

**Powerware 5110 UPS
User's manual**

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Powerware 5110 UPS

User's manual

1023922 Revision A

Contents

Introduction	4
Features:.....	4
Unit inspection.....	4
Requesting for CE-declaration.....	4
Safety Instructions	5
Battery connection required before use!	6
Connecting the Battery:.....	6
Installation and Operation:	6
Typical applications.....	7
Indicators	7
Indicator table	9
Status Indicators.....	9
LED Indicator Table.....	9
LED Audible Alarm Table.....	9
Battery replacement procedure:	9
Troubleshooting.....	12
Specification*.....	13
Service and Support	14

Introduction

The Powerware 5110 uninterruptible power system (UPS) filters the input line from line disturbances and protects your sensitive electronic equipment from five common power problems such as power failures, power sags, power surges, over-voltage and under-voltage.

Features:

- Processor-controlled voltage regulation (AVR)
- Eight outlets:
 - Four with surge and backup protection
 - Four with surge protection only
- Data Line (Internet fax – modem – DSL) or telephone line surge protection
- Cold start capability
- USB communication port
- User-replaceable batteries

Unit inspection

Once you have received the Powerware 5110 UPS product, you should remove the package and inspect the product for shipping damage. If any damage is found, please notify the carrier and your dealer. Please keep the shipping carton and the packing foam in the event the product must be returned to the factory for service.

Requesting for CE-declaration

Can be downloaded from
http://www.powerware.com/Service_support/EMEA_certificates.asp

Eaton Power Quality Oy
Koskelontie 13, FIN-02920 Espoo Finland
Phone: +358-9-452 661
Fax: +358-9-452 66 396

Safety Instructions



ATTENTION

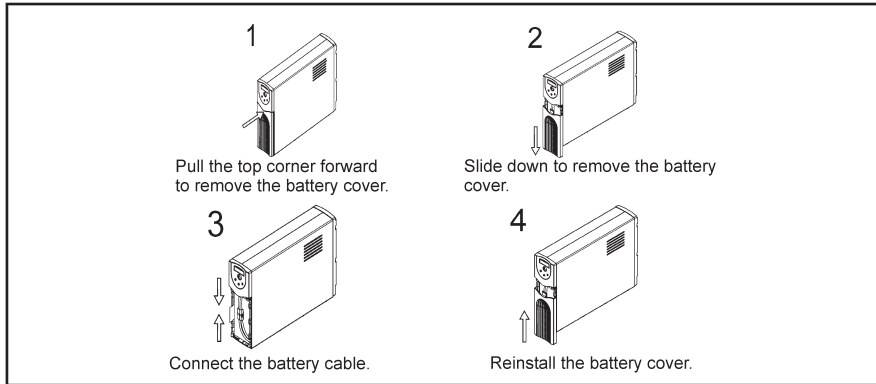
Maintenance, other than battery replacement must be performed by a qualified technician. Failure to do so could result in an electrical shock. Although the unit may be unplugged from utility power, hazardous voltage still may be present through the battery."

1. Place the Powerware 5110 UPS indoors in an area that has adequate airflow and is free of excessive dust. Do NOT allow the UPS to be exposed to moisture, rain, excessive heat, or direct sunlight.
2. Use of the Powerware 5110 UPS product in life support applications, where failure of this equipment can reasonably be expected to cause failure of life support equipment or to significantly affect its safety or effectiveness is NOT recommended.
3. Shut off the UPS and disconnect the input power cord from the wall outlet before replacing the battery.
4. When replacing the battery, use the same number and type of battery
5. Do NOT dispose of battery in a fire. The battery may explode.
6. Do NOT open or mutilate the battery. They contain an electrolyte that is toxic and harmful to the skin and eyes.
7. Proper disposal of the battery is required. Please refer to your local laws/regulations regarding battery disposal.
8. Use tools with insulated handles to replace the battery to avoid personal injury. Due to energy hazard, please remove wristwatches and jewelry such as rings when replacing battery.

Battery connection required before use!

Connecting the Battery:

Principal shown below for detailed information how to connect please refer to battery replacement section.



Installation and Operation:

Following steps explain how to connect and operate the Powerware 5110 UPS.

