

HIGHER TECHNICAL INSTITUTE
ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

AUTOMATIC IRRIGATION SYSTEM
CONTROLLER

EFSTATHIOU CONSTANTINOS

E/1067

JUNE 1997

HIGHER TECHNICAL INSTITUTE	PROJECT NO 2658
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DIPLOMA PROJECT

**AUTOMATIC IRRIGATION SYSTEM
CONTROLLER**

SUBMITTED BY :

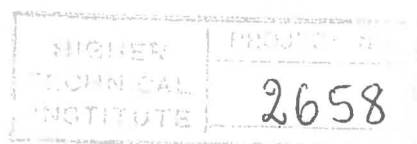
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E/1067

**In partial of the requirements for the diploma award
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SUMMARY - INTRODUCTION

This project deals with the techniques and basic principles associated with the control of electronic devices from a computer. The main objective of the project is an automatic irrigation system.

Although, this is not a new investigation for modern technology, is not very common here in Cyprus. Until now systems, are not installed because of their cost and their complexity. But, in the nearest future it will be an ordinary facility that will save time and help in the production.

In large field a system like this is needed in order to have full control and to avoid mistakes and other problem during the irrigation time. Also you can save plenty of time for doing other things for improving your production's quality.

The reader will find it interesting and very educational as he progresses through these pages. Unique and modern ideas about electronics circuits and computer programs are part of this project. Of course basic electrical, electronic and computer engineering knowledge is required in order to understand the circuits and the various programs.

The project is divided into two parts, theoretical and practical:

- The theory goes around the use of computer in our life, a small introduction to computers, the operating system of a computer, the application of the project and mainly the use of Pascal and other special integrated circuits such as the 8255 PPI (peripheral interface).
- In the practical part there is mainly a complete description of the circuits used, their operation, the internal block of 8255 and application and description of its operation. Also the use of 4013 (D-Latch) ICs is explained and the external board is described

Furthermore , at the end of the project my conclusion are written . Common problem and software arrangements are mentioned such as improvements and ways of avoiding incorrect operation of the whole system .