

HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING COURSE

DIPLOMA PROJECT

F M TRANSMISSION

E. 1149

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FM TRANSMISSION

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FM TRANSMISSION

Project report submitted by
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to

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ABSTRACT

TITLE.... : FM TRANSMISSION

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The purpose of this project is to design, construct and test an FM transmitter.

This project also explains the principle of operation of radio communication, introduces the type of the radio waves.

This project is basically explain the FM waves, how can we transmit it and how we receive the FM waves.

Also in this project we can see how the aerials transmit and receive the signal. With fully explanation by aid of diagrams and waveforms various type of aerials was insert in this project.

At the end, this project discuss how the radio receiver works(principle of operation, diagrams e.t.c)

This project also discuss the main circuit of the FM transmitter. Based on the block diagram of the FM transmitter and its principle of operation the appropriate circuit was designed, constructed and tested according to some specific condition reference to the principle of transmission and the principle of FM waves.

1. Introduction

FM transmitters has a main special requirements which is the ability to vary the carrier frequency in accordance with the modulation. The transmitter has the ability to generate the FM signal by direct or indirect method (Armstrong method). To make the transmitter to send to the output a power of our selection we must use an appropriate transistor which is range the power output.

At the input of the transmitter we send a sound which then towards the transmitter circuit abilities it modified to an FM signal at the output.

By using an appropriate FM aerial the signal is send to a specific distance which is selected by the power range of our FM transmitter. As we say before the power range is specify from the main transistor of the circuit.

Then the radio receiver receive the signal from the FM aerial which then demodulated through the receiver circuit and is send it to output as a sound signal.

To reduce the noise in the transmission from the FM transmitter we prefer to use a stereo generation which clear our signal.

Stereophonic broadcasting make our transmitting signal more stronger without any specific noise or distortion.

Also professional kind of aerials may help the transmitting signal by transmit all his power. With non professional aerials may be a problem to transmit all the power of the transmitter.