

DESIGN OF A SOLAR POWERED REMOTE  
TRANSMITTER/RECEIVER

Project Report Submitted by

SOTERIOS IOANNIDES

In part satisfaction of the award of  
Diploma of Technician Engineer in

Electrical Engineering

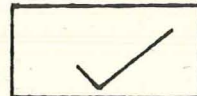
of

the Higher Technical Institute, Cyprus

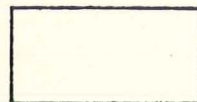
Project Supervisor: Mr. S. Spyrou  
BSc, Lecturer,  
Electrical Engineering  
Department, H.T.I.

External Assessor : Mr. Philios Christodoulides,  
BSc in Electronic Engineering,  
Manager of  
"PHILIOS CHRISTODOULIDES & CO"

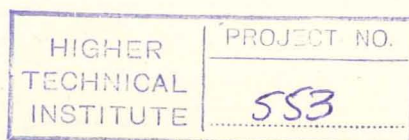
Type of Project : Individual



Group



JUNE 1981



# C O N T E N T S

	page
ACKNOWLEDGEMENTS	I
ABSTRACT	II
INTRODUCTION	1
CHAPTER 1 - PULSE POSITION MODULATION	
1.1 Conveying command signals	5
1.2 The 490 coder I.C.	7
1.3 Frequency setting	8
1.4 Outputs	10
1.5 Power Supply	12
1.6 Control panel	12
1.7 Dual control	13
1.8 Tuning the coder and decoder	13
CHAPTER 2 - P.P.M. DECODING	
2.1 Introduction	14
2.2 The 922 I.C.	15
2.3 Feeding signals to the decoder I.C.	16
2.4 Using the I.C. outputs	16
CHAPTER 3 - SOLAR POWER FOR THE WHOLE SYSTEM	
3.1 Introduction	19
3.2 Storage Batteries	19
CHAPTER 4 - HOW TO BUILT UP THE CIRCUIT	
4.1 Construction	21
4.2 Power Supply	22
CHAPTER 5 - COST AND AVAILABILITY OF COMPONENTS USED IN THIS PROJECT	23
CONCLUSIONS	25
REFERENCES	
APPENDIX 1	
APPENDIX 2	

## A B S T R A C T

This Diploma work appointed by the Higher Technical Institute deals with the design, construction and testing of Remote Control Project. This project consist of an encoder/decoder unit and an appropriate circuit suitable to decode the outputs of the decoder.

The whole system is so designed as to take power from an appropriate system design last year by a student of the Higher Technical Institute. This system is used to convert the sunlight into electrical energy and finally this energy is stored in batteries.

Reference about the operation of the whole system is given to the sample constructed.

A study finally is being made giving an analysis of cost and availability of components used in this project.