

**HIGHER TECHNICAL INSTITUTE
ELECTRICAL ENGINEERING DEPARTMENT**

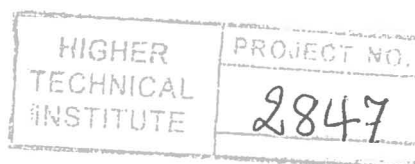
DIPLOMA PROJECT

**DEVELOPMENT OF
DOMESTIC SATELLITE
MONITORING SYSTEM**

BY

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E.1112**

NICOSIA , JUNE 1998



**SATELLITE ANTENNA
SYSTEMS
BY
KOURTELLIS ACHILLEAS**

**PROJECT REPORT: Submitted to the Electrical Engineering Department
of H.T.I, Nicosia, Cyprus in partial fulfilment of the
requirements for the diploma of**

TECHNICIAN ENGINEER IN ELECTRICAL ENGINEERING

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Lecturer in Electrical
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Nicosia 1998

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ACKNOWLEDGEMENTS

This project is dedicated to those that believed in me and especially to the woman that I will always love.

I would like also to thank everyone that helped me in fulfilling this project.

HIGHER TECHNICAL INSTITUTE
Nicosia - Cyprus

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

Academic Year 1997/98

Project Number, E. 1112

Title:

Development of Domestic Satellite Monitoring System

Objectives

1. To study different types of Domestic Satellite Systems (Analogue / Digital).
2. To study the technology Satellite Systems (past/modern/future)
3. To study and test amplifiers used in industry for domestic Satellite / TV signals.
4. To test and improve an existing Satellite Monitoring System (signal testing, positioning, increase number of LNB etc)

Terms and conditions

1. Satellite Monitoring System (Provided by HTI)
2. Amplifiers (Provided by industry)

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Supervisor : Mr D Lambrianides

External Assessor :

DL/ML

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INTRODUCTION

The Satellite is the element that makes the whole link possible. The satellites we are concerned with are in geostationary orbit. That is when seen from the earth they seem to be always in the same location.

The position of the satellites is given in longitude from the Greenwich Meridian. Satellites operating in different frequency band can be collocated (separated by 0.2 degrees). Satellites operating in the same frequency band can not be located closer than 2 degrees due to the performance characteristics of earth station antennas. If the satellites were located closer significant interference would occur.