Powerware 5110 UPS
User's manual

EAT•N | **Powerware**

Powerware 5110 UPS
User's manual

1023922 Revision A

Contents

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 and power surges.

Features:

- Processor-controlled voltage regulation (AVR)
- Six outlets
  - Three with surge and battery backup protection
  - Three 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 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.

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:

Principle shown below. For detailed information how to connect, please refer to battery replacement section.
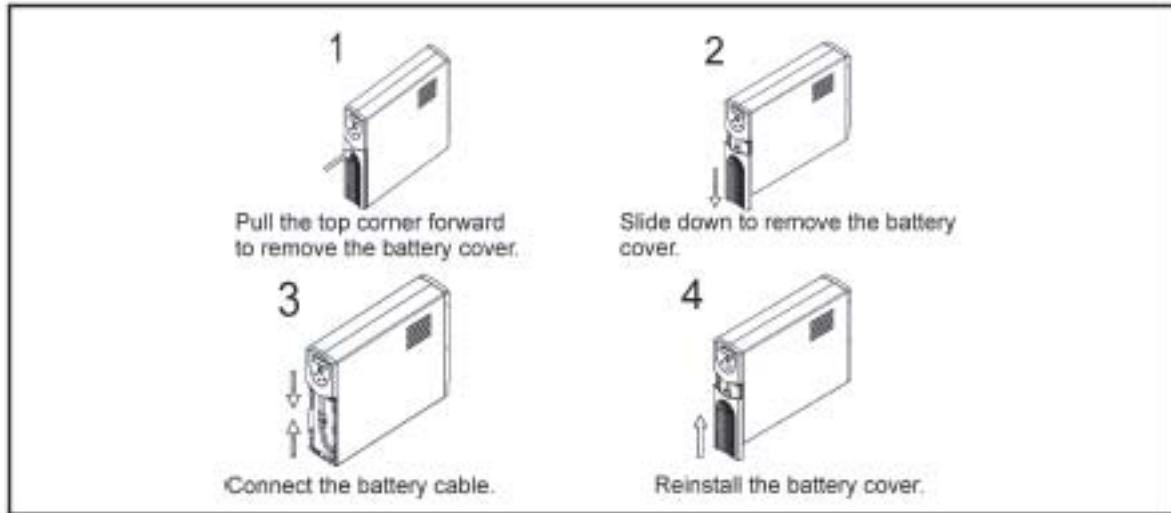
Installation and Operation:

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

1. Connect the UPS to a grounded power outlet.

Note
It is recommended that the battery should be charged for minimum 8 hours to ensure full charge before placing the UPS in service.

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. Connect your computer to the UPS using USB cable provided.
5. With your equipment turned off, switch on the UPS.
6. When the "On/Off" LED light is illuminated, turn on the connected equipment.
7. Install Power management software provided with the UPS

Indicators

1. **On/Off Push Button/Test Switch**
   One switch controls the power to your equipment and performs a self-test to detect overload or undercharged conditions.

   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.
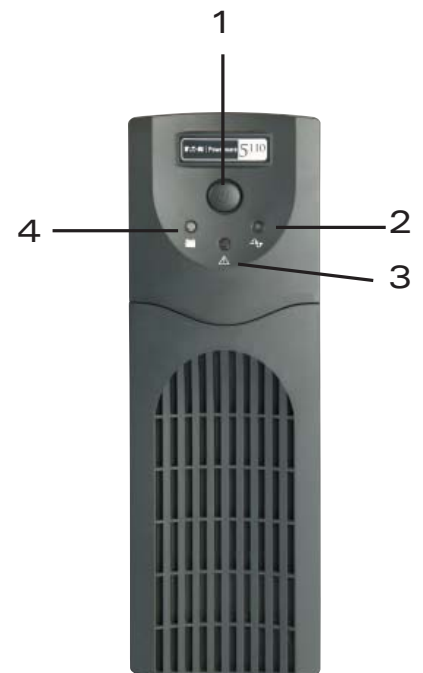
5.   3 Battery Backup and Surge Protection Outlets
These 3 Australian 10 Amp output receptacles provide full time surge protection, but also provide emergency battery backup power.