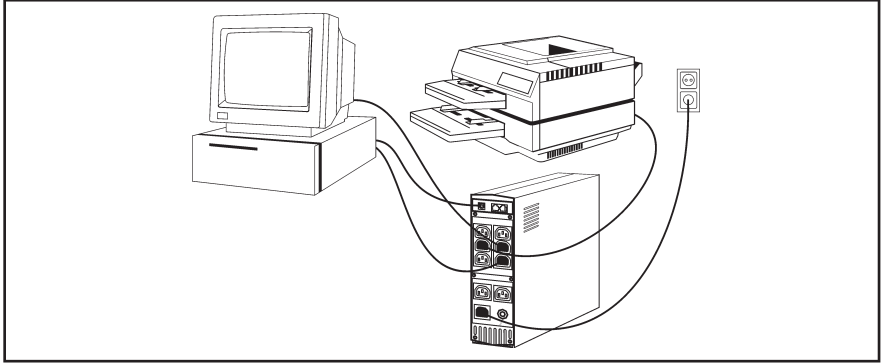
1. Connect the UPS to a grounded power outlet.
2. Plug your computer, monitor or load to be protected into the "Battery Backup & Surge Protection" outlets. (These outlets will provide emergency battery backup power during power outages as well as protection from surges and spikes.)

Do NOT plug LASER PRINTERS into the "Battery Backup" outlets.

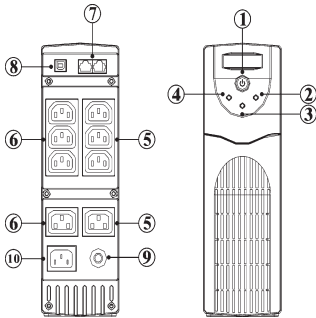
Do NOT plug ACCESSORY SURGE strips into the "Battery Backup" outlets.

3. Plug your peripheral equipment or non-critical loads (printer, scanner, fax, speaker, etc.) into the "Surge Protection" outlets. (These outlets provide surge and spike protection only, they will NOT provide battery backup power during a utility power failure).
4. With your equipment turned off, switch on the UPS.
5. When the "On/Off" LED light is illuminated, turn on the connected equipment.
6. Connect your computer to the UPS using USB cable provided.
Install Power management software provided with the UPS

Typical applications



Indicators



1. On/Off/Test Switch

One switch controls power to your equipment and performs a self-test to detect overload/undercharge.

Turn on the UPS.

Press and hold the switch for more than one second and release the switch after the beep. The UPS will start.

Turn off the UPS.

Press and hold the switch for more than one second and release the switch. The UPS will shut down completely.

Perform Self-test.

The UPS will perform self-test for about 4.5 seconds when the UPS is turned on and the utility power is present.

2. Normal mode (Green)LED

Indicates the UPS is providing mains power to your equipment. When the LED is blinking the UPS is providing power from the battery.

3. Fault (Red)LED

When blinking, LED could indicate an overload condition or that the battery should be replaced. When the LED is always on it indicates a short or UPS fault. For details please see Indicator Table.

4. Battery mode (Yellow)LED

Indicates the UPS is providing battery power to your equipment.

5. Four Battery Backup & Surge Protection Outlets

These three outlets not only provide full time surge protection but also provide emergency battery backup power.

6. Four Surge Protection Outlets

These Three outlets provide full time protection from surge and spike.

7. Phone/modem/ADSL Protection

Built-in RJ11 jacks protect the Internet, phone or fax line from surges. Connect the line in from the wall into the jack named "in" and connect the phone, modem, ADSL box to the jack named "out"

8. USB Communication Port

The provided LanSafe monitoring and shutdown software can be automatically configured to save your files and shut down your computer in the event of a prolonged power outage.

9. Circuit Breaker

The button will protrude when the overload condition occurs. The UPS will switch off of utility power. If the button protrudes, disconnect some non-essential equipment and reset the circuit breaker by pushing the button inward.

10. Input Power Connector IEC C13

Plug your load power cable to power your UPS

Indicator table

Status Indicators

The UPS provides both visual and audible status indicators. Visual indicators consist of three LEDs to represent the following conditions:

- On utility power operation
- On battery power operation
- UPS fault/alarm

LED Indicator Table

On Utility (AC mode)	Green Lighting
On Battery (Backup mode)	Yellow Lighting
Low Battery	Yellow Flashing
Fault/Output Short	Red Lighting
Overload/Check Battery	Red Flashing

