



# CPOWER-80W

Adjustable DC Power Supply with 8 Outputs



Operation Manual





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## SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

## REVISION HISTORY

VERSION NO.	DATE DD/MM/YY	SUMMARY OF CHANGE
VR0	30/08/13	Preliminary Release
VS1	28/10/13	Updated text/diagrams

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## 1. INTRODUCTION

The Adjustable DC Power Supply is an 8-way DC power splitter which can distribute electrical power up to 8 devices (10.2 volt/3.2 amp each port) with overall power consumption of 80 watts over Terminal Block (3.5mm, 2 poles). Ideal for professional applications, this device provides smart control over each individual port and supports adjustable voltage control and On/Off switching functions. It can be controlled through on-panel buttons or via RS-232 commands. It also comes with an OLED display which can show the status of all ports or data for a single port.

## 2. APPLICATIONS

- Installation usage
- Control Room
- Exhibition Hall
- Outdoor activities exhibition

## 3. PACKAGE CONTENTS

- Adjustable DC Power Supply with 8 Outputs
- 8×Screw Type, 3.5mm, 2-pole Terminal Block
- 4×DC Lock Cable
- 2×Rack Ear
- 12V DC Power Supply Adaptor
- 1×Power Cord
- Operation Manual

## 4. SYSTEM REQUIREMENTS

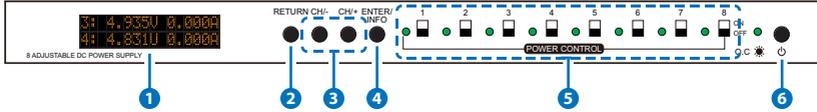
Up to 8 devices that require power supply, connect with professional 3.5mm Terminal Blocks.

## 5. FEATURES

- Power management system that can provide voltage-controlled current on each port, with the ability to show real-time measurement results on the built-in OLED screen
- PC software application with the capability of collecting voltage current variation data in time and using RS-232 protocols it can create tables and charts of historic data
- Supports adjustment of voltage and current to allow the maximum usage on each channel
- Supports 12V/6.67 A power input
- Supports overall power consumption up to 80 watts
- Supports up to 8 power outputs with professional pluggable 2-pole 3.5mm Terminal Blocks

## 6. OPERATION CONTROLS AND FUNCTIONS

### 6.1 Front Panel



**1 OLED:** Display each output, voltage and current value the selected setting information.

**2 RETURN Button:** Press to select the Function selection menu, the OLED will display the model number and the Selection function. Press '-/+' to display the available functions (please see section 6.5 for details).

Return to a previous selection or back to main page where the OLED display will show the status of each output ports Voltage/ Current.



**3 CH/- or CH/+ Buttons:** When in the function selection menu, press to cycle through and view all the available functions.

In the main menu page, press to select the Channel and Press 'ENTER' to check the values for that channel.

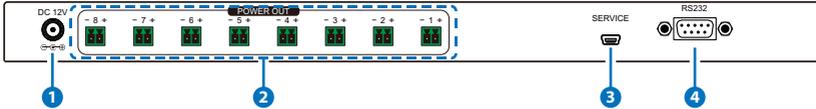
Once entered press 'CH/+' or 'CH/-' to increase/decrease the Voltage values (between 3.2V~10.2V) and press 'ENTER' again to enter the Current Limit page, press 'CH/+' or 'CH/-' to increase/ decrease the Current values between 0.10A~3.20A) then press 'RETURN' to exit the setting.

**4 ENTER/INFO Button:** When in the main page press 'ENTER' to show the current total watts in use, press it again in sequence to display each Channel's power consumption / voltage / current values.

**5 POWER CONTROL 1~8 Switch and LEDs:** Each switch and LED represents a power channel, when switched to ON the LED will illuminate in green provide power to that channel. When switched to OFF the LED will not illuminate and the corresponding output port will not output power.

- 6 POWER ON/OFF Button and LED:** Press to power the unit ON or to set it to standby mode. The LED will illuminate in green when powered ON or red when in standby mode. When any of the channels is Over Current, the LED will be flash red and the OLED screen will display a warning sign.

## 6.2 Rear Panel



- 1 DC 12V:** Connect the 12V DC power supply included in the package to the unit and plug the adaptor with its power cord into an AC wall outlet.
- 2 POWER OUT 1~8:** Connect power cables to the supplied 3.5mm 2-pole Terminal Blocks. Maximum of up to 8 devices.
- 3 SERVICE:** Reserved for manufacturer use only.
- 4 RS-232:** Connect with a D-Sub 9pin cable to a PC/laptop for RS-232 control of this system.

