

INSTRUCTION MANUAL

HP-450

SWITCHING MODE DC POWER SUPPLY

INTRODUCTION

The HP-450 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 1V to 15V under 60A 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 82% under the best condition.

3. Overload Protection

The current foldback circuitry is adopted to prevent from overload. The overload indicator will be lit up when the unit is overloaded.

4. Over Temperature Protection

The over temperature protection is triggered when the unit is over a certain high temperature to prevent the unit from damage by the high temperature. When the protection is triggered, the output voltage and current will drop down to a safety value and the overload indicator will be lit up.

5. High RFI Stability

The high protection circuitry against RFI (Radio Frequency Interference) provides a stable operation.

6. Variable Voltage Output

The variable range of output voltages from 1V to 15V enables good fits with various uses.

7. Multiple DC Output Connections

The unit has a pair of 6A easy snap on output terminal; a pair of full power screw-on output terminal and a cigar-lighter type output jack.

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.

CAUTION

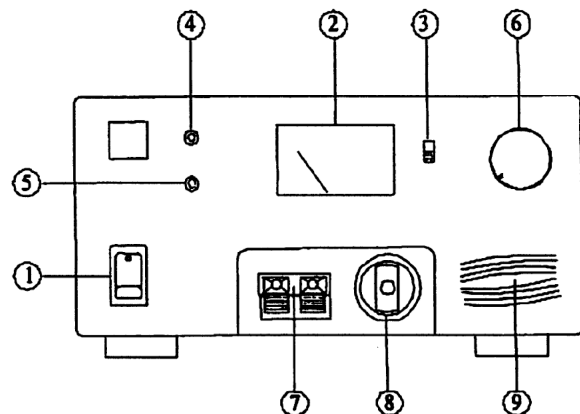
1. DO NOT use the unit for the equipment requiring higher current input than the designed value otherwise it may damage the unit.
2. DO NOT use the unit for the lamps or motorized equipment, which require high current input at starting and it may damage the unit.
3. DO NOT replace the fuse before ceasing problems and the assigned value of fuse must be used in place.

SAFETY PRECAUTIONS

MUST read through the following precautions carefully to prevent from electric shock.

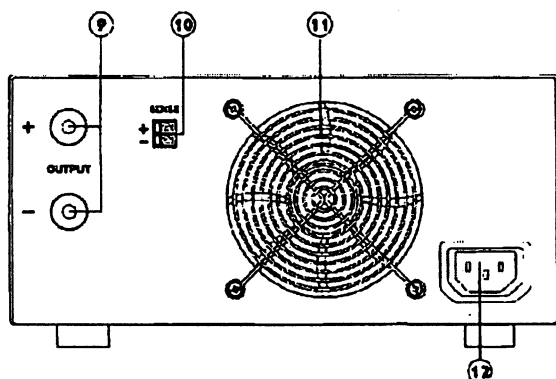
1. NEVER remove the metal cover of the power supply while AC power is connected.
2. NEVER touch the unit when your hands are wet.
3. NEVER operate the unit if foreign materials such as metallic objects, water, or other debris have fallen inside. Contact your dealer for check and repair.
4. NEVER operate 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, be contained to let it cool down completely, as some components may be enough to burn your hand in the event of component failure.

PANEL DESCRIPTION



1. **POWER SWITCH:** Turn ON/OFF the unit.
2. **OUTPUT METER:** Indicate the voltage or current output
3. **METER SELECTOR:** Select the meter to indicate the voltage or current.
4. **POWER INDICATOR:** Lights up when the unit is turn on.

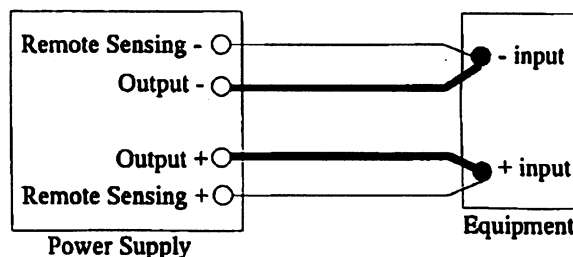
5. **OVERLOAD INDICATOR:** Lights up under the condition of overload or over temperature.
6. **VOLTAGE CONTROL KNOB:** Control the output voltage.
7. **6A SNAP-ON OUTPUT TERMINAL**
8. **CIGAR-LIGHTER OUTPUT JACK**



9. **SCREW-ON OUTPUT TERMINAL**
Note: Total Rated Current (Screw-ON+Snap-ON + Cigar-Lighter outputs) is 60A
10. **REMOTE SENSING TERMINAL**
11. **COOLING FAN AIR INLET**
12. **AC Input Plug**

CONNECTION AND OPERATION

1. Connect the power supply to the AC Mains using the provided power cord.
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. Using the REMOTE SENSING feature:
Warning! Never short the Remote Sensing Terminal
You can use this feature to compensate the voltage drop of the long output line losses. Connect the remote sensing terminal to the equipment's input terminals as below:



Remote sensing wire should be at least 22AWG.

5. First turn ON the unit and then turn ON the equipment.
6. When an operation is finished, turn off the equipment first and then turn OFF the unit.

SPECIFICATIONS

VOLTAGE SOURCE:	100 - 240VAC
OUTPUT VOLTAGE:	1-15V
OUTPUT CURRENT:	60A (continuous)
RIPPLE AND NOISE:	5mV _{r.m.s.}
LINE REGULATION:	20mV (90-130/190-264Vac Variation)
LOAD REGULATION (sense) :	0.1%+5mV (0-100% Load)
LOAD REGULATION (no sense) :	0.1%+5mV (0-100% Load)
METER TYPE:	Precision Analog Meter
INPUT FUSE:	20A
DIMENSION (W×H×D):	210mm×110mm×380mm
WEIGHT:	5.8 Kgs (Approx.)

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