SPS-100.4

100-Amp Switching DC Power Supply

OWNER'S MANUAL

FEATURES

The **SPS-100.4** uses AC power to power equipment that requires 10~16V DC power.

The **SPS-100.4** converts standard 110~130V(220~240V) AC household power to an adjustable 10~16V DC power, and supplies up to 100 amps of continuous power.

Note: A normal vehicle's electrical system provides between 13.8 and 14.8 Volts when the engine is running.

The **SPS-100.4** is a versatile piece of equipment that can be used in several applications such as retail audio displays, show cars, and test benches.

The **SPS-100.4** features include:

- Adjustable regulated output voltage 10~16V
- Up to 100 amp output current
- Cooling fans
- Thermal overload shut off protection
- Current overload shut off protection
- 1/0 AWG power and ground terminals
- Pulse charging to inhibit battery sulfation
- Battery Charging mode for lead acid, LiFePo4, and other battery chemistries with a max charge voltage of 14.8

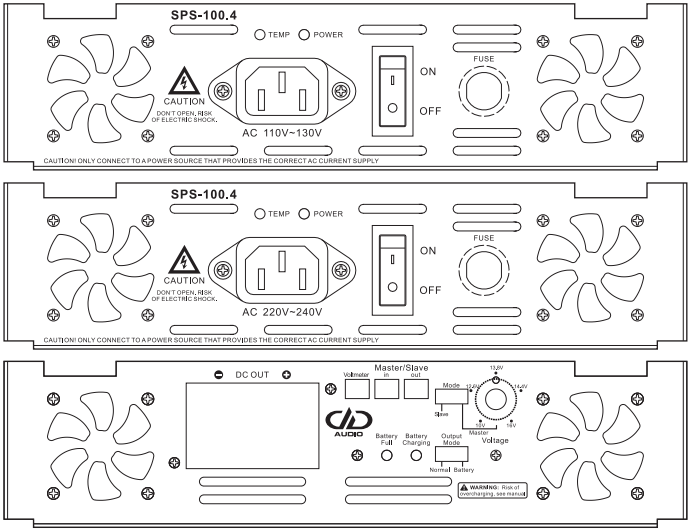
IMPORTANT SAFETY INSTRUCTIONS

This manual contains important safety and operating instructions for the **SPS-100.4**. To reduce the risk of fire, electric shock, and injury to person or equipment; carefully read the following before you use the power supply. Please read all cautionary markings on both the SPS-100.4 and on the product that you will connect to the power supply.

WARNINGS:

- This product is not recommended for outdoor use.
- Do not expose the power supply to excessive moisture.
- Do not set the output voltage higher than 2 Volts over the resting battery voltage.
- This product is not intended to be used as a stand alone battery charger. It is designed for the purpose of providing supplemental power when a DC power generator isn't available.
- Do not connect the SPS-100.4 to a battery that is deeply discharged. The initial high level of current draw will force the power supply into current limit mode for prolonged periods. This type of use is harmful to the power supply.
- When used as a supplemental power supply the SPS-100.4 will not damage connected batteries. When a connected battery reaches a fully charged state the SPS-100.4 will decrease its output current to a safe level by degree, or shut off.
- The SPS-100.4 should not be left connected to batteries for extended unattended periods of time. This could result in damage to the connected batteries.
- Make sure the power supply is securely mounted to avoid injury or damage to the unit.
- The power supply should be operated only from a standard AC outlet that provides 120v AC/60Hz (220V AC/50Hz), as indicated on the label.
- Do not overload AC power outlets to avoid danger of electric shock and fire. A minimum current of 20A will be required.
- Avoid using extension cords.
- The power plug is polarized for safety. Do not defeat the ground feature.
- Do not block or cover the power supply's cooling fan openings to avoid overheating.
- Unplug the power supply during lightning storms to avoid power surge damage.
- If your unit should require service or new parts contact the manufacturer. Do not attempt to service the unit.

CONNECTIONS



1. Ensure no connections are made between the power supply output and other components
2. Connect the SPS-100.4 AC cord to a standard 110~130V(220~240V) AC outlet.
3. Set the SPS-100.4 Power Switch to on.
4. Use the included voltmeter to set the SPS-100.4 to the correct output voltage for the device being connected.
5. Set the SPS-100.4 Power Switch to off.
6. Use a 5mm hex drive/hex key to unscrew the DC power terminal screws.
7. Insert the device's positive wire into the positive power terminal hole, then tighten the 5mm screw and secure the wire in place.
8. Insert the device's negative wire into the negative power terminal hole, then tighten the 5 mm screw and secure the wire in place.

