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**THE KENYA POLYTECHNIC UNIVERSITY COLLEGE**

**DEPARTMENT OF ELECTRICAL AND ELECTRONIC  
ENGINEERING**

**HIGHER NATIONAL DIPLOMA IN ELECTRICAL ENGINEERING  
(POWER AND ELECTRONICS OPTION)**

**TRADE PROJECT**

**TITLE: PASSIVE INFRARED MOTION DETECTOR**

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## **PREFACE**

Passive infrared motion detector is one of the security machines garget that are installed in both domestic and industrial premises to detect an intruders. The devices uses the principles of pyroelectric effect for it operation. Moreover, the garget has four main parts which are transducer, signal conditioning, timing circuit and the alarm.

Transducer act as pyroelectric sensor which absorb infrared ray from the intruder and generate electric signal. This signal is conditioned by coupling it to two stage amplifier one of the stages had a fixed gain and the other has a variable gain to vary the sensitivity of the device. Furthermore, a timing circuit is added to determine the duration of the alarm.