



Instruction Manual

Switching Mode DC Power Supply

Model HP-460

Introduction

The HP-460 Switching Mode DC Power Supply provides 60A of high power output, and boasts of its small size and lightweight. It is especially suitable for high power radio as well as high power linear power amplifiers working from DC 13.8V. Output voltage is variable from 1V to 15V under 60A continuous operation.

Please read this instruction manual carefully and follow the instructions to prevent from abuse or misuse. Keep the manual for your reference.

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 in size.

2. High Efficiency

Total efficiency is 82% or higher under the best condition.

3. Overload Protection

The current foldback circuitry is employed to prevent from overload failures. The overload indicator will light 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 due to high temperature. When the protection is triggered, the output voltage and current will decrease to a safety value and the overload indicator will light.

5. High Stability for RF Stray

The protective circuitry against RF stray is incorporated for a most stable operation.

6. Variable Voltage Output

The variable range of output voltages from 1V to 15V is great for universal applications.

7. Multiple DC Output Connections

The unit has 5A auxiliary output terminal on front and full power screw-on output terminal at rear.

Installation

1. Ground the unit to prevent from electric shock at high voltage caused by leakage or lightning. (See ①GND of illustration.)
2. Keep the unit in a cool dry environment, out of direct sunlight.
3. Allow some free space at both sides of cabinet, and never block the air intake window. Otherwise air cooling will not work.
4. Never place the unit close to the TV sets or CRT monitor.
5. Plug into wall AC outlet directly, as source via distribution cables may heat plugs and cable.
6. Put the unit horizontally for accurate meter readings.

Caution

1. Never exceed the designed output current limit of 60A. Otherwise it may damage the unit.
2. Never use the unit for the lamps or motorized equipment, which require high current input at starting and it may damage the unit.
3. Never replace the fuse before correcting problems and the correct value of fuse must be put in place.

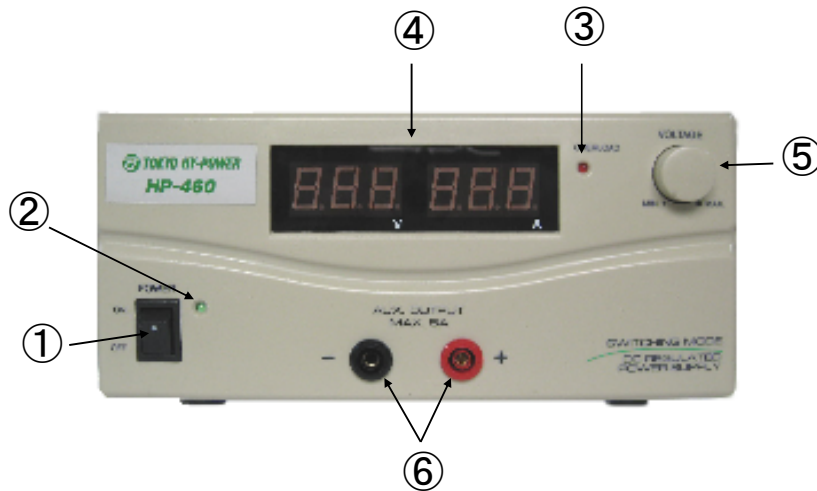
Safety Precautions

Read 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 repair and maintenance.
4. NEVER operate the failed unit, as the voltage regulation circuitry may have been disabled. The resulting high voltage could damage your radio equipment.
5. NEVER allow foreign objects to touch the DC Power Output Terminals.
6. If you need to check the inside of the unit, cool off completely, as some heated components may burn your hand.

