

# SPS-8402/SPS-9402 SWITCH MODE POWER SUPPLY

## USER'S MANUAL

### INTRODUCTION

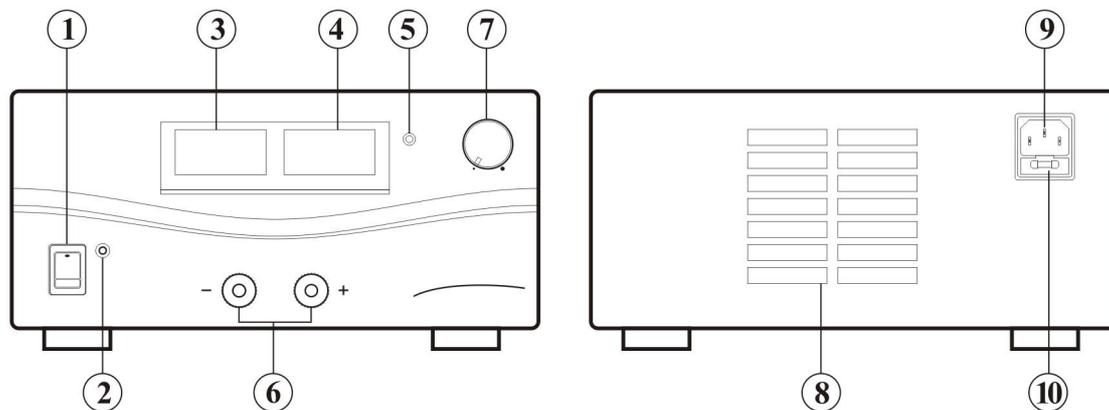
The SPS-8402/SPS-9402 Switching Mode DC Power Supply provides high power output with its small size and lightweight. It is suitable for a variety of uses, especially for DC operated radio equipment source from an AC outlet and providing variable voltages of 3V to 30V under 20A continuous operation.

Please read through this operation instruction carefully and follow the instructions to prevent from abuse or misuse. This manual must be kept for reference at anytime in need.

### FEATURES

1. Lightweight and Small Size: Switching mode power supply has the advantages of lightweight and small size. Comparing with linear mode power with the same power output, it is much lighter and smaller.
2. High Efficiency: The unit is operated with efficiency over 80% under the best condition.
3. Overload Protection: The constant current circuitry is adopted to prevent from overload. The overload indicator will be lighted up when the unit is overloaded.
4. Over Temperature Protection: The over temperature circuitry is functioned when the unit is over a certain high temperature to prevent the unit from damage by the high temperature. When the circuitry is functioned, the output voltage and current will drop down to a safety value and the overloaded indicator will be lighted up.
5. Over Voltage Protection : The over voltage circuitry protect the unit and the loading equipment from damage by abnormal high output voltage.
6. High RFI Stability: The high protection circuitry against RFI (Radio Frequency Interference) provides a stable operation.
7. Variable Voltage Output: The variable range of output voltages from 3V to 30V enables good fits with various uses.

### PANEL DESCRIPTION



- |                                   |                                  |
|-----------------------------------|----------------------------------|
| 1. On/Off Switch                  | 2. Power Indicator               |
| 3. Voltmeter                      | 4. Ammeter                       |
| 5. Overload Indicator             | 6. Output Terminal               |
| 7. Output Voltage Adjustment knob | 8. Cooling Fan Air Intake Window |
| 9. Power Input Connector          | 10. Fuse Holder                  |

*Note: The fixed 13.8Vdc output selection switch is placed at the bottom of unit. It used to select the output voltage to fixed 13.8V or 3-30V adjustable output (controlled by adjustment knob ⑦).*

## INSTALLATION

1. Make grounding the unit to prevent from electric shock at high voltage caused by leakage or lightning.
2. **DO NOT** place the unit in high humid, dusty and/or sunshiny places.
3. Place the unit in a location where allows free air circulation.
4. **DO NOT** place the unit close the TV sets or CRT monitor.
5. Couple with an AC outlet directly, as source via distribution cables may heat plugs and cable.
6. Put the unit horizontally for accurate meter readings.

*Note: For Indoor Use Only.*

## CAUTION

1. **DO NOT** use the unit for the equipment requiring higher current input than the designed value otherwise damages the unit.
2. **DO NOT** replace the fuse before ceasing problems and *the assigned value of fuse* must be used in place.
3. If the external flexible cable or cord of this transformer is damaged, it shall be replaced by a special cord or assembly available from the manufacturer or his service agent.

## SAFETY PRECAUTIONS

1. **NEVER** remove the metal cover of the power supply while AC power is connected.
2. **NEVER** touch the unit when your hands are wet.
3. **NEVER** operate the unit if foreign materials such as metallic objects, water, or other debris have fallen inside. Contact your dealer for check and repair.
4. **NEVER** operate the unit that was being damaged, as the voltage regulation circuitry may have been disabled. The resulting high voltage could damage your equipment.
5. **NEVER** allow foreign objects to touch the DC Power Output Terminals.
6. If you have the need to inspect the interior of the unit, let it to cool down completely, as some components may be enough to burn your hand in the event of component failure.
7. **NEVER** block the cooling fan air intake window.

## CONNECTION AND OPERATION

1. Make sure the AC power source fits the input of voltage unit labeled and plug it in the AC outlet.
2. Turn ON the unit and adjust the output voltage to match with the input voltage of the equipment. Then turn OFF the unit.
3. Connect the equipment to the unit. Red (+) is connected to the positive polarity input of the equipment and Black (-) is connected to the negative polarity input of the equipment.
4. First turn ON the unit and then turn the equipment ON.
5. When and operation is finished, turn off the equipment first and then turn OFF the unit.

## SPECIFICATIONS

	SPS-8402	SPS-9402
OUTPUT VOLTAGE:	3-30Vdc Adjustable or Fixed 13.8Vdc (Selectable)	
OUTPUT CURRENT:	20A	
RIPPLE AND NOISE:	5mV <sub>r.m.s</sub>	
LINE REGULATION:	5mV (±10% Variation)	
LOAD REGULATION:	200mV (0~100% Load)	
POWER SOURCE:	230Vac/50Hz~	
METER TYPE:	Analog	Digital LED
DIMENSION (W×H×D):	220 × 110 × 300 (mm)	
WEIGHT:	Approx. 3.5Kg	