INTELLIGENT OBJECT COUNTING SYSTEM

ABSTRACT

The project is aimed to design a system using which the objects can be counted automatically, without human involvement.

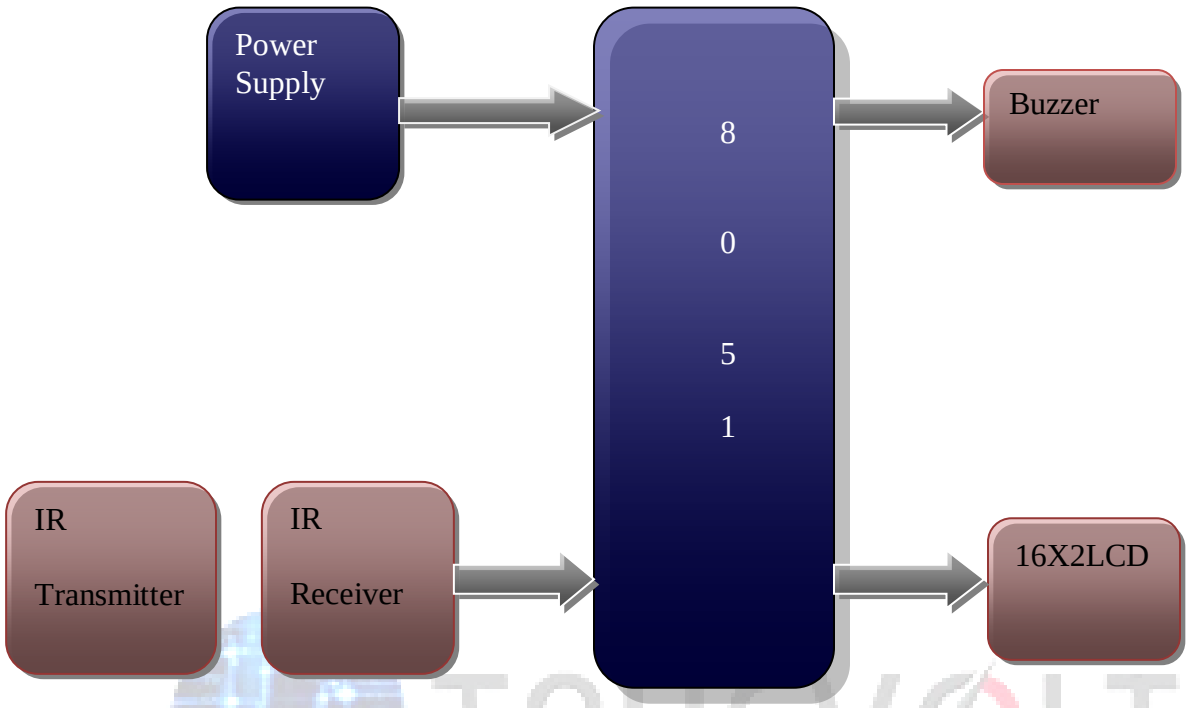
To develop the project here we use IR technology which is a wireless communication. A 16x2 LCD is provided to display the object count and a buzzer is interfaced to the controller for an audio indication. To count the objects, we fix an IR transmitter and an IR receiver by facing each other at the place where the objects to be counted and the IR receiver will be interfaced to 8051 microcontroller. Generally, the IR receiver receives the IR rays transmitted from the transmitter. But when an object passes through the IR ray passing from the transmitter to the receiver the rays get interrupted. Which have to be received by the receiver so the corresponding signal change will be detected by the controller and the object cont will be increased from the previous value and will be displayed on the LCD. This process repeats for every object which passes through IR transmitter and receiver. The buzzer gives a beep for each and every increment of object count.

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:

- Bottle filling equipment
- Packing equipment
- Other industrial instruments

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM: