

HIGHER TECHNICAL INSTITUTE
ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

**DEVELOPMENT OF A DIGITAL LAB
EXPERIMENTAL UNITS**

by
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Units**

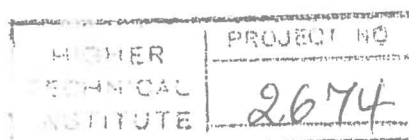
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INTRODUCTION

In nowadays it can be seen that digital systems have been developed in a remarkable way. If we look around us a conclusion can be observed, that the digital systems are now an integral part of our everyday life. For example we wake up using digital alarm clocks, we program a compact disk player to play the pre-selected music at the right time, digital computers are programmed to operate specific programs.

This project is presenting the theory about Multiplexer, Demultiplexer, Decoder ICs and the ROM-Implementation at the first stage. In that way the operation of these ICs is presented to us in the simplest way. At a second stage some examples that can be worked out with these units are going to be explain in the better possible way.

The ICs that are presented on this project are very important and they are widely used in nowadays. For example the Multiplexers are used in telephony at the transmitting end and the Demultiplexers at the receiving end. The ROM-Implementation is used in computers and in digital systems for transmitting a constant information at the output.