

SCHOOL OF ENGINEERING

FINAL REPORT

THE DESIGN OF A SSB VOICE TRANSMISSION SYSTEM

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ABSTRACT

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“The Design of a Single Sideband Voice Transmission System” is to investigate the technology by applying the single sideband modulation into the voice transmission system and to improve the telephone system of the previous analog telephone. Single sideband modulation is being applied into the designation of the system in order to improve the quality of the audio by increasing the existing bandwidth channel. In the existing telephone system, the audio quality would be awful if the audio frequencies transmitted exceeded the 4 kHz range. There are several types of single sideband amplitude modulation and this system is now implementing one of those methods which will be further discussed in the process of completing this project. The method which uses the balanced modulator as the main components is being used to enable the voice transmission system to transmit and receive better audio quality. This project involves the design of a transmitter and a receiver and is later combined into one system to perform as a voice transmission system. Several types of testing have been carried out to the voice transmission system to prove the ability of the system in improving the bandwidth or the audio quality.