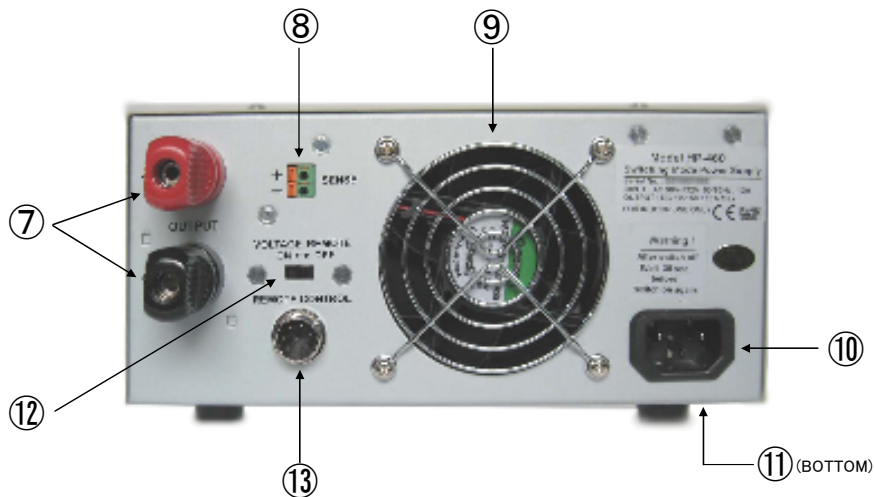
Panel Description

<FRONT PANEL>



- ① POWER SWITCH: Turn ON/OFF the unit.
- ② POWER INDICATOR: Lights when POWER① is turned ON.
- ③ OVERLOAD INDICATOR: Lights under the condition of overload or over temperature.
- ④ OUTPUT METER: Indicate the voltage and current output.
- ⑤ VOLTAGE CONTROL KNOB: Controls the output voltage with a detent at 13.8V.
- ⑥ 5A AUXILIARY OUTPUT TERMINAL

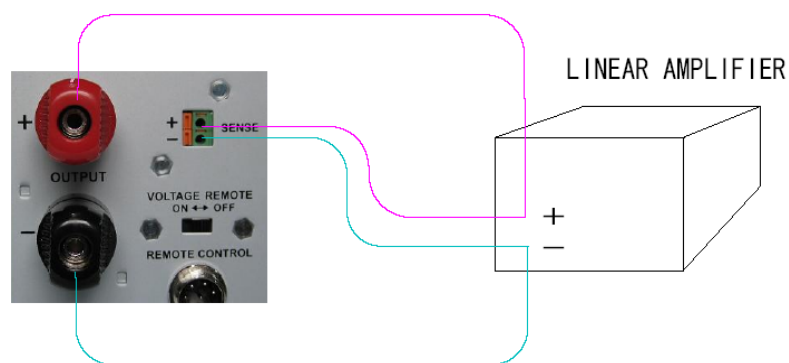
<REAR PANEL>



- ⑦ SCREW-ON OUTPUT TERMINAL
Note: Total Rated Current (Screw-ON + Aux. Out) is 60A.
- ⑧ REMOTE SENSING TERMINAL
- ⑨ COOLING FAN AIR INTAKE
- ⑩ AC INPUT SOCKET
- ⑪ GND: Ground screw is on the bottom of chassis.
- ⑫ VOLT. REMOTE (ON⇌OFF): Usually to be set at OFF.
- ⑬ REMOTE CONTROL: Enables AC Power Input to turn ON and OFF remotely when VOLT. REMOTE⑫ is at ON. (Contact your dealer for details.)

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 objective 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

AC Power Input	AC 90-132V, 50/60Hz
Output Voltage	1-15V
Output Current	60A (continuous) max.
Ripple and Noise	50mV P-P max.
Line Regulation	20mV (90-130V Variation) , 0.05%+3mV max.
Load Regulation (sense)	0.1%+5mV (0-100% Load) max.
Load Regulation (no sense)	0.1%+5mV (0-100% Load) max.
Meter Type	Precision Digital Meter
Input Fuse	20A
Dimension (WxHxD)	220 x 110 x 410 mm (8.6 x 4.3 x 16 inches)
Weight	Approx. 5.2kgs., 11.5lbs.

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