RESTAURANT MANAGEMENT SYSTEM USING MICROCONTROLLER

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ABSTRACT- The system is implemented to reduce the manpower and enhances the accuracy of work in a restaurant. This system wake to provide service facility to restaurant and also the customer.

INTODUCTION

Automatic systems are increases in our day to day life. Application like home appliances and industrial automation reduce man power and increasing efficiency. Here restaurant management system that automate menu for ordering food in restaurants. In this modern day number of restaurant are increasing. They also required very fast processing for serving to the customers. With the increasing number of customer it would be require more man power, since the current situation has become hectic for the restaurant. Also change the hardcopy of the menu can't happen.

Using simple component and programming techniques, an automation systems is proposed. Menu is displayed on the LCD. User should be press the corresponding number of selected items from the display.
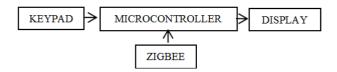
BLOCK DIAGRAM

Fig.1.1 Transmitter section

Fig.1.2 Receiver section

BLOCK DIAGRAM DESCRIPTION:

Transmitter section:

A keypad is used to select the items. Menu is displayed on LCD.

A number is indicated for each item in the menu. It is selected by using keypad. In case if touch panel is used there is no need of using a keypad.

Zigbee transmitter is used to transfer the menu.

Receiver section:

Receiver is arranged in kitchen. Receiver section consists of a microcontroller, zigbee receiver, LCD.

Multiple receivers can be connected on the zigbee network. Zigbee defined has a rate of 250kbits/s. On the receiver side order the menu is received from multiple transmitters.

The data received from the transmitter is displayed on the LCD.

WORKING PRINCIPLE:-

Menu is stored in the eeprom of the AVR microcontroller.AVR has 512 bytes of eeprom internally.

This is displayed on the LCD .Here LCD is used in 4bit mode to reduce number of pins usage.

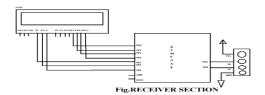Data from EEPROM is fetched by the micro controller and is displayed on the LCD.

By using the key pad one should select the menu.

Suppose 1.Soup 2.Starters 3.Main course is displayed, the user should press 1 from keypad and select the item again and press #.

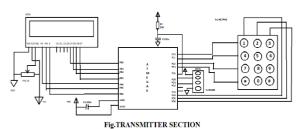Thus the order is transferred to the receiver through zigbee.

ZIGBEE is high level communication protocol using small, low-power digital radios.

CIRCUIT DIAGRAM:

Fig.RECEIVER SECTION

Fig.TRANSMITTER SECTION

DESCRIPTION OF CIRCUIT DIAGRAM:

In circuit diagram Microcontroller (Atmega8) has connected with the Graphics Display, Keypad and Zigbee module. From the basis of block diagram we can connect four pin connector instead of zigbee module and input is given to the microcontroller at Port C. Input received from the Port C where we connected keypad or touch panel microcontroller gives the output to Port B. The output of the microcontroller at transmitter side is menu card and the output at receiver side is the ordered menu which ordered by customer.
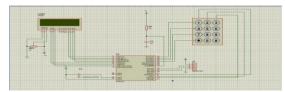
CIRCUIT SIMULATION:
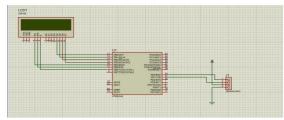

Fig.1.3 Transmitter section

Fig.1.4 Receiver section

RESULT:

The LCD display displays the menu card on the table of customer and then transmitter section takes the order from customer and it send to receiver section through the zigbee module. After that receiver side displays the order of each table by the given table number.

Figures below show the results of the working demonstrated above.

Fig.6: Menu on a table

Fig.7: Selected Items

Fig.8:Order received in the kitchen

Fig.9: Order completed

Fig.10: Payment at counter

CONCLUSION:

The project entitled "RESTAURANT MANAGEMENT SYSTEM" has been proposed to be implementing to replace the manual system. The whole management system is designed for a general computerized digital restaurant so that any restaurant owner can get it and can start automated process to his restaurant.

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