

CyberPower

User's Manual for CyberShield

CBN50U48A-1

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.

IMPORTANT SAFETY WARNINGS (SAVE THESE INSTRUCTIONS)

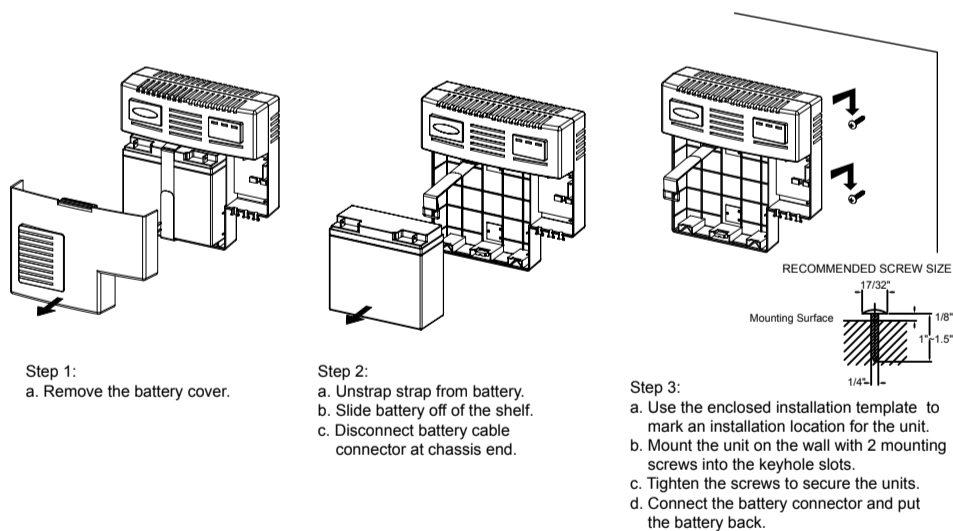
This manual contains important instructions regarding the installation and operation of this device. Read this manual thoroughly before attempting to unpack, install or operate this device.

- CAUTION!** The battery can energize hazardous live parts inside even when the AC input power is disconnected.
- CAUTION!** To reduce the risk of fire or electric shock, install in a temperature and humidity controlled indoor area, free of conductive contaminants. To find the acceptable temperature and humidity ranges, please refer to the device specifications.
- CAUTION!** To avoid electric shock, unplug power cable from the AC power 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, including the battery. 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 utility power.
- CAUTION!** The UPS battery is charging when it's connected to utility power. The battery is charging during its first 24 hours of normal operation. Don't expect full battery capacity during this initial charging period.
- CAUTION!** Runtimes based on testing fully-charged, 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 batteries, remove conductive jewelry, such as chains, watches and rings, and use tools with insulated handles. High energy passed through conductive materials can cause severe burns.
- CAUTION!** When replacing batteries, the replacement should have the same rating: Listed/Certified Valve Regulated Lead Acid Battery, 12V, max. 20Ah.
- CAUTION!** Don't dispose of batteries in a fire. Batteries may explode if improperly disposed. Recycle batteries in accordance with local regulations.
- 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.

ENCLOSURE INSTALLATION

Carefully follow these instructions during installation of this device:

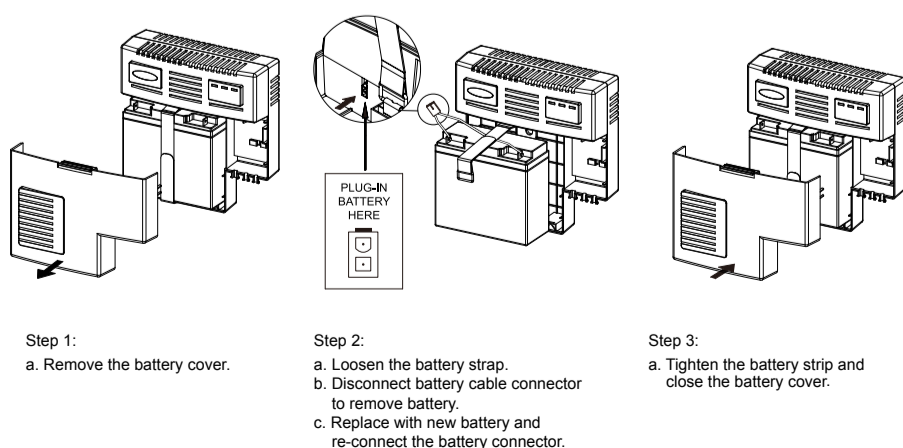
- 1.) Carry out the installation in a safe area that is free of excessive dust and has adequate airflow.
- 2.) Screws must be appropriate for total weight of the UPS and the mounting surface material.
- 3.) Do not operate the UPS where the temperature and humidity are outside the specified limits. (Refer to specification in this manual.)



