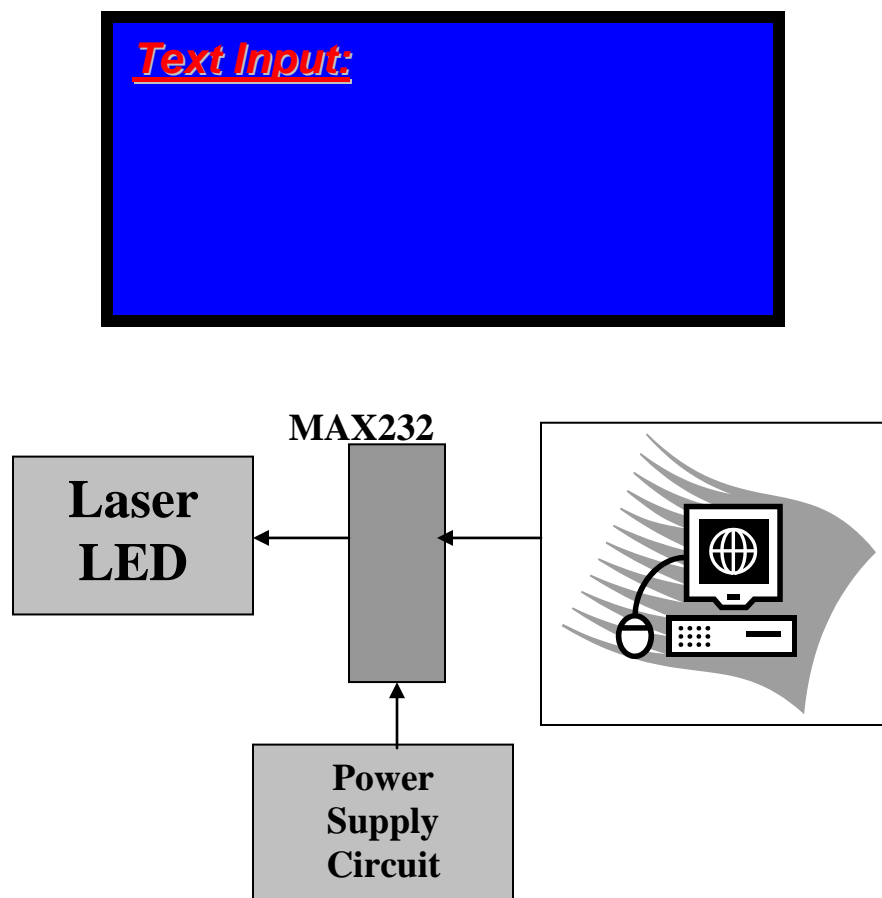


# Data Transmission System of an Optically Steered Modulated Laser Beam

## ***Abstract:***

The main goal of this project is to develop and implement a prototype optical transmission system supporting point-to-point communication link. A free space laser link and a plastic fiber link have been designed and implemented in this present work. Both links have been tested with two data source systems: "PC as a host" and "PIC as a host" by asynchronous serial transmission. Since any serial data from either host is represented by turning the laser beam on for a one and off for a zero, visible red laser diode is the heart of this project. Just up to the maximum speed of serial port that can be offered, 115200 bps, has been tested and is reliable at distances of 30 feet. As a result of this work, wireless laser system was designed and can be used as a direct link between adjacent buildings whereas plastic fiber link in short range communication network architecture without EMI, impossible direct interception and the transmission can be detected by no instrument. Any information in all types of files and any images can successfully transfer by Hyper Terminal and self-developed software through those links.

## **Block Diagram of Transmitter Circuit:**



**Block Diagram of Receiver Circuit:**

