



## DL450ELCD / DL650ELCD / DL850ELCD User's Manual

### IMPORTANT SAFETY INSTRUCTIONS

This manual contains important instructions that should be followed during installation and maintenance of the UPS and batteries. Please read and follow all instructions carefully during installation and operation of the unit. Read this manual thoroughly before attempting to unpack, install, or operate.

**CAUTION!** The UPS must be connected to a grounded AC power outlet with fuse or circuit breaker protection. DO NOT plug the UPS into an outlet that is not grounded. If you need to de-energize this equipment, turn off and unplug the UPS.

**CAUTION! DO NOT USE FOR MEDICAL OR LIFE SUPPORT EQUIPMENT!** CyberPower Systems does not sell products for life support or medical applications. DO NOT use in any circumstance that would affect the operation or safety of any life support equipment, with any medical applications, or patient care.

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

**CAUTION!** To prevent the risk of fire or electric shock, install in a temperature and humidity controlled indoor area, free of conductive contaminants. (Please see specifications for acceptable temperature and humidity range).

**CAUTION!** To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside.

**CAUTION!** To avoid electrical shock, turn off the unit and unplug it from the AC power source before installing a computer component.

**CAUTION! DO NOT USE WITH OR NEAR AQUARIUMS!** To reduce the risk of fire, do not use with or near aquariums. Condensation from the aquarium can come in contact with metal electrical contacts and cause the machine to short out.

**CAUTION! DO NOT USE WITH LASER PRINTERS!** The power demands of laser printers are too large for a UPS.

### INSTALLING YOUR UPS SYSTEM

#### UNPACKING

The box should contain the following:

- (1) UPS Unit x 1; (2) User Manual x 1; (3) USB cable x 1; (4) Management software Disk x 1

#### OVERVIEW

The DL450ELCD/DL650ELCD/DL850ELCD ensures consistent power to your computer system and its included software will automatically save your open files and shutdown your computer system during a utility power loss.

#### HOW TO DETERMINE THE POWER REQUIREMENTS OF YOUR EQUIPMENT

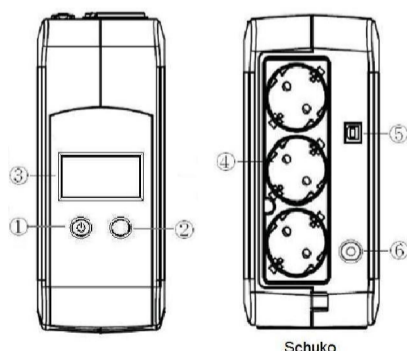
- Make sure that the total Volt-Amp (VA) requirements of your computer, monitor, and peripheral equipment does not exceed 450VA/650VA/850VA.
- Ensure that the equipment plugged into the battery power-supplied/surge outlets does not exceed the UPS unit's rated capacity (450VA/270W for DL450ELCD, 650VA/360W for DL650ELCD, 850VA/490W for DL850ELCD). If the rated unit capacities are exceeded, an overload condition may occur and cause the UPS unit to shut down or the circuit breaker to trip.

#### HARDWARE INSTALLATION GUIDE

- Your new UPS may be used immediately upon receipt. However, recharging the battery for at least 8 hours is recommended to ensure that the battery's maximum charge capacity is achieved. Charge loss may occur during shipping and storage. To recharge the battery, simply leave the unit plugged into an AC outlet. The unit will charge in both the on and off position.
- With the UPS unit off and unplugged, connect the computer, monitor, and any externally powered data storage device (Zip drive, Jazz drive, Tape drive, etc.) into the battery power supplied outlets. **DO NOT plug a laser printer, copier, space heater, vacuum, paper shredder or other large electrical device into the UPS. The power demands of these devices will overload and possibly damage the unit.**
- Plug the UPS into a 2 pole, 3 wire grounded receptacle (wall outlet). Make sure the wall branch outlet is protected by a fuse or circuit breaker and does not service equipment with large electrical demands (e.g. air conditioner, refrigerator, copier, etc.) Avoid using extension cords.
- Depress the power switch to turn the unit on. The power on indicator light will illuminate and the unit will "beep".
- If an overload is detected, an audible alarm will sound and the unit will emit one long beep. To correct this, turn the UPS off and unplug at least one piece of equipment from the outlets. Wait 10 seