

Electronics

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Electronics

Foreword

1. Aim of This Textbook
2. Prerequisites
3. Preface

Chapter 1: DC Circuits

1. Charge and Coulomb's Law
 - ▣
2. Voltage, Current, and Power
 - ▣
3. Basic Concepts
 - ▣
4. Cells
 - ▣
5. Resistors
 - ▣
6. Capacitors
 - ▣

7. Inductors

- ▣ 1. Inductance
 - ▣ 2. Inductors/Networks
 - ▣ 3. Inductor Construction
 - ▣ 4. Inductors/Real Inductors
 - ▣ 5. Simplifying Capacitor/Inductor Networks

8. Other Components

- ▣ 9. DC Voltage and Current Laws

- ▣ 10. Nodal Analysis

- ▣ 11. Mesh Analysis

- ▣ 12. Thevenin and Norton Equivalent Circuits

- ▣ 13. Superposition

- ▣ 14. Diagnostic Equipment

- ▣ 15. DC Circuit Analysis

▣

16. Measuring Instruments



17. Noise in electronic circuits



Chapter 2: AC Circuits

1. AC Circuits



2. Phasors



3. Impedance



4. Steady State



Chapter 3: Transient Analysis

1. Inductors/Transient Analysis



2. RC Circuits



3. RL Circuits



4. LC Circuits



5. RCL Circuits



Chapter 4: Analog Circuits

1. Analog Circuits



2. Vacuum Tubes



3. Diodes



4. Transistors



5. FET

6. MOSFET

7. Amplifiers



8. Operational amplifiers



1. Op-Amps/Non Linear Configurations



2. Op-Amps/Non Linear Configurations/Inductor Gyrator



9. Analog multipliers



Chapter 5: Digital Circuits

1. Digital Circuits
2. Boolean Algebra
3. TTL
4. CMOS
5. Integrated Circuits

Elements of Digital Circuits

1. Transistors
2. Basic gates
3. Combination gates
4. Flip Flops
5. Counters
6. Adders
7. Decoders and Encoders
8. Multiplexers

Computer Architecture

1. RAM and ROM
2. Registers
3. ALU
4. Control Unit

5. [I/O](#)
6. [RTN](#)

Analog-to-Digital and Digital-to-Analog Converters

1. [Analog to Digital Converters](#)
2. [Sequential Approximation Registers](#)
3. [Digital to Analog Converters](#)

Radio engineering

1. [Frequency Spectrum](#)
2. [Gallery of VLF-signals](#)
3. [VLF-reception with the PC](#)
4. [Reception of DRM-transmitters](#)
5. [Transmitter design](#)

Formulas Sheets

1. [Definitions](#)
 - [☐](#)
2. [Circuit Symbols](#) (Editors should also look at [Template](#))
3. [Identifying Components and Values](#)
 - [☐](#)
4. [Electronics Formulas](#)

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5. Op Amp Applications
6. Laplace Transform pairs



Others



Wikipedia has related information at *Electronics*

1. Formulas
2. Design Basics: Tools and Equipment
3. Electro-Mechanical Analogies
4. Expanded Edition

Resources: (When adding links make sure to fill out the [Permission Form](#))

1. [Discuss this book](#)
2. [GCSE Science/Electricity](#)
3. [Wikipedia's Electronics](#)
4. [Wikipedia's List of electronics topics](#)

Resources that are not yet covered by the [Permission Form](#)

1. [Tony R. Kuphaldt's Lessons in Electric Circuits](#)
2. [American Home Electronics](#)
3. [An eBook resource site with related topics to RF, DSP and Electronics](#)

