

# CyberPower

## User's Manual for CyberShield

### CPLI72D48V

CyberShield UPSs are designed to provide a local power solution for cable telephony, wireless local loop (WLL), and fiber to the home (FTTH) broadband equipment. FTTx not only needs backup power to prevent utility power failure, but also supports making emergency calls (e.g., 911) for help.

#### IMPORTANT SAFETY WARNINGS (SAVE THESE INSTRUCTIONS)

This manual contains important instructions regarding the installation and operation of this device. Read this manual thoroughly before attempting to unpack, install or operate this device.

**CAUTION!** The battery can energize hazardous live parts inside even when the power is disconnected.

**CAUTION!** To reduce the risk of fire or electric shock, install in an indoor area that both temperature and humidity could be controlled, and free of conductive contaminants. To find the acceptable ranges of temperature and humidity, please refer to the specification.

**CAUTION!** To avoid electric shock, turn off the unit and unplug it from the adapter source before servicing the battery or installing a computer component.

**CAUTION!** To reduce the risk of electric shock, keep the cover on. There are no user-serviceable parts inside the unit. Please contact us or our dealer for service.

**CAUTION!** It is recommended to connect the unit to the required equipment and battery before plugging in the adapter source.

**CAUTION!** Runtime is based on testing fully-charged and new batteries at normal operating conditions. Runtime curve is approximate and varies based on battery age, level of charge at test, environment, and other variables.

**CAUTION!** Before replacing the battery, remove conductive jewelry, such as chains, watches, and rings. Use tools with insulated handles to avoid high energy, which could pass through conductive materials and cause severe burns.

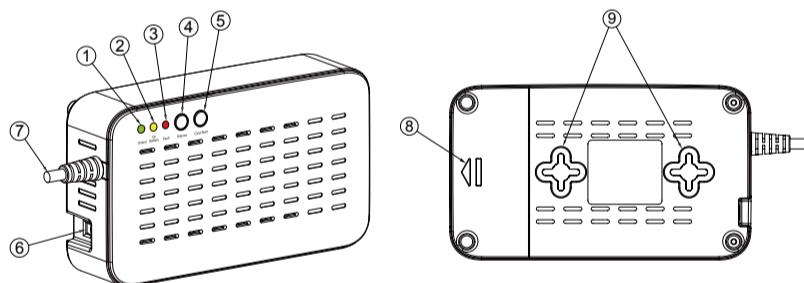
**CAUTION!** Battery is customized lithium battery pack. Before replacing the battery, make sure the specification of the replacement is 2,200mAh/14.4V, including protection module and temperature detecting for battery.

**CAUTION!** The battery must be supplied by CyberPower. Using improper battery which is not evaluated with this model could cause a risk and is at the user's own risk.

**CAUTION!** Do not open or mutilate batteries. The materials released from batteries are harmful.

**CAUTION!** Dispose of used batteries according to the instructions.

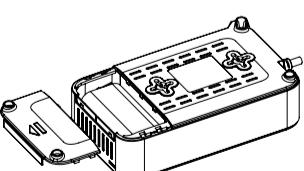
#### OVERVIEW



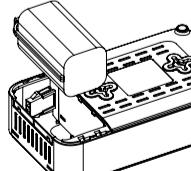
Number	Description
1	Output (Green)
2	On Battery (Yellow)
3	Fault (Red)
4	Silence Button
5	Cold Start Button
6	Input Connector
7	DC Output Cable
8	Battery Cover
9	Mounting Hole

#### BATTERY REPLACEMENT (FOR TECHNICIAN ONLY)

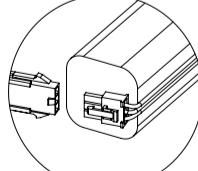
Follow these instructions carefully during the replacement of the battery.



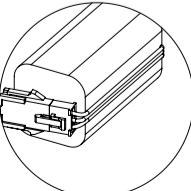
Step 1:  
a. Remove the battery cover.



Step 2:  
a. Remove the battery and disconnect the battery cable connector.



Step 3:  
a. Reconnect the battery connector to a new battery.  
b. Install the new battery into the compartment.



Step 4:  
a. Make sure the battery is fixed properly in the compartment and close the battery cover.

#### UNPACKING

Check the CyberShield unit upon receipt. It should contain the following items:

- CPLI72D48V unit
- Lithium battery pack
- User's manual
- Wall-mounted installation template

#### BUTTON FUNCTIONS

Button	Functions	Instructions
Silence	Temporarily Alarm Off	Press the Silence button for 1 second to turn the alarm off for 24 hours. A short beep will occur to confirm the alarm is off.
	Temporarily Alarm On	Press the Silence button for 1 second again to restore the alarm. Two short beeps will occur to confirm the alarm is on.
	Shut down	In battery mode, press the Silence button for 10 seconds to shut down CPLI72D48V.
	Reset	In line mode, press the Silence button for 10 seconds to reset output power and CPLI72D48V.
Cold Start	Cold Start	When utility power is no longer present and a new battery is installed, press the Cold Start button to start CPLI72D48V.

#### LED STATUS INDICATION

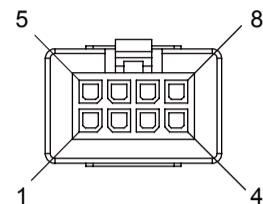
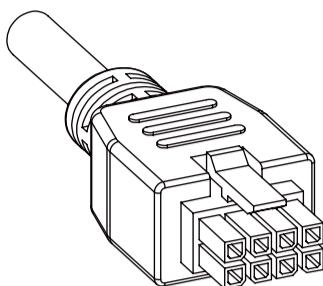
Indicator	Color	Conditions		
		On	Off	Blinking
Output	Green	Output is normal	Output is off	NA
On Battery	Yellow	Battery mode	Line mode	Low battery
Fault	Red	Replace battery Battery missing	Normal	OVP/UVP (Every 1 sec.) System error (Every 5 sec.)