6.   3 Surge Protection Outlets
These 3 Australian 10 Amp output receptacles 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 the 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. Power Connector
10 Amp IEC to 10 Amp Australian input lead provided.
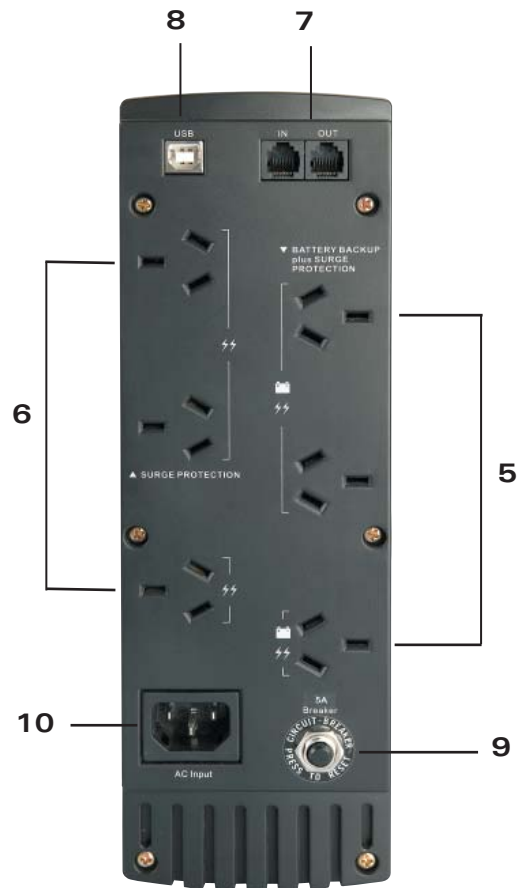
Indicator Table

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. Batteries must be replaced with identical type.

