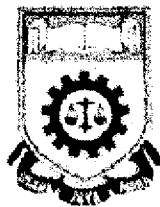


DIGITAL LINE GUARD

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ABSTRACT

The digital line guard is an electronic device designed to protect the telephone lines against bugging, wire-tapping and fraud. This product will fully paralyse and deactivate all those phenomena mentioned above. It is fully automatic, small in size, easy to connect and use. The advantages of this device are its free maintenance and no battery is required since the unit is fed by the protected line. This device is compatible with all telephone systems in all countries. The US type RG-11 socket system is used i.e. the snap-in plug / socket installation.

This project concentrates on the development of electronic circuit that can overcome problems such as protection from fraud, saving on telephone bills and detection of broken lines.

TABLE OF CONTENTS

CONTENTS	Page No.
Dedication	i
Acknowledgements	ii
Abstract	iii
Contents	iv
 CHAPTER 1	
1. INTRODUCTION	
1.1 Background	1
1.2 Objectives	2
 CHAPTER 2	
2. THE TELEPHONE SYSTEM	
2.1 Overview of the Telephone System	3
2.2 The Telephone Set	4
2.3 Telephone Speech Functions	6
2.4 Dialer and Switchhook Operation	7
2.5 Standard Telephone Characteristics and Functions	9
2.5.1 The Two-Wire Circuit	11
2.5.2 Off-Hook Impedance and Bandwidth or Frequency Response	11

CHAPTER 1

INTRODUCTION

1.1 Background

Communication is as old as the human race. It refers to the exchange of information or the passing of the messages that includes things like talking and writing, and is clearly a vital part of our lives. Even before there were recognisable languages, people made sounds and signs to talk to one another. Since 1800s, there have been great advances in communication technology. First, the telegraph and then, the telephone put people in touch with one another across cities and continents. The telephone is one of the most useful, sophisticated, and reliable tools of modern civilisation. In a very complex and technological world, the telephone provides a relatively simple link between people and machines.

By 1960s, digital line systems were on trial by a number of consumers and by 1970, the systems which set today's standard were in operation. At first, it was only to alleviate cable congestion, but after miniaturisation and Large Scale Integration (LSI) of electronic components and digitalisation of telephone exchanges, it rapidly becomes the obvious choice for all new transmission systems. Digital line systems become the standard for conveying information and other signals over telecommunication networks.