TELEPHONE LINE SECURITY DEVICE (TLSD)

This thesis is presented in partial fulfillment for the award of the Bachelor of Electrical Engineering (Hons.)

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ABSTRACT

This paper presents the invention relates to the telephone line security. Telephone line security device (TLSD) has been developing to preventing unauthorized use of the telephone subscriber's set. Act as an inhibit device to isolate unauthorized make a call. The TLSD has a personal identification number (PIN) storing in the PIC microprocessor, the personal identification number (PIN) is a secure number which is used every time when make a call. TLSD includes circuitry which able to disconnect the transmitting element from the telephone if the personal identification number (PIN) given are incorrect. TLSD was tested and develops based on public switched telephone network (PSTN) architecture. An emergency service number is obtainable at any time even when other calls are inhibited.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Various telephone security devices have been proposed which generally comprise an inhibiting circuit and switch, for example a key switch or a switch in a hidden position, for bringing the inhibiting circuit into operation. There are also known devices which, by mechanical means, enable particular telephone number for example to call the operator or to call an emergency services number (999 in the Malaysia), to be obtained free.

1.2 System Description

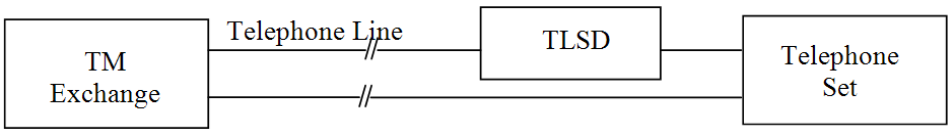

Figure 1.1: System Architecture of Telephone Line Security Device

Telephone is connected to the telephone exchange by about three miles or 4.3 km of a twisted pair of No.22 American Wire Gauge (AWG) or 0.5mm copper wires, through Public Switching Telephone Network (PSTN) [1]. Telephone measurements refer to current consumption, not voltage. The length of the wire connecting the subscriber to the telephone exchange affects the total amount of current that can be drawn by anything attached at the subscriber's end of the line.

The signal form exchange will only connect to subscriber telephone when a correct personal identification number (PIN) are entered. If incorrect PIN numbers are entered the device will terminate the line. But in some reason the device can be programmed to make a several telephone number a command example an emergency number, owner/subscriber phone number etc.