F I N A L Y E A R R E P O R T

RF SPEECH PROCESSOR

project report presented in partial fulfillment of the requirements for the award of Diploma in Electrical Engineering (Electronics) of MARA Institute of Technology.

By:

Jamaluddin Akhir b. Abdul Raof

and

Ibrahim b. Abdul Rahman

Department of Electrical Engineering (Electronics)

MARA Institute of Technology

Shah Alam 40450 Selangor.

ACKNOWLEDGEMENT

We would like to take this opportunity to wish our thanks to all the people who help us in many way in making this project. This project entitled RF speech processor.

We wish to express our respect and thanks to our project supervisor,Puan Rusnani Ariffin for her advice,guidance and encouragement which helped us in many ways in making this project. She had spent much of her time with us for make sure that this project would end in succesful.

Furthermore we would to extend our thanks and appreciation to our friends,Wan Ismail,Hamdan and especially Din Kedah who always make jokes.We wish all of them will have luck in all time of their life.

Thank you

Jamaluddin Akhir Abdul Raof

Ibrahim Abdul Rahman

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 General Concept

Spoken voice links are one of the least efficient ways of communicating information electrically,but the most natural to us humans.The classic compromise is to clip or to compress the speech signal into smaller bandwidths.

There are various ways of obtaining improved perfamance.The perfomance can be improved by the increasing the so-called 'talk power' of the signals.This really means making the signal as effective and powerful as possible within given peak amplitude limits.Most voice links have some form of processing to boost perfomance,even it is only in the form of some simple filtering. Bass frequency do not aid intelligibility to a significant degre and can even hinder it to a limited extent.Removing bass frequcies enables the remaining signal to be boosted slightly without giving any increase in the peak amplitude,and this makes it slightly more effective.Another benefit is that reduced bandwidtl can be used at the receiving equipment,making it slightly less vulnerable to problems with noise and general interference.

Some high frequency components do significantly aid inteligibility,but using low pass filtering with a cut off frequency at about 3kHz or a little less does not greatly hinder the clarity of the signal,and the removal of these frequencies again enables the remaining signal to be boosted without the signal