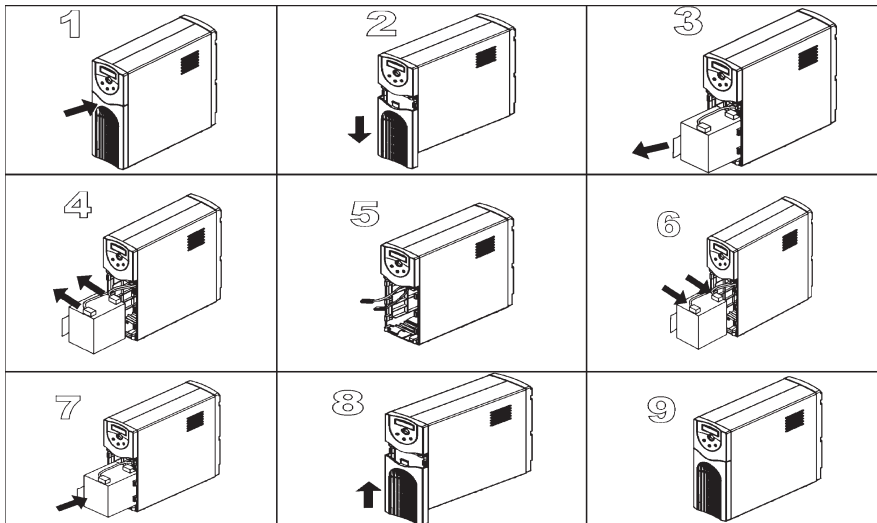
LED Audible Alarm Table

On Battery (Backup mode)	Sounding every 5 seconds
Low Battery	Sounding (two beeps) every 5 seconds
Overload	Sounding every 0.5 seconds
Replace battery	Sounding (three beeps) every 30 seconds
Fault or output short circuit	Continuous sounding
Battery over charge	Sounding (three beeps) every 5 seconds

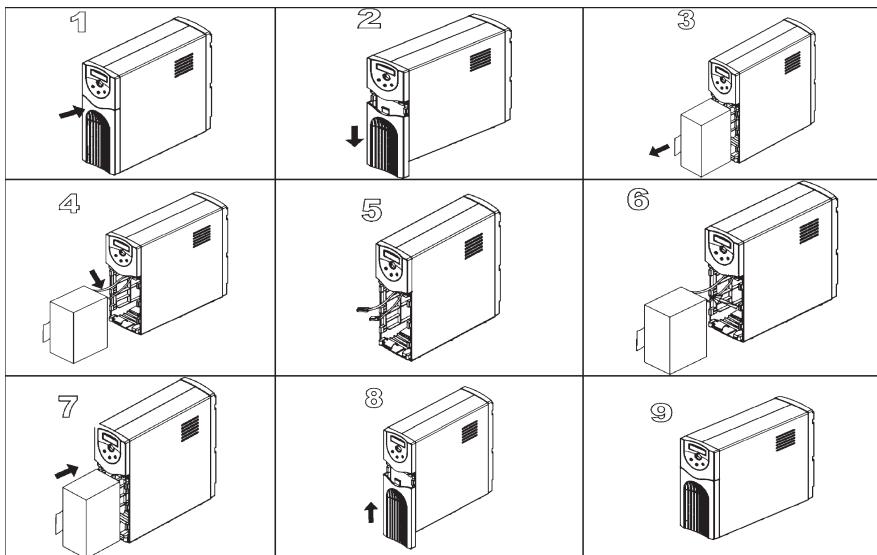
Battery replacement procedure:

1. Shut off the UPS and disconnect the input power cord from the wall outlet.
2. Open battery door.
3. Disconnect used battery. Connect new battery. (It is important that connectors be firmly attached to new batteries.)
4. Close battery door
5. Properly recycle used battery.

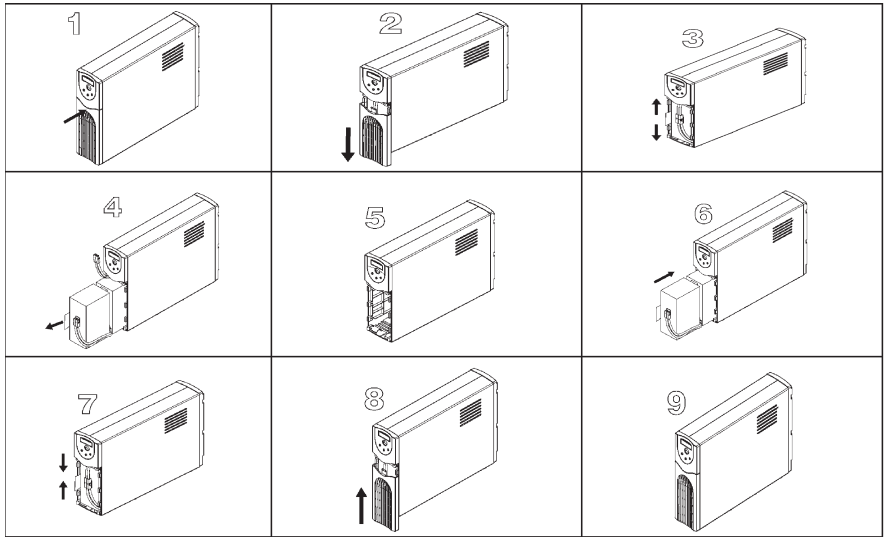
5Ah batteries (350VA, 500VA models)



