BARCODE READER DEVELOPMENT

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INSTITUT TEKNOLOGI MARA

40450 Shah Alam

SELANGOR

HAZIAN BIN MAMAT

Faculty of Electrical Engineering

INSTITUT TEKNOLOGI MARA

40450 Shah Alam

SELANGOR

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INSTITUT TEKNOLOGI MARA

Shah Alam, Selangor

ABSTRACT

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The traditional Punch card system can now be fully replaced by a much more advanced technology device such as Bar Code system. Here is a sample application of Bar Code Attendance System, where *staff attendance* are recorded as well as variables such as *date, time* and *places of events*. This project concentrates on the barcode development system itself which is implemented by using a MicroChip PIC micro controller. All functions including bar code decoding, signal conditioning, serial communication, LCD display driver, 3X4 keypad decoding as well as audio beeper acknowledgement are all done within the 18-pin micro controller.

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INTRODUCTION

1.1   Introduction

Bar codes were first developed in the railroad business to keep track of which cars went with which engine. The bar codes were imprinted on the side of the railway cars that went with a particular "system" at a uniform height above the ground. The bar code of the different cars could then be read together to compile information on that particular grouping; what station they came from, where they were headed, etc. In this way, trains could be brought in and sent back out "automatically". When the business world realised how well this system worked, these "railway bar codes" mutated into the UPC or Universal Product Code system. In addition to making product management easier, it reduced the health risk of being a store clerk, since store clerks were originally at high risk due to the repetitive motion of keying in the codes [1].

The UPC now used on almost all manufactured goods. This form of the bar code is standardised so the UPC for a given product is the same everywhere. One interesting thing to note is that UPC codes were developed and standardised before bar code readers were developed. The people developing the system were confident that the technology would eventually come about to make reading the codes easy [1].