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# Equalizer++

Signal Processing

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This report is compiled in L<sup>A</sup>T<sub>E</sub>X, originally developed by Leslie Lamport, based on Donald Knuth's T<sub>E</sub>X. The main text is written in *Computer Modern* pt 11, designed by Donald Knuth. Flowcharts and diagrams are made using Microsoft Visio, Inkscape and Tikz, a T<sub>E</sub>Xpackage for generating graphics.



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# **AALBORG UNIVERSITY**

## STUDENT REPORT

**Title:**

Flexible Equalizer for use in active speaker systems

**Abstract:**

This is a box for an Abstract waiting to be written.

**Theme:**

Digital Real-Time Signal Processing

**Project Period:**

6. Semester

**Project Group:**

16gr514

**Participants:**

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# Contents

<b>Part I</b>	<b>Prealysis</b>	<b>1</b>
<b>1</b>	<b>Introduction</b>	<b>2</b>
<b>2</b>	<b>Problem Analysis</b>	<b>3</b>
2.1	Problem Statement . . . . .	3
<b>3</b>	<b>Technical Analysis</b>	<b>4</b>
3.1	Gate . . . . .	4
3.2	Equalizer . . . . .	4
3.3	Limiter . . . . .	4
3.4	why a DSP? . . . . .	4
3.5	Part Conclusion . . . . .	4
<b>Part II</b>	<b>Design &amp; implementation</b>	<b>5</b>
<b>4</b>	<b>Overview</b>	<b>6</b>
<b>5</b>	<b>Requirements</b>	<b>7</b>
<b>6</b>	<b>Choice of hardware</b>	<b>8</b>
<b>7</b>	<b>Interface</b>	<b>9</b>
<b>8</b>	<b>Total Overview</b>	<b>10</b>
<b>9</b>	<b>Gate</b>	<b>11</b>
9.1	Requirements & Interface . . . . .	11
9.2	Design . . . . .	11
9.3	Simulation . . . . .	11
9.4	Implementation . . . . .	11
9.5	Test . . . . .	11
<b>10</b>	<b>Equalizer</b>	<b>12</b>
10.1	Requirements & Interface . . . . .	12
10.2	Design . . . . .	12
10.3	Simulation . . . . .	12
10.4	Implementation . . . . .	12
10.5	Test . . . . .	12
<b>11</b>	<b>Limiter</b>	<b>13</b>

11.1	Requirements & Interface . . . . .	13
11.2	Design . . . . .	13
11.3	Simulation . . . . .	13
11.4	Implementation . . . . .	13
11.5	Test . . . . .	13
<b>Part III</b>	<b>Acceptance Test &amp; Conclusion</b>	<b>14</b>
<b>12</b>	<b>Conclusion</b>	<b>15</b>
<b>13</b>	<b>Optimization</b>	<b>16</b>
<b>14</b>	<b>Perspectivation</b>	<b>17</b>
<b>15</b>	<b>Discussion</b>	<b>18</b>
<b>Part IV</b>	<b>Appendix</b>	<b>19</b>
<b>A</b>	<b>Appendix</b>	<b>20</b>



# Preface

This report has been carried out during spring of 2016 as a 6. semester Electronics and IT student bachelor project at Aalborg University by group 16grXXX. The project concerns the development of Something extremely awesome.

Aalborg University, May 27, 2016

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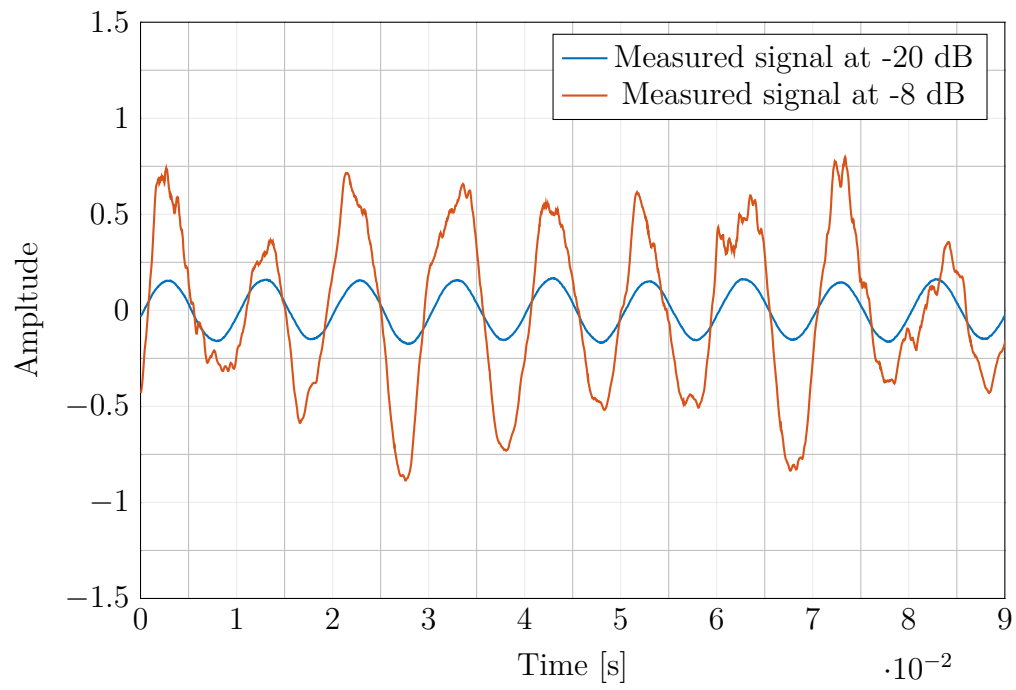




# Part I

## Preanalysis

# 1 | Introduction



**Figure 1.1:** test.

## 2 | Problem Analysis

### 2.1 Problem Statement

## **3 | Technical Analysis**

**3.1 Gate**

**3.2 Equalizer**

**3.3 Limiter**

**3.4 why a DSP?**

**3.5 Part Conclusion**

## Part II

# Design & implementation

## 4 | Overview

# 5 | Requirements

## 6 | Choice of hardware



# 7 | Interface

## 8 | Total Overview

## 9 | Gate

### 9.1 Requirements & Interface

### 9.2 Design

### 9.3 Simulation

### 9.4 Implementation

### 9.5 Test

# 10 | Equalizer

## 10.1 Requirements & Interface

## 10.2 Design

## 10.3 Simulation

## 10.4 Implementation

## 10.5 Test

# 11 | Limiter

## 11.1 Requirements & Interface

## 11.2 Design

## 11.3 Simulation

## 11.4 Implementation

## 11.5 Test

## Part III

# Acceptance Test & Conclusion

# 12 | Conclusion

# 13 | Optimization



# 14 | Perspectivation

# 15 | Discussion

## Part IV

## Appendix

Appendix

# A | Appendix

Somehting nice to know