

HIGHER TECHNICAL INSTITUTE  
ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DEVELOPMENT OF AN  
AUTOMATIC BATCHERY UNIT

CHRISTOU CHRISTOS

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HIGHER TECHNICAL INSTITUTE  
ELECTRICAL ENGINEERING COURSE

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AUTOMATIC HATCHERY UNIT**

E.1002

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1996**

HIGHER TECHNICAL INSTITUTE	PROJECT NO 2575
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This project is in memory of my ancle Christophoros

**DESIGN, CONSTRUCTION AND TESTING OF AN  
AUTOMATIC HATCHERY UNIT  
WITH A NUMBER OF SAFETY FEATURES**

by

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This Project Report is submitted  
to  
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In partial fulfilment of the requirements  
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# **PART A**

## **General**



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Last but not least, I want to express my sincere thanks to my father for the fact that he gave me all the background information relating to the theory behind a hatchery unit.

***Christou Christos***

***June 1996***

## SUMMARY

**TITLE** : Development of an Automatic Hatchery Unit.

**AUTHOR** : Christou A. Christos.

The purpose of this project was to design construct and test an automatic hatchery unit with a number of safety features. The unit is actually to be used for hatching any kind of bird's eggs, in this case chicken eggs.

Hence for this reason, certain sensing, indicating and alarming circuits were incorporated in order to provide automatic operation reliability and better hatching results.

The main body of the unit is a wooden case and heat to it is provided by means of an element and heater. These are controlled by a certain circuit, incorporating a comparator to maintain a temperature of 37 degrees centigrade. On the other hand if the temperatures rises above or falls below this level, the alarm systems are activated to inform the user that something is wrong with the system.

There are also circuits for temperature indication, the turning of the eggs and small auxiliary circuits such as power supply circuits. All the functions and controls of the hatchery unit are clearly indicated and mounted on a labelled panel box above the engine.

During the construction care was taken to provide production in the operation of the unit for both the user but the unit as well.

The circuits which are used were simple, clever and not very expensive in their construction based on our knowledge and experience of electronics.

Finally, the unit has all essential features of a professional engine except humidity control which was very difficult to construct (especially mechanical part), and also very expensive due to expensive sensors needed for this design.