

## Power Supply 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

## IE2050

### DESCRIPTION

#### Curriculum Outlines:

- Design and implementation of Rectifier Circuits .
- Design and implementation of Regulator DC Circuits.
- Design and implementation of Inverter Circuits.
- Design and implementation of DC-DC boost and buck regulator circuits
- Design and implementation of Switch Buck-boost Regulator Circuits.
- Design and implementation of Power Supply Application Circuits.

### FEATURES

#### Curriculum Objectives:

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



#### 1 Rectifier Circuits

- Experiment 1: Rectifier circuits e Characteristic Curve Measurement
- Experiment 2: Filter circuits
- Experiment 4: Half-wave voltage quadrupler
- Experiment 5: Precision rectifier

#### 2 Regulator DC Circuits

- Experiment 1: 7805 regulator characteristics
- Experiment 2: 7805 expanded voltage
- Experiment 3: 7805 variable current regulator
- Experiment 4: 7805 current source
- Experiment 5: 7905 regulator characteristics
- Experiment 6: 7905 expanded voltage
- Experiment 7: 7905 variable current regulator
- Experiment 8: 7905 current source

#### 3 Variable Regulator Circuits

- Experiment 1: Zener Breakdown C
- Experiment 1: Zener diode regulator
- Experiment 2: 7805 variable regulator
- Experiment 3: 1117 variable regulator
- Experiment 4: BJT variable regulator
- Experiment 5: 317 variable regulator
- Experiment 6: 337 variable regulator

#### 4 Inverter Circuits

- Experiment 1: 7805 inverter circuit
- Experiment 2: 555 inverter circuit
- Experiment 3: 34063 inverter circuit
- Experiment 4: Astable multivibrator inverter circuit
- Experiment 5: Wien bridge inverter circuit

#### 5 DC-DC Boost and Buck Circuits

- Experiment 1: 34063 boost circuit
- Experiment 2: 3775 boost circuit
- Experiment 3: 34063 buck circuit
- Experiment 4: 3775 buck circuit

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<b>Switch Buck-boost Regulator</b> Experiment 1: Low power buck-boost regulator circuit Experiment 2: Low power LNK625PG buck regulator circuit Experiment 3: Low power HIP5600 buck regulator circuit	<b>6</b> <b>Switch Buck-boost Regulator Circuits</b>	
<b>Power Supply Application</b> Experiment 1: PWM light controller Experiment 2: 4-state remote controller (The remote controller can be operated by switching ON/OFF) Experiment 3: LED words circuit (The LED display of the characters can be dimmed or lighted by following the experiments 1 and 2)	<b>7</b> <b>Power Supply Application Circuits</b>	

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