   To avoid risk of damage to both the power supply and the connected device:

   - Verify and follow the correct polarity when connecting the power supply to the device
   - Do not let the ends of the positive and negative wires touch each other
   - The power terminal wire holes can accommodate up to 1/0 AWG wiring

9. Ensure all connections are made properly and there is no risk of short circuits
10. Set the SPS100.4 Power Switch to on.

OPERATION

To use the **SPS-100.4** after you have correctly connected a device to it, flip the power switch to the on position. The blue LED should illuminate indicating the unit is on.

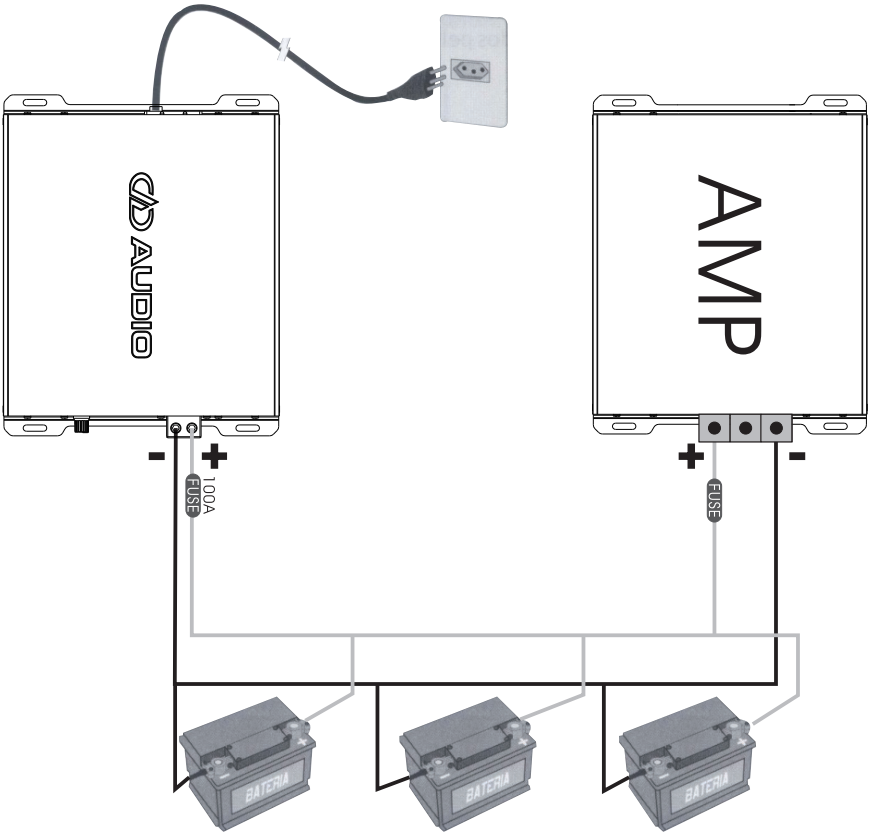
If the blue LED does not illuminate check all connections. If all connections are good turn the unit off and confirm the wall AC outlet has power. If the outlet has power disconnect the power supply from the device then turn the power supply on again. If the power supply now operates normally verify the connected device does not require more than 100 amps of current which will cause the **SPS-100.4** to go into protection.

Your power supply might cause TV or FM radio interference. To determine whether your power supply is causing interference, simply turn off your power supply. If the interference goes away, your power supply is causing it. Try moving your power supply away for the affected source.

When using Lead Acid, LiFePo4, or other battery chemistries with a max charge voltage of 14.8 set the unit to battery charging mode to avoid accidentally overcharging the battery.

