by showing the pictures at a high speed.Electrical Design:I use a Atmel AVR ATmega8 microcontroller as the main processor to flash the LEDs. Also a Hall Effect Sensor and two driver ICs in the PCB board.
Â Mechanical Design:I used belt as Transmission Method.Schematic:Mechanic Structure:Intellectual Property Considerations:Although the idea (two dimensions Propeller Display) was emitted independently by me at 2004, it is by no means novel, as mention at the beginning, similar idea (two dimensions) first published into internet at 2003. However, in this project, I use a lot of unique architecture, making the Display more capable and developable. Considering these factories, I applied China Patent at 2006.8.Other ProjectsI have a lot of other projects of electrical or computer software. Like I lighted on a 6610 LCD by a ARM microcontroller.