

TITLE PAGE

**CONSTRUCTION OF MICROCONTROLLER DOT MATRIX
DISPLAY SYSTEM**

BY

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APPROVAL PAGE

This project has been approved by the department of Electrical/ Electronics Engineering, Caritas University Enugu, in partial fulfillment for the award of bachelor of engineering degree (B.Eng.) in Electrical/ Electronic Engineering.

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DEDICATION

This work is specially dedicated to the great Almighty and Ever-living Father, if not for His mercy and favour, all my efforts would have been in vain.

ACKNOWLEDGEMENT

My awesome thanks to GOD Almighty whose grace has sincerely contributed to my guidance and protection throughout the past seasons.

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ABSTRACT

The microcontroller based display board is an advert system that displays information based on a specific purpose. The system is designed to enable the viewer know the designers aim.

The system comprises of different blocks of functional circuit that are put together to achieve the desired aim. These blocks include; the power supply section, the control section, the demultiplexer section and the display unit. The power supply unit is the section of the system that ensures that the system is turned ON and this section comprises of a 12- volt step-down transformer, a bridge rectifier circuit, a smoothing capacitor and a voltage regulator IC.

The control section is in charge of interpreting the changes that occur in the environment. The section controls the function of all other parts of the circuit. The function of the control unit is carried out using a micro-controller (AT89S52). It is programmed to carry out the desired function.

The demultiplexer section distributes signal to the display unit and allows them to light at appropriate time. This unit is achieved using a demultiplexer (74LS138). The display unit comprises of light emitting diode which are in dot matrix form. The light emitting diode is arranged in 64 columns and 14 rows.

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