

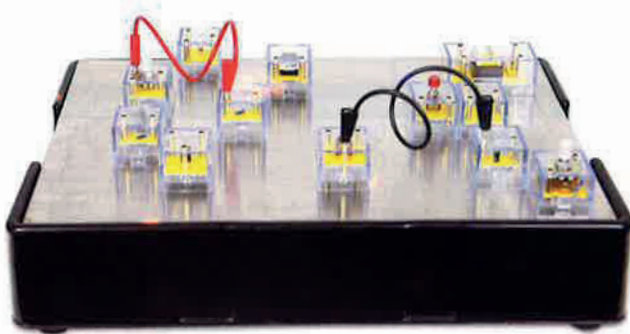
# BASIC ELECTRONIC CIRCUIT TRAINING SYSTEM F1-1

## Features

The training system of basic electronic circuits is designed for educational practice. All components are separated as units in transparent plastic boxes with magnetic stand on a grid panel. Circuit assembling is made by leads plug. The leads plugs are  $\Phi 4\text{mm}$  and totally 40 pcs in two lengths. The training system is used in the experiments, it can be completed according to the experiment manual. Totally 33 recommend experiments are contained in this system with the corresponding components. Also you can design other more experiments with yourself.

## System contain:

- |                        |        |                      |       |
|------------------------|--------|----------------------|-------|
| 1. Grid panel and tray | 1 pcs  | 4. Experiment manual | 2 pcs |
| 2. Components          | 49 pcs |                      |       |
| 3. Leads               | 40 pcs |                      |       |



## COMPONENTS LIST

### Resistors:

R 100 $\Omega$ , 2W, 1%	1 PC
R 100 $\Omega$ , 1/2W, 1%	1 PC
R 220 $\Omega$ , 1/2W, 1%	1 PC
R 470 $\Omega$ , 1/2W, 1%	1 PC
R 500 $\Omega$ , 1/2W, 1%	1 PC
R 680 $\Omega$ , 1/2W, 1%	1 PC
R 1k $\Omega$ , 1/2W, 1%	3 PCS
R 2.2k $\Omega$ , 1/2W, 1%	1 PC
R 3.3k $\Omega$ , 1/2W, 1%	1 PC
R 4.7k $\Omega$ , 1/2W, 1%	2 PCS
R 10k $\Omega$ , 1/2W, 1%	1 PC
R 330k $\Omega$ , 1/2W, 1%	1 PC

### Potentiometers:

Pot 500 $\Omega$	1 PC
Pot 1k $\Omega$	1 PC
Pot 10k $\Omega$	1 PC
Pot 1M $\Omega$	1 PC

### Decade box:

DECADE $\times 1\text{k}\Omega$	1 PC
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### Capacitors:

C 0.1 $\mu\text{F}$	1 PC
C 1 $\mu\text{F}$	1 PC
C 2.2 $\mu\text{F}$	1 PC
C 10 $\mu\text{F}$	2 PCS
C 100 $\mu\text{F}$	2 PCS

### Zener and diodes:

ZD 6.2V	1 PC
ZD 8.2V	1 PC
DIODE 1N4007	4 PCS
DIODE 1N4148	1 PC

### Inductors:

L 30mH	2 PCS
L 40mH	1 PC

### Switches and relays:

Toggle switch	1 PC
Push button	1 PC
Relay 12V	1 PC

### Transistors:

Transistor BC108	1 PC
Transistor BC177	1 PC
Transistor BD135	1 PC
Transistor D313Y	1 PC

### Transformers:

220V 12V-0-12V	1 PC
1000T:500T+500T	1 PC
1000T:500C+500C	1 PC

### Others:

LED	1 PC
PTC	1 PC
NTC	1 PC

# DEMONSTRATION TRANSPARENT COMPONENTS

## EXPERIMENTS CONTENT

- 1: Series resistors circuit
- 2: Parallel resistors circuit
- 3: Compound resistors circuit
- 4: Ohm's law  $I = F(V)$
- 5: Ohm's law  $I = F(R)$
- 6: Kirchhoff's Laws on voltage
- 7: Kirchhoff's Laws on current
- 8: Superposition theorem
- 9: Thevenin's theorem
- 10: Norton's theorem
- 11: Voltage divider circuit
- 12: Wheatstone bridge circuit
- 13: R, C series circuit in AC circuit
- 14: R, L series circuit in AC circuit
- 15: R, L, C series circuit in AC circuit
- 16: Characteristics of transistor
- 17: Common base transistor amplifier circuit
- 18: Common emitter transistor amplifier circuit
- 19: Common collector transistor amplifier circuit
- 20: Constant DC voltage control circuit with transistor
- 21: Capacitors in series and parallel circuit
- 22: Characteristics of PTC resistor
- 23: Characteristics of NTC resistor
- 24: Characteristics of the transformer on load and no load
- 25: Half-wave rectifier
- 26: Full-wave rectifier
- 27: The function of the relay
- 28: Inductors in series and parallel circuit
- 29: Magnetic induction circuit transformer
- 30: Characteristics of diode in DC circuit
- 31: Characteristics of diode in AC circuit
- 32: Rectifier and filter current circuit
- 33: Characteristics of Zener diode