DIFFERENT COLORED OBJECTS SEGGRETATION BASED ON COLOR SENSOR THROUGH ADC

ABSTRACT

Color provides powerful information for object recognition. A simple and effective recognition scheme is to represent and match images on the basis of color histograms. The work makes a significant contribution in introducing color for object recognition. However, it has the drawback that when the illumination circumstances are not equal, the object recognition accuracy degrades significantly.

The purpose of this project is to arrive at recognition of colored objects invariant to a substantial change in viewpoint, object geometry and illumination. In this project we use a LDR sensor interfaced with ADC (Analog to Digital Converter) to attain value of the color. Every color object is asserted with certain value. The color values are stored in microcontroller. The ADC is interfaced to the microcontroller. Whenever the color object placed over color sensor, the microcontroller reads data from the ADC to get the value of the color. If the color value matches with value stored in the controller, the color status is displayed on the LCD.
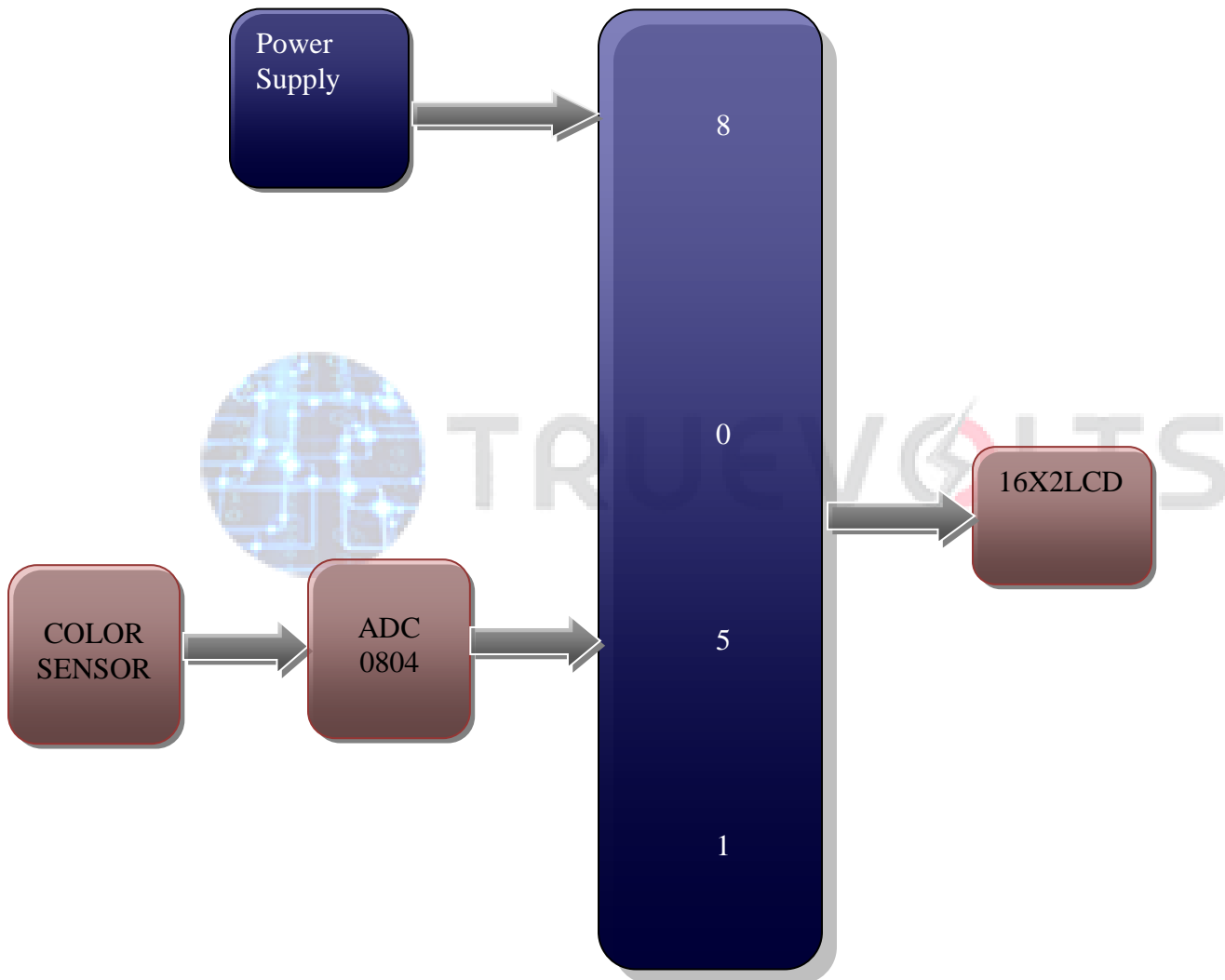
This project uses regulated 5V, 500mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Full wave bridge rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

APPLICATIONS

- ➢ Industrial applications
- ➢ Household applications

BLOCK DIAGRAM:

Power Supply → [8 0 5 1] (microcontroller)

COLOR SENSOR → ADC 0804 → [microcontroller] → 16X2LCD

POWER SUPPLY BLOCKDIAGRAM:

Step down Transformer → Bridge Rectifier → Filter → Regulator → Output