



**SPS-100.4**

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100-Amp Switching DC Power Supply

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**OWNER'S MANUAL**

# FEATURES

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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 around 13.8 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
- Combo output connectors act as both binding posts and banana plug terminals
- Pulse charging to inhibit battery sulfation



# IMPORTANT SAFETY INSTRUCTIONS

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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.

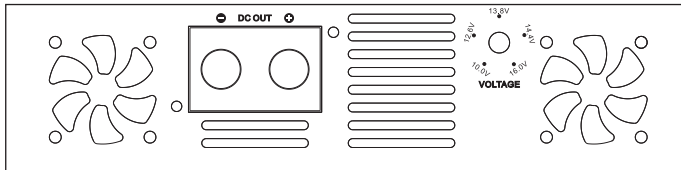
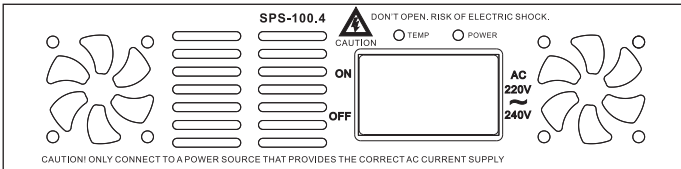
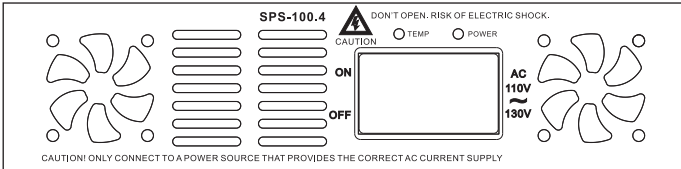
## WARNINGS:

- This product is not recommended for outdoor use.
- Do not expose the power supply to excessive moisture.
- 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.
- 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

**CAUTION:** Make all connections before you connect the power supply to AC Power.

1. Turn off the device requiring power.
2. Set the SPS-100.4 Power Switch to off.



3. Set the **SPS-100.4** to the correct output voltage for the device being connected.
4. Turn the sleeves of the red and black binding output posts counterclockwise to expose the wire hole.
5. Insert the device's positive wire into the red binding post wire hole, then tighten the binding post sleeve to secure the wire in place.
6. Insert the device's negative wire into the black binding post wire hole, then tighten the binding post sleeve to secure the wire in place.
7. If you are using a banana plug style connector, simply insert the plugs into the corresponding positive and negative terminal jacks.

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 binding post wire holes can accommodate up to 14 gauge wire

8. Connect the SPS-100.4 AC cord to a standard 110~130V(220~240V) AC outlet.

## OPERATION

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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.

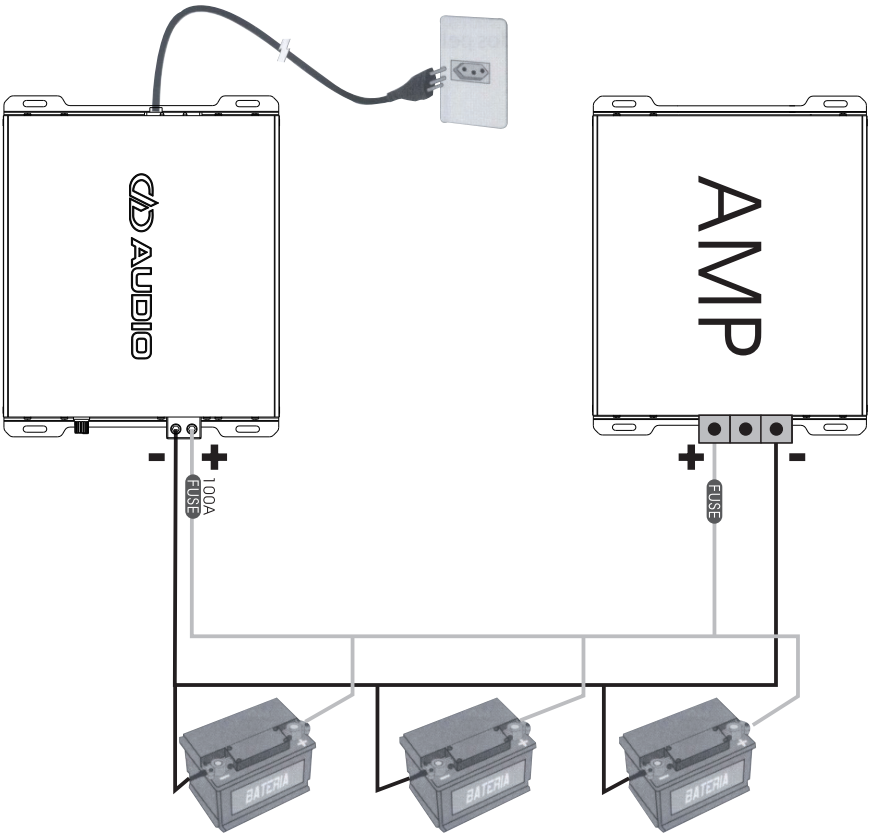
If the blue LED does not illuminate check all connections. If all connections are good turn the unit off and confirm the wall AC outlet has power. If the outlet has power disconnect the power supply from the device then turn the power supply on again. If the power supply now operates normally verify 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 from the affected source.