7Ah x 1 battery (700VA models)



7 Ah x 2 batteries (1000 VA models), 9 Ah x 2 batteries (1500 VA models)



Troubleshooting

Symptom	Possible Cause	Action to Take
Powerware 5110 UPS will not turn on.	UPS is not turned on or battery is not connected.	Switch on the ON/OFF switch. If the power is not present, please make sure your circuit breaker on the building is not accidentally turned off.
	Circuit Breaker has tripped.	Reduce the amount of equipment plugged into the "Battery Backup & Surge Protection" outlets of the UPS. Next, reset the circuit breaker by pushing it back in.
Powerware 5110 UPS is making a continuous sound and the "Overload" indicator is light.	The "Battery Backup & Surge Protection" outlets are overload.	Reduce the amount of equipment connected to these outlets.
Powerware 5110 UPS does not provide expected runtime.	Due to age the battery does not hold a full charge.	Charge the battery for at least 8 hours and recheck the battery runtime
		Battery might need to be changed, look on battery replacement.
Connected equipment's lose power while connected to the Powerware 5110 UPS	The "Battery Backup & Surge Protection" outlets are overloaded.	Refer to the Indicator Table "Powerware 5110 UPS is making a continuous sound and the Overload indicator is lit."
	The Powerware 5110 UPS has depleted the battery.	The Powerware 5110 UPS will turn off when the battery has been depleted during the failure of utility power. Allow UPS to re-charge before continuing use of the UPS.
	Connected equipment is connected to the wrong outlet.	Ensure that the equipment you want to stay powered during a failure of utility power is plugged into the "Battery Backup & Surge Protection" outlets.
	The Powerware 5110 UPS may be faulty.	Please Call your local Powerware representative for further troubleshooting.

Specification*:

	230V Models
Model	5110 350i USB 5110 500i USB 5110 700i USB 5110 1000i USB 5110 1500i USB
Capacity	350VA / 210W 500VA / 300W 700VA / 420W 1000VA/ 600W 1500VA/ 900W
Input Voltage Range	178~275Vac
Output Voltage Range	207~250Vac
Frequency	50 / 60 Hz auto sensing
Outlets	4 Battery Backup & Surge Protection; 4 Surge Protection only
Lighting / Surge Protection	476 Joules
Transfer Time to Battery/AC	2-6 msec. typical
Battery Type	Sealed and leak proof maintenance free lead-acid battery
Battery Specification	350VA:12V 5Ah 500VA:12V 5Ah 750VA:12V 7Ah 1000VA:12V 7Ah x 2 1500VA:12V 9Ah x 2
Typical Backup Time	3 – 5 minutes at full rated load
Phone / modem ADSL Protection	RJ11 connector/RJ11 cable
Short Circuit Protection	Resettable Circuit Breaker
Communication Port	USB
Operation Temperature	0 ~ 40
Operation Relative Humidity	0 to 95% non-condensing
Storage Temperature	-15 ~ 50
Net Weight	350VA:5.5kg 500VA:5.7kg 700VA:7.7kg 1000VA:11.8kg 1500VA:12kg
Dimensions (WxDxH)	350VA&500VA&700VA: 87x270x 260 (mm) 1000VA &1500VA: 87x270x 384 (mm)

*Due to continuing product improvement programs, specifications subject to change without notice

Service and Support

For questions and/or problems, please call your local distributor or the help desk at one of the following telephone numbers and ask for a UPS technical representative.

United States: 1.800.356.5737, Europe, Middle East, Africa: Local Powerware representative. Asia: +852.2830.3030, Australia: +61.3.9706.5022

Please have the following information ready

- Model number and Serial number
- Symptoms of failure or problem
- Customer contact information

For additional information please visit us online: www.powerware.com