"Circuit Design of Glow Discharge Plasma Panel and Parameters Optimization"

"**A Thesis Submitted for the degree of Master of Science As a partial fulfillment for the requirements of the master of Science**"

by

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Dedication

There is a number of people to whom I would like to dedicate this thesis, and to whom I am greatly indebted.

I dedicate the present work to my family, who offered me unconditional love and support during my study;

my father, my biggest champion and cheerleader, for everything he did and is still doing for me,

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SUMMARY

SUMMARY

The one atmosphere uniform glow discharge plasma panel (OAUGDPP) is a kind of panel that allows making sharp and clear pictures of glow and cold-discharge plasmas. The panel is a sheet made of polystyrene foam. In our laboratory, the OAUGDP was created using two different circuits, traditional and electronic.

The diagnostic tool, which was used to measure the plasma voltage and plasma current, acted as the high voltage probe. A simple high-voltage probe is constructed from a pair of resistors, which is suitable for DC measurements. The voltage division ratio used by the probe during our experiment is (1:1000).

This thesis includes a description of various types of TV screens as well as various types of ignition systems. It also includes the measurements and calculations of the electrical parameters of plasma using traditional and electronic circuits.

Key Words:

glow discharge - TV screens - electrical plasma parameters.

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CHAPTER I

INTRODUCTION