

MESSENGER AT WINDSCREEN

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ABSTRACT

When drivers caught in the road congestion, they are curious and easily get irritable to know what happened and what caused the traffic congestion. How do you going to show all drives that the cause of this jam if you are from opposite direction? How do you expect the opposite drivers to give a clue on what causes the jam if you are the driver who caught in the jam?

This project is purposely to solve these problems by designing of Messenger at Windscreen display panel which based on a 40 columns by 7 rows of LED dot matrix. The concept of this display panel is to display different modes shown with different intended word phrases. This display panel has to mount inside windscreen and powered by DC source from vehicle. The display panel is controlled by a PIC microcontroller that send serial data to numbers of cascaded shift registers. The shift registers convert the serial data from PIC microcontroller to a parallel sequence which used to scan and drive each columns and rows of the dot matrix.

Software part is about algorithm of selecting words to display panel programming codes. At first, microcontroller selected intended words and pick bit by bit of alphabet from character data for each column and rows systematically and execute different kinds of function to display with different modes. After that, send the output of serial data to shift register in order to multiplexing each dot matrix efficiently.