2. Disconnect UPS system from power source

3. Open battery door.

4. Disconnect used battery. Connect new battery. (It is important that connectors be firmly attached to new batteries.

5. Close battery door.

6. Properly recycle used battery.

5Ah battery (350VA, 500VA models)
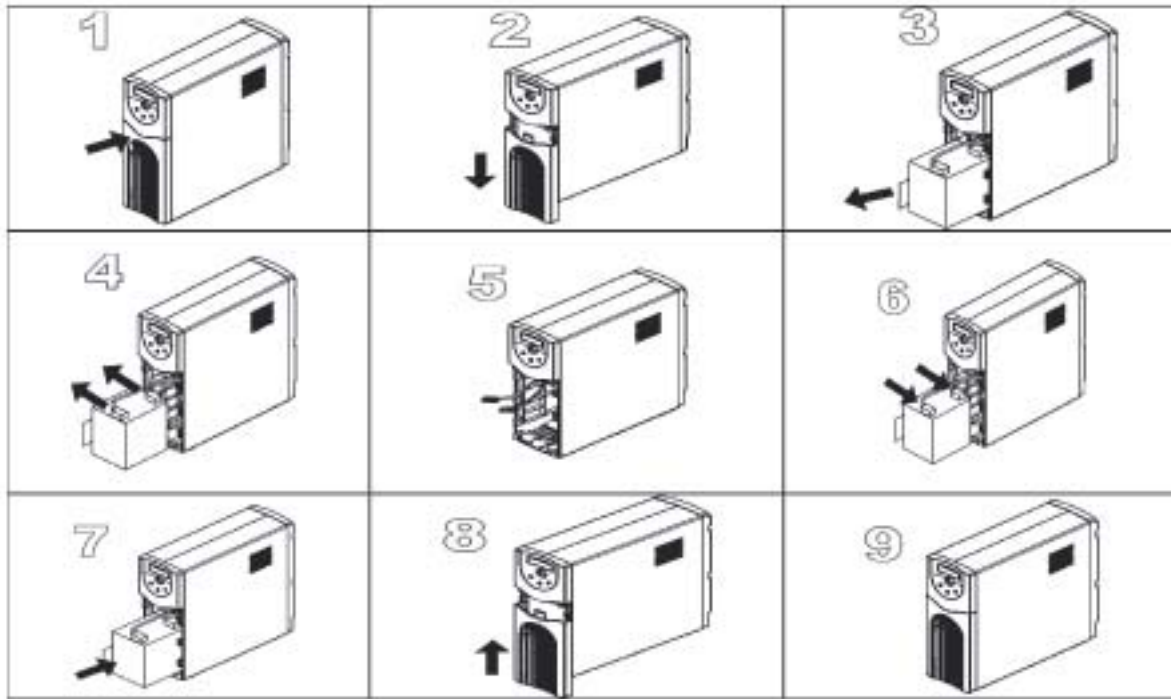
7Ah x 1 battery (700VA models)
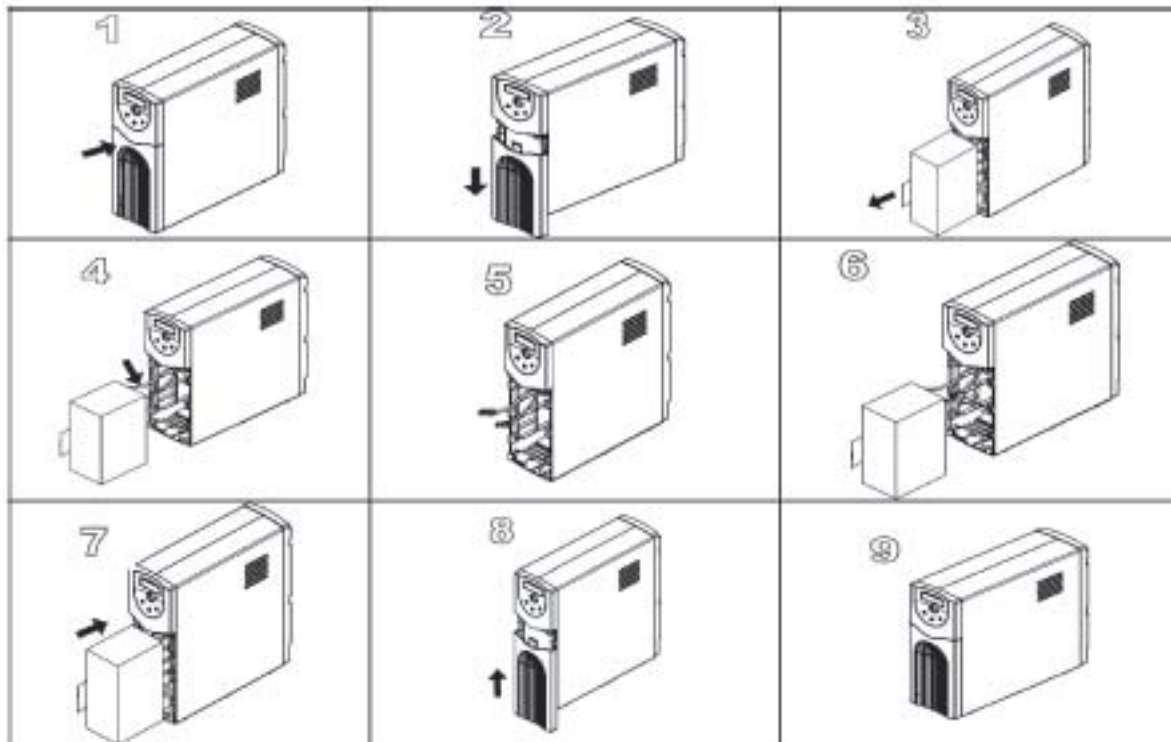
7Ah x 2 batteries (1000VA models), 9 Ah x 2 batteries (1500VA models)

