

INTELLIGENT AUTOMATIC RAILWAY GATE CONTROLLER USING 8051 MICROCONTROLLER

Description:

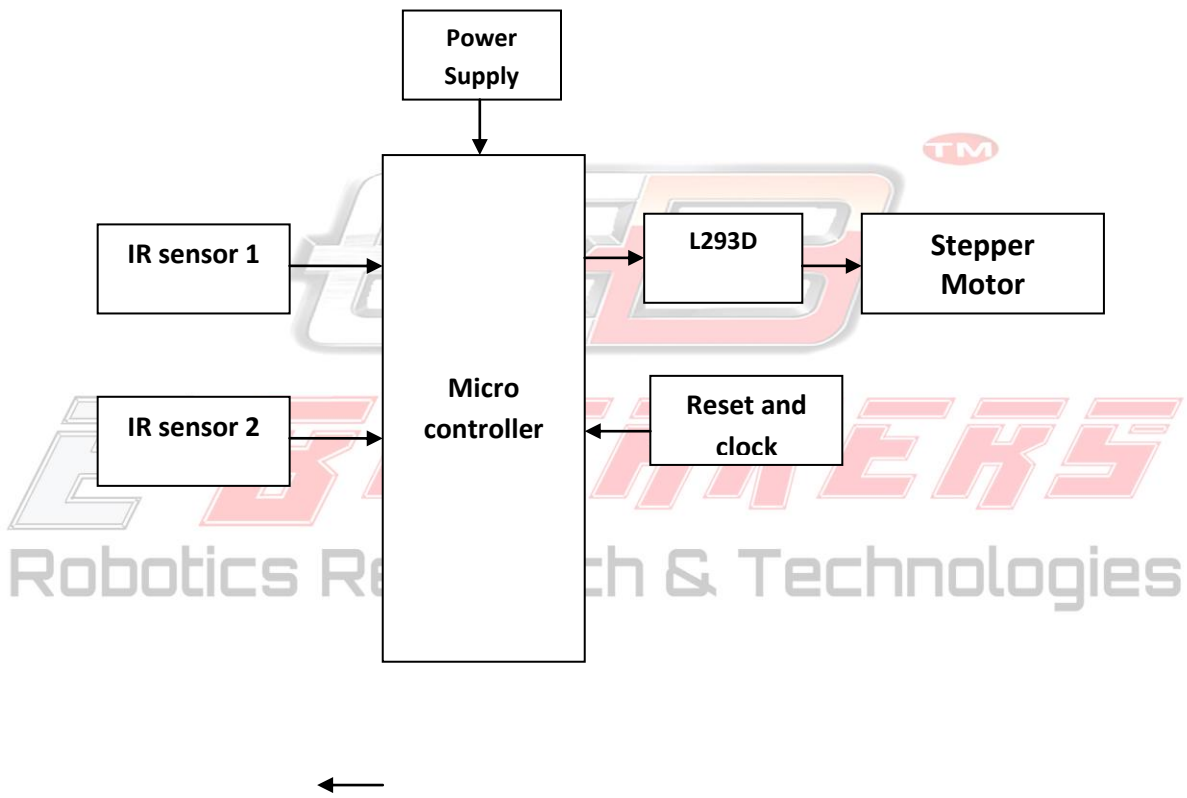
Automatic railway gate operation implemented in unmanned level crossings at remote areas. Detection of train approaching the gate can be sensed by means of four sensors placed on either side of the gate.

Train arrival and departure sensing can be achieved by means of Relay techniques. When the wheels of the train moves over, both tracks are shorted to ground and this acts as a signal to microcontroller (89C51) indicating train arrival.

RED signal appears for the road user, once the train cuts the relay sensor placed before the 5Kms before the gate. A buzzer is made on as a pre cautionary measure for the road users.

Once micro controller senses that there are no vehicles inside, it automatically produces signal to operate motor through relay circuit and hence close the gate for passage of train. This can be implemented in manned level crossings also, as manual errors can be eliminated by automation.

Block diagram:



Hardware requirements:

1. Micro Controller
2. Ir Sensors
3. L293d
4. Motors

Software requirements:

1. Keil software
2. Embedded c

