VIETNAM AVIATION ACADEMY

Department of Telecomunication - Electronics Engineering Technology

LOCATION IN HO CHI MINH CITY

PROJECT REPORT:

"Circuit Remote Controlled Using Infarred Light"

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PREAMBLE

In this day of advancement, we are indispensable remote control to control the devices we use every day as televisions, machines air conditioners, fan, etc. So how do remote controls work? Can control other objects in the distance? Few know that the first remote control available during World War II. Initially, people use RF technology (Radio Frequency) and then catch to start applying IR (Infarred Remote) technology to the remote control. In today's life, we use both types, however control remote use infarred in more often used. Let's see the principle operation and construction of this remote control.

Auth. Nguyen Van Anh Tuan

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Chapter 1

Introduction

1.1 Preliminary introduce:

With the current trend of modernization and industrialization, many modern technology devices appear to help save time. We can mention as public technology of things connected through the internet (Internet of Things) etc. But with expensive fees are not suitable for the average consumer. From there, i founded simple solutions with the same purpose and low cost.

In parallel, to supplement, to supplement the knowledge not studied in school. From there, i selected "Remote Controlled Using Infarred" for the topic.

1.2 Objectives of the study:

To help reduce costs and supplement knowledge not researched at school.

1.3 Research Methods:

Find information on internet.
Test on software.

Chapter 2

Find out theoretical related to the research

2.1 Application of remote controlled using infarred

Remote controlled now is using broadly, it use to controlled all wireless device. Remotes and televisions are the best example for application of this recieve and transmitter circuit. Or more application of this circuit. Beside that, we can see that remote controlled can use with air conditioners, fans, or even use to turn on the lights in house...etc.

2.2 Define of Infarred (IR LED)

Infarred light (infarred ray) is the light we can't see it by our eyes, they have wavelength from 700nm to 1mm. The infarred light have transmittion speed is equal to lightspeed.

The infarred can transmit many signal channels. It is widely applied in industry.

The amount of information that it can gain is 3 megabit/s. The amount of information transmit with infarred light is many times larger compared to the electromagnetic waves people still use.

Infarred rays are easily absorbed, poor penetration. In the word control far by infarred, the beam emits a narrow, directed direction, so when recieve must be in the right direction to use it.

Infarred wave have characteristics such as light (focusing through the lens, focal distance...). Normal light and infarred light differ very clearly in light through the material.