Note: please always mount the unit on the wall when it is working.

BATTERY REPLACEMENT

This battery is hot-swappable. As long as utility power is on, you may leave the UPS and connected equipment on while replacing a new battery.



OPERATION

Connect: Equipment and Power

- Step 1. Plug the UPS power cord into the utility power cord inlet
- Step 2. Plug the UPS power cord into the wall outlet.

COLD START

The cold start feature is for applying power to the UPS and connected equipment when the UPS is off and there is no utility power. Before using the cold start feature, please make sure the battery is charged. To start the cold start feature, press the recessed cold start button with a small pointed object.



Once the battery is disconnected, the connected equipment is not protected from power outages.

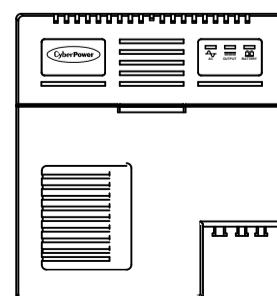


Deliver spent batteries to a recycling facility or ship to the manufacturer in the replacement battery packing material.

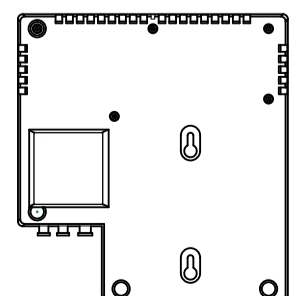
WARNING INDICATOR

Indicator	Color	Condition
AC	Green	UPS is on utility power.
	Yellow	UPS is on battery power.
OUTPUT	Green	DC output power is provided by the battery or utility power.
BATTERY	Red	The battery is not connected or the battery needs to be replaced.

• Front Panel

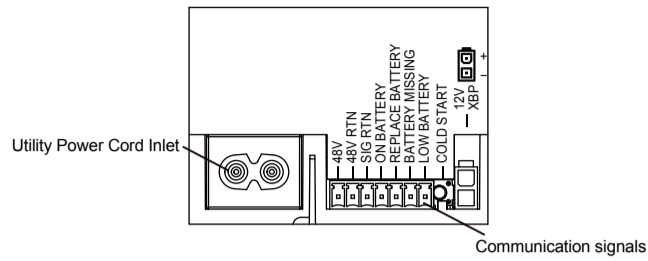


• Back Panel



COMMUNICATION SIGNALS

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



Signal	Message
48V	+ Voltage output
48V RTN	- Voltage output
SIG RTN	Signal return
ON BATTERY	Low when operating from utility line. Open when operating from battery.
REPLACE BATTERY	Low when battery is charged. Open when battery fails the Self Test.
BATTERY MISSING	Low when battery is present. Open when battery is missing.
LOW BATTERY	Low when battery is near full charge capacity. Open when operating from a battery with < 20% capacity.

SPECIFICATION

MODEL	CBN50U48A-1
AC Input	
Input Voltage Range	90- 264V _{AC}
Input Frequency Range	50 - 60 Hz
Input Power Cord	Standard NEMA1-15P 2-Prong Power Cord
DC Output	
On Battery Output Voltage	48V _{DC}
Continuous Power Capability	50W
Output Power Max	50W
Efficiency (at Full Load, 25°C)	>85%
Battery	
Battery Type	Sealed, Maintenance Free Lead-Acid Battery
Numbers of Battery	20AH / 12V x 1
Typical Recharge Time (25°C)	Around 38 hours (90% Charged)
Replaceable	Yes
Surge Protection and Filtering	
Lightning / Surge Protection	Yes
Warning Diagnostics	
Audible Indicator	Utility Failure, Low Battery
LED Indicators	AC, Output, Battery
Management	
Auto-Charge	Yes
Communication Interface	On Battery, Replace Battery, Battery Missing, Low Battery
Physical	
Maximum Dimensions (L*W*D)	30cm x 28cm x 10.1cm
Weight	7.9Kg
Environment	
Operating Temperature	32°F - 104°F (0°C - 40°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	5°F - 113°F (-15°C - 45°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 or 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 still 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 fault. NOTE: **Some States or Provinces do not allow the exclusion or limitations 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 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 can radiate 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: Shielded signal cables must be used with this device to ensure compliance with Class B FCC limits.

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

 **WARNING:** Cancer and Reproductive Harm-
www.P65Warnings.ca.gov.

For more information, please contact:

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