## Example: Using a single SPS-100.4 with multiple batteries

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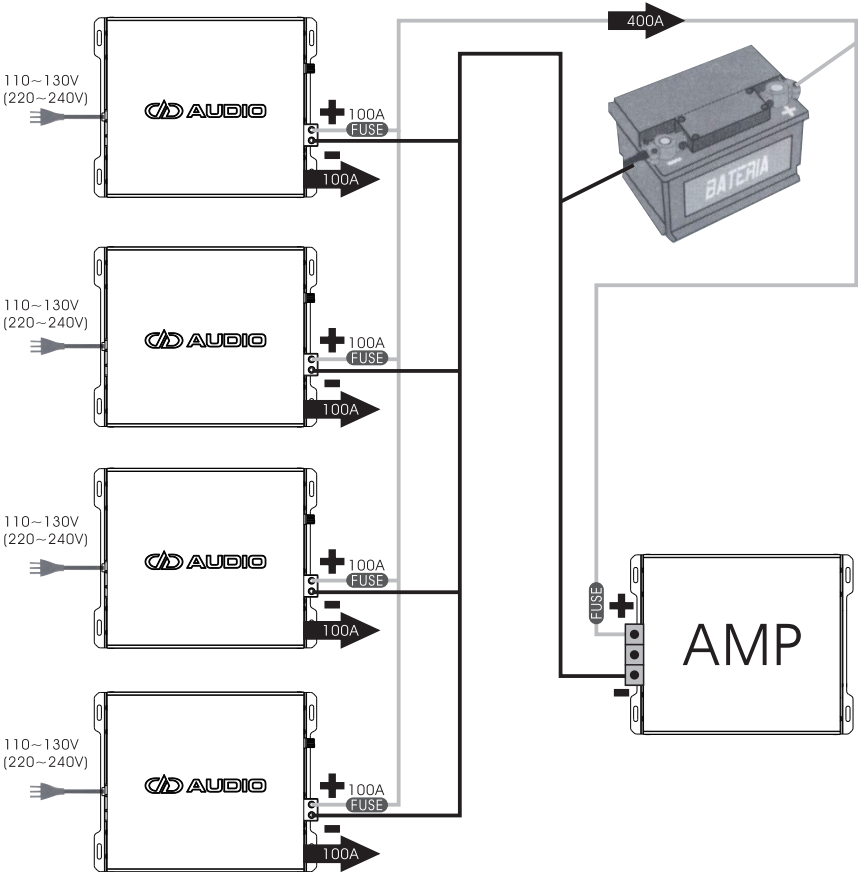
Fuse all connected devices as recommended by the manufacturer.



## 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

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## AC 110V-130V

Input Voltage .....	120V AC±10%
Input Frequency .....	60Hz
Adjustable Output .....	10V-16V DC±0.5Volts
Output Current.....	100 Amps DC Continuous (Maximum)
Line Regulation .....	Less Than ±5%
Load Regulation .....	MoreThan ±85%
Efficiency .....	More Than 85% Input Voltage
Overload Protection.....	FUSE 20A/250V (Input Voltage: 120V)
Output 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
Dimensions (WHD) .....	262.4x67x240mm

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



## SPECIFICATIONS

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### AC 220V-240V

Input Voltage .....	220V AC $\pm$ 10%
Input Frequency .....	50Hz
Adjustable Output .....	10V-16V DC $\pm$ 0.5 Volts
Output Current.....	100 Amps DC Continuous (Maximum)
Line Regulation .....	Less Than $\pm$ 5%
Load Regulation .....	Less Than $\pm$ 5%
Efficiency .....	More Than 85%
Overload Protection.....	FUSE 10A/250V (Input Voltage: 220V)
Output Ripple .....	150 mV RMS
Design .....	Switching Type
Protection Temperature .....	75.C
Cooling Fan .....	4pcs (40x40x10mm)
Input Cable .....	SVT 16 AWG 85 C 6 Feet
Power Switch.....	10A I 250V AC
Dimensions (WHD).....	262.4x67x240mm

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