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IT.BE2010

Basic Electronic Circuits Trainer

ALL ELECTRONIC CIRCUITS TRAINERS

- **Basic Electronic Circuits Trainer**
- Basic Electricity and Electronic Trainer
- Digital Logic Circuits Trainer
- Advanced Digital Logic Circuits Trainer
- Electronic Circuits Trainer
- Practical Electronic Circuits Trainer
- Power Supply Circuits Trainer
- Industrial Electronics Circuits Trainer

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Basic Electronic Circuits Trainer

BE2010

DESCRIPTION

Curriculum Outlines:

- Design and implementation of basic electronic circuits and waveform generator circuits.
- Design and implementation of digital circuits and signal process circuits.
- Design and implementation of regulator DC power supply and applications circuit of LED and transistors.
- Design and implementation of the applications for basic electronic circuits.

FEATURES

Curriculum Objectives:

- Understanding the theory and applications of basic electronic circuits.
- Suitable for both engineer and the relative electronic student.

CE

	**1.1 Basic Electronic Circuits** 1. Diode and Transistor Switches	**Diode and Transistor** Experiment 1: Diode Switch Experiment 2: Transistor Switch Experiment 3: Improved Transistor Switch
	**1.2 Basic Electronic Circuits** 2. Basic applications of Operation Amplifiers (I)	**Operation Amplifiers (I)** Experiment 1: Inverter OP Amplifier Experiment 2: Inverter Experiment 3: Non-Inverter OP Amplifier Experiment 4: Voltage Follower
	**1.3 Basic Electronic Circuits** 3. Basic Applications of Operation Amplifiers (II)	**Operation Amplifiers (II)** Experiment 1: Comparator Experiment 2: Zero-Crossing Detector Experiment 3: Photoelectric Controller
	**2.1 Waveform Generator Circuits** **1.** Schmitt Trigger Circuit	**Schmitt Trigger Circuit** Experiment 1: Schmitt Trigger Experiment 2: 555 Delay Circuit Experiment 3: Delay Turn-off Circuit
	**2.2 Waveform Generator Circuits** 2. Astable Multivibrator	**Astable Multivibrator Circuits** Experiment 1: OPA Astable Multivibrator Experiment 2: 555 Astable Multivibrator Experiment 3: Sparkling Lampit
	**2.3 Waveform Generator Circuits** 3. Astable Multivibrator	**Astable Multivibrator Circuits** Experiment 1: OPA Astable Multivibrator Experiment 2: 555 Astable Multivibrator Experiment 3: Sparkling Lampit
	**2.4 Waveform Generator Circuits** 4. Crystal Oscillator	**Crystal Oscillator** Experiment 1: TTL Crystal Oscillator Experiment 2: OPA Crystal Oscillator

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CE

BCD Adder
Experiment 1: BCD Adder

BCD Subtractor
Experiment 2: BCD Subtractor

Applications of Timer
Experiment 1: Monostable Circuit
Experiment 2: Touch Switch
Experiment 3: Alarm Circuit

Digital Display Circuit
Experiment 1: BCD Counter
Experiment 2: 7-segment LED Display
Experiment 3: Four 7-segment LED Display

Application of LCD
Experiment 1: LCDM Circuit

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Digital Circuits
1. BCD Adder
2. BCD Subtractor
3. Applications of Timer
4. Digital Display Circuit
5. Application of LCD

Digital to Analog Converter
Experiment 1: R-2R Ladder Network Circuit
Experiment 2: D/A Converter

Analog to Digital Converter
Experiment 1: A/D Converter

Filters
Experiment 1: Low-pass Filter
Experiment 2: High-pass Filter
Experiment 3: Bandpass Filter
Experiment 4: Bandstop Filter

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Signal Process Circuits
1. Digital to Analog Converter
2. Analog to Digital Converter
3. Filters

Applications of 7800 Series Regulator
Experiment 1: 7805 Regulator Characteristic
Experiment 2: 7805 Expanded Voltage
Experiment 3: 7805 Variable Regulator
Experiment 4: 7805 Current Source

Applications of 7900 Series Regulator
Experiment 1: 7905 Regulator Characteristic
Experiment 2: 7905 Expanded Voltage
Experiment 3: 7905 Variable Regulator
Experiment 4: 7905 Current Source

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Regulated DC Power Supply
1. Applications of 7800
2. Applications of 7900

Electrons Competition-answer Machine
Experiment 1: Electronics Competition-answer Machine

Remote Lamp Controller
Experiment 1: Remote Lamp Controller Using DC Voltage
Experiment 2: Remote Lamp Controller Using AC Voltage

Electronic Wheel-amusement Machine
Experiment 1: Electronic Wheel-amusement Machine Experiment 4: 7905 Current Source

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LED & Transistor Application Circuits
1. Electrons Competition-answer Machine
2. Remote Lamp Controller
3. Electronic Wheel-amusement Machine

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