Automatic Counting for Entry Point

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An automated occupant counter is a device used to count the number of people walking through a door. Most of the time, this system is used at the entrance of a building so that the total number of people occupied can be recorded. This occupant counting system will be useful for many sectors. Especially, it may be important for marketing research, pedestrian traffic management, tourist flow estimation or in security application in an emergency situation and more. For example in case of an evacuation need it is possible to know how many people are trapped inside a building to execute a prompt evacuation plan.

The system has two sensing elements and two signal processing channels arranged such that a PIC16F84 microcontroller produces signals of opposite polarities in the two channels. A method of monitoring a passageway and an alarm management unit associated with an integrated system are also provided. An alarm signal is delivered only in the event that the two signals of opposite polarities are cutting simultaneously. Disturbances, such as component noise, which affect only one channel cannot give rise to an alarm, nor can power supply disturbances which produce signals of the same polarity in both channels. There will be also provided an automated occupant counter system for determining a direction of travel of human including first and second human detection devices and a controller. The controller provides an output representative of a direction of travel in response to the outputs of the first and second human detection devices and then that will display on LCD. Further, there will be a rotating gate set up to control the passengers to move one by one in an overcrowded situation.

Key words: Microcontroller, Occupant counter, Signal processing