## 6.3 DC Power Cable



*Note: The conductor with writing is connected to the outer part of the power connector, the conductor without is the inner part of the connector.*

## 6.4 OLED Functions

<b>VOL Alert TH</b>	CH1~8	Vtarget-Vout 0~4.0V (0.5V a scale)	
<b>Erase Record</b>	CH1~8	Confirm/Cancel	
<b>Record Setting</b>	CH1~8	Interval 0.1 ~ 60 Sec.	Switch ON/OFF
<b>Timeout Setting</b>	5~30sec (5sec a scale)/never		
<b>F/W Version</b>	x.xx.xx		

## 6.5 RS-232 Protocols

CPOWER-80W			REMOTE CONTROL	
PIN	Assignment		PIN	Assignment
1	NC		1	NC
2	Tx		2	Rx
3	Rx		3	Tx
4	NC	▶	4	NC
5	GND	◀	5	GND
6	NC		6	NC
7	NC		7	NC
8	NC		8	NC
9	NC		9	NC

Baud Rate: 115200 bps

Data Bit: 8-bit

Parity: None

Stop Bit: 1-bit

Flow Control: None

## 6.6 RS-232 Commands

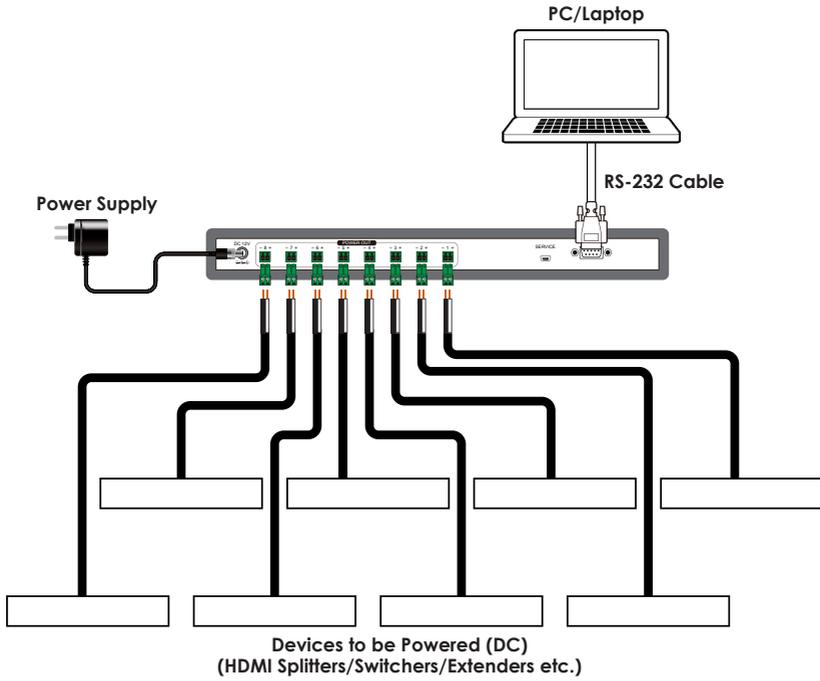
COMMAND	DESCRIPTION
<b>help</b>	Show All Commands
<b>parareset</b>	Reset Parameters to Default
<b>stat Y</b>	Show Channel's Current Status Y=0:All channels, 1~8: Channel 1~8
<b>vout Y xx.x*</b>	Set Output Voltage Y=0 means all channels Y=1~8 means channel 1~8 xx.x=3.2~5.0(0.1/scale) or 5.2 ~ 10.2(0.2/scale)
<b>lout Y x.x*</b>	Set Current Limit Y=0 means all channels Y=1~8 means channel 1~8 x.x=0.1~3.2
<b>power xxx*</b>	Set Power Mode xxx= on, off or sta (status)
<b>valert Y x.x*</b>	Set voltage alert threshold Y=0:All channels, 1~8: Channel 1~8, x.x=0~1 (0.1/scale)
<b>recordintv Y x*</b>	Set Interval Timing between current output setting and current voltage (in second) Y=0 means all channels Y=1~8 meanscChannel 1~8 x= 0.1, 0.2, 0.5, 1, 2, 3, 4, 5, 10, 15, 20, 25, 30, 40, 50 or 60

COMMAND	DESCRIPTION
<b>recordswit Y xxx*</b>	Record Current Output Voltage Y=0 means all channels Y=1~8 means channel 1~8 xxx=on, off or sta (status)
<b>recorderas Y</b>	Erase Record Data Y=0 means all channels Y=1~8 means channel 1~8
<b>timeout x*</b>	Set Timeout on OLED's menu mode (in second) x=0, 5, 10, 15, 20, 25 or 30
<b>version</b>	Show Firmware version
<b>powerinfo</b>	Show the Information of input, output and total power

Note:

1. All RS-232 commands will not execute unless followed by a carriage return. Commands are case-sensitive.
2. Items in brackets (\*) mean the status of a command setting can be checked by using a "sta" command. For example: To check the Voltage alert threshold for channel 1 the command would be "Valert 1 sta".

## 7. CONNECTION DIAGRAM





## 8. SPECIFICATIONS

<b>Output Ports</b>	8×3.5mm, 2-pole Terminal Block
<b>Input Power</b>	12 V/6.67 A
<b>Output Voltage</b>	3.20~10.2 V
<b>Output Current</b>	0.10~3.20 A
<b>ESD Protection</b>	Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge)
<b>Dimensions</b>	340 mm (W)×111 mm (D)×30(H)
<b>Weight</b>	935 g
<b>Chassis Material</b>	Metal
<b>Silkscreen Color</b>	Black
<b>Operating Temperature</b>	0°C~40°C / 32°F ~ 104°F
<b>Storage temperature</b>	-20°C~60°C / -4°F ~ 140°F
<b>Relative Humidity</b>	20~90% RH (no condensation)
<b>Power Consumption</b>	80W (Max)





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20121225 MPM-CPOER80W