Example: Using a single SPS-100.4 with multiple batteries

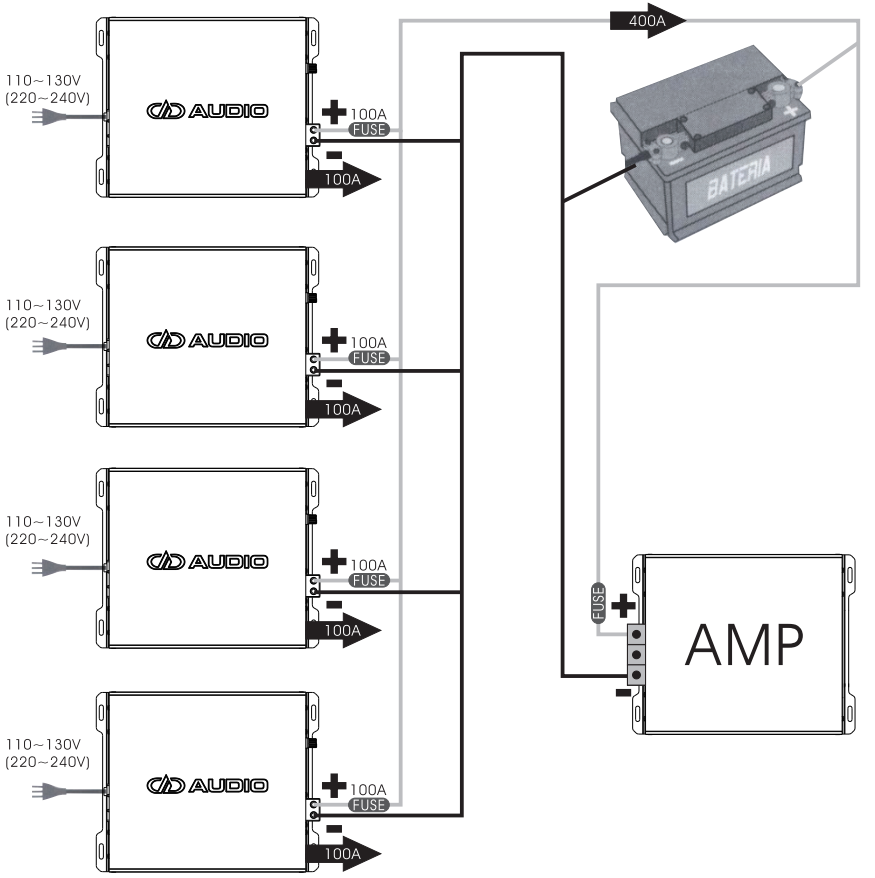
Fuse all connected devices as recommended by the manufacturer.



Example: Using multiple SPS-100.4s in parallel with multiple batteries

Fuse all connected devices as recommended by the manufacturer.

Up to four **SPS-100.4** can be connected in parallel. When using in parallel configuration, adjust all connected units to the same output voltage. The maximum available current will be determined by the sum of the rated capacity of each **SPS-100.4** in the circuit. In the example below the four parallel units of **SPS-100.4** will supply about 400A of current.



WARNING: Do not overload AC power outlets to avoid danger of electric shock and fire. A minimum current of 20A per **SPS-100.4** will be required. Avoid connecting multiple power supplies to a single AC outlet using power strips.

SPECIFICATIONS

AC 110V-130V

Input Voltage	120V AC±10%
Input Frequency Hz	60
Adjustable Output	10V-16V DC±0.5V
100 Amps DC Continuous (Maximum)	100 Amps DC Continuous
Line Regulation	±5%
Load Regulation	±5%
Efficiency	±85%
Overload Protection	FUSE 20A/250V (Input Voltage: 120V)
Ooutput Ripple	150 mV RMS
Design	Switching Type
Protection Temperature	75.C
Cooling Fan	4pcs (40x40x10mm)
Input Cable	SVT 14 AWG 85 C 6 Feet
Power Switch	15A I 250V AC
Dimentions WHD (mm)	262.4x67x240

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.

SPECIFICATIONS

AC 220V-240V

Input Voltage	220V AC±10%
Input Frequency Hz	50
Adjustable Output	10V-16V DC±0.5 Volts
100 Amps DC Continuous (Maximum)	100 Amps DC Continuous
Line Regulation	±5%
Load Regulation	±5%
Efficiency	±85%
Overload Protection	FUSE 10A/250V (Input Voltage: 220V)
Ooutput Ripple	150 mV RMS
Design	Switching Type
Protection Temperature	75.C
Cooling Fan	4pcs (40x40x10mm)
Input Cable	SVT 14 AWG 85 C 6 Feet
Power Switch	10A I 250V AC
Dimentions WHD (mm)	262.4x67x240

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.

If you have any questions regarding setup, installation or warranty please contact the DD AUDIO® technical support team by email at **service@ddaudio.com** or by phone at **(405) 239-2800**.

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