#### AUDIO ALARM

Alarm	Condition
1 long beep	Transfer to battery mode
1 short beep every 15 minutes	Replace battery/ Battery missing
4 short beeps every 1 minute	Low battery
1 short beeps every 5 seconds	System error
1 short beep	Temporary alarm off
2 short beeps	Temporary alarm on

## COMMUNICATION SIGNALS

The communication signals of this unit are isolated from the internal circuitry via open collector optocoupler transistors. The connection "SIG RTN" (Signal Return) is a return point for all communication signals. In the typical application, the connected equipment digital ground connects to Signal Return, and pull-up resistors turn the open collector signals into logic levels.



Pin Number	Function	Message
1	Power "+"	+ Voltage output.
2	On Battery	Low when the unit is in utility mode. Open when the unit is in battery mode.
3	Battery Missing	Low when the battery is present. Open when the battery is missing.
4	SIG RTN	Signal return.
5	Power "-"	- Voltage output.
6	Replace Battery	Low when the battery is in a normal state. Open when the battery needs to be replaced.
7	Low Battery	Low when the battery has sufficient capacity. Open when the battery's capacity is low.
8	No Use	

## SPECIFICATION

Model	CPLI72D48V
<b>Input</b>	
Voltage Range	48 – 56 Vdc
<b>Output</b>	
Output Voltage	50 – 56 Vdc
Continuous Power Capability (Utility Mode)	72 W
Max Power Capability (Utility Mode)	80 W (<5 sec)
Continuous Power Capability (Battery Mode)	40 W
Max Power Capability (Battery Mode)	72 W (<5 sec)
Efficiency	>80%
<b>Battery</b>	
Battery Type	Lithium Battery Pack (with thermal sensor)
Numbers of Battery	2,200 mAh/14.4 V x 1
Typical Recharge Time	5 Hours
Replaceable	Yes (technician only)
<b>Warning Diagnostics</b>	
LED Indicators	Output, On Battery, Fault
Audible Alarm	Yes
<b>Management</b>	
Auto Charge	Yes
Battery Pre-charge Function	Yes
Communication Interface	On Battery, Replace Battery, Battery Missing, Low Battery
<b>Physical</b>	
Maximum Dimensions (L*W*D)	16.5 x 9.6 x 4.7 (cm)
Weight (including battery)	575 g
<b>Environment</b>	
Operating Temperature	23 ~ 131°F (-5 ~ 55 °C)
Operating Humidity	0 ~ 95% noncondensing within enclosure
Max Operating Elevation	10,000 ft (3,048m)
Max Storage Elevation	50,000 ft (15,240m)
Storage Temperature	23 ~ 131°F (-5 ~ 55 °C)

## LIMITED WARRANTY

CyberPower warrants to you, the Initial Purchaser, that the Product will be free from defects in material and workmanship for three years from the date of original purchase, subject to the terms of this Limited Warranty. This Limited Warranty gives you specific rights, and you may have other rights, which vary from State to State and Province to Province.

Any Implied Warranty of Merchantability or for Fitness for a Particular Purpose, if applicable to the Product, is limited in duration to three years. This provision shall NOT create any Implied Warranty or Merchantability or of Fitness for a Particular Purpose that would not otherwise apply to the Product. NOTE: **Some States and Provinces do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.**

To be covered, you must be the owner of the Product at the time of the failure that results in the claim made under this Limited Warranty. Your sole and exclusive remedies are those provided by this Limited Warranty. This exclusion of other express warranties applies to written and oral express warranties. CyberPower excludes any liability for personal injury. CyberPower excludes any liability for direct, indirect, special, incidental, or consequential damages, whether for damage to or loss of property, loss of profits, business interruption, information or data. This exclusion applies even though damage or loss is caused by negligence or other faults. NOTE: **Some States or Provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.**

### DO NOT USE FOR MEDICAL OR LIFE SUPPORT EQUIPMENT OR OTHER HIGH RISK ACTIVITIES.

CyberPower does not sell the Product for use in high-risk activities. The Product is not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, weapons systems, life support or medical applications or for use in any circumstance in which the failure of the Product could lead directly to death, personal injury, or severe physical or property damage, or that would affect operation or safety of any medical or life support device (collectively, "High Risk Activities"). CyberPower expressly disclaims any express or implied warranty of fitness for High Risk Activities. CyberPower does not authorize the use of any Product in any High Risk Activities. ANY SUCH USE IS IMPROPER AND IS A MISUSE OF A CYBERPOWER PRODUCT.

The Limited Warranty is governed by the laws of the United States and the State of Minnesota, without reference to conflict of law principles. The application of the United Nations Convention of Contracts for the International Sale of Goods is expressly excluded.

## FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and radiates radio frequency energy and, if not installed and used in accordance with these instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: (1) Reorient or relocate the receiving antenna. (2) Increase the separation between the equipment and receiver. (3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. (4) Consult the dealer or an experienced radio/TV technician for help.

**CAUTION:** Any changes or modifications not expressly approved by Cyber Power could void the authority granted by the FCC to operate this equipment.



**CAUTION:** Batteries are considered HAZARDOUS WASTE, so they must be disposed of properly.

Most retailers that sell batteries collect used batteries for recycling, as required by local regulations.

**CAUTION:** CyberPower Systems encourages environmentally sound methods for disposal and recycle of its UPS products.

Please dispose and/or recycle the UPS in accordance to the local regulations of your state.



**WARNING:** Cancer and Reproductive Harm-[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

For more information, please contact:

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