

HIGHER TECHNICAL INSTITUTE
ELECTRICAL ENGINEERING COURSE

DIPLOMA PROJECT

**DEVELOPMENT OF A D.C. DRIVE
WITH SPEED REVERSAL
AND POWER REGENERATION FOR A D.C. MOTOR**

E/912

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This project is dedicated to all my family and especially to my father Neofytos and my mother Maria for all the understanding, patience and love they have shown to me through all these years. May God bless them.

SUMMARY

This project deals with the design of a dc chopper providing a variable dc voltage for a dc motor. Also a control circuit to provide forward and reverse rotation with regeneration during switching off is designed.

A general approach to dc motors, MOSFETS, snubber circuits and dc choppers is made at first and then the design and operation of the system is presented.

Chapter two has information about the dc motors in general.

Chapter three deals with power MOSFETS, the snubber circuit and dc choppers in general.

Chapter four gives a design overview, i.e. it gives and explains the block diagram and each part of it. It also explains the internal operation of the 3524 IC.

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