Troubleshooting

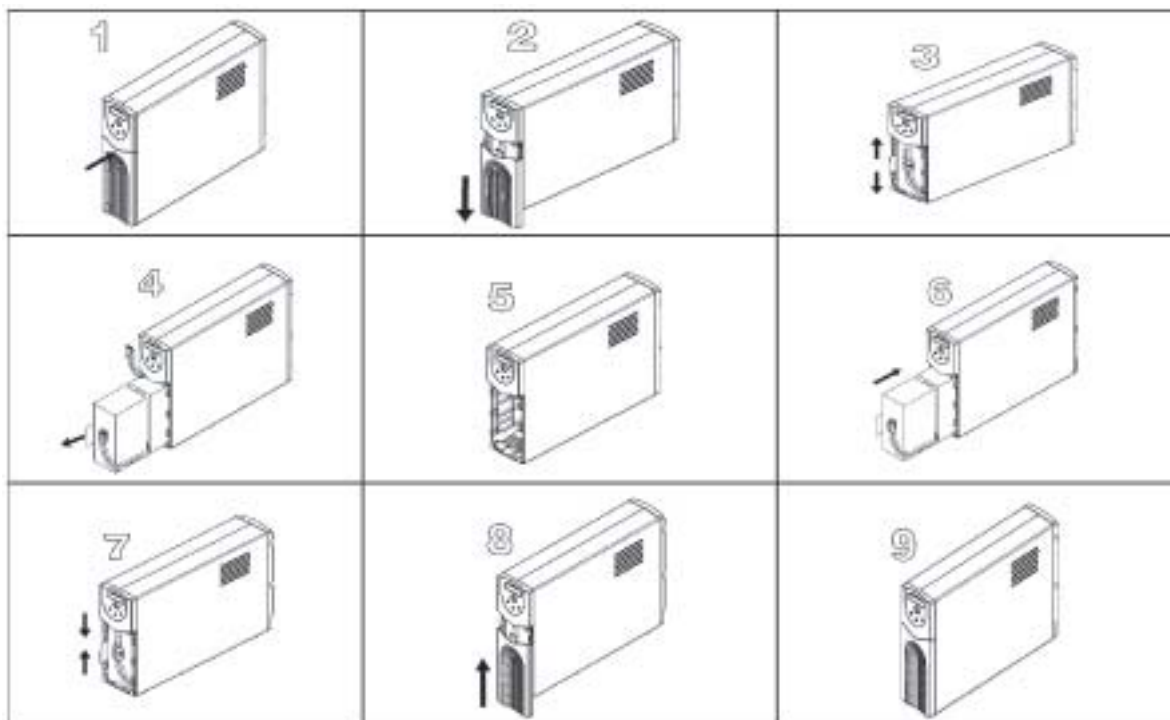| Symptom	Possible Cause	Action to Take
Powerware 5110 UPS will not turn on	UPS is not turned on or battery is not connected	Switch on the ON/OFF switch. If the power is not present, please make sure your circuit breaker on the building is not accidentally turned off.
	Circuit Breaker has tripped.	Reduce 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 lighted.	The "Battery Backup & Surge Protection" outlets are overloaded.	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 at battery replacement
Connected equipment 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 indictor 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.

Service and Support

For questions and/or problems, please call your local distributor or the help desk and ask for a UPS technical representative.

Powerware National Service Centre   1300 303 059

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.au

Specification*:

Capacity	350VA/210W	500VA/300W	700VA/420W	1000VA/600W	1500VA/900W
Dimensions (mm) HxWxD	270x87x260	270x87x260	270x87x260	270x87x384	270x87x384
Unit Weight (kg)	5	6	8	12	12.5
Input Connection	1.8 metre line cord IEC to Australian 10Amp Plug				
Output Connection	6 Australian 10Amp Outlets (3 Battery Backup & Surge Protection, 3 Surge Protection only)				
Operation					
Input Voltage Range	0-160Vac/0-300 VAC				
Output Voltage Range	Nominal -23% to +25%				
On Battery Output Voltage	Nominal -12% to +10%				
Frequency	50 Hz				
Lightning/Surge Protection	476 joules				
Safety	AS/NZS62040.1.1, AS/NZS60950, A-Tick				
EMI	AS/NZS62040.2, AS/NZSCISPR22, C-Tick				
Transfer Time to Battery/AC	2-6 msec. typical				
Battery Type	Sealed, maintenance free lead-acid battery				
Typical Backup Time	3 minutes at full rated load				
Internet/Phone/Fax Protection	RJ11				
Short Circuit Protection	Circuit Breaker				
Communication Port	USB				
Environmental					
Operation Temperature	0°C - 40°C				
Operation Relative Humidity	0 to 95% non condensing				
Storage Temperature	-15°C - 50°C				
Software	Powerware LanSafe Software is included free of charge				
Service Plans	Optional Extended Warranty and On Site Changeover service plans available				

Battery Run Times (in minutes)

Model	Load (VA)											
	80	170	250	330	420	550	650	850	1000	1200	1350	1500
51100350A	31	12	7	4								
51100500A	43	17	11	6	4							
51100700A	53	30	14	9	7	4	3					
51101000A	80	64	-	28	20	15	12	8	5			
51101500A	-	74	-	35	-	-	14	10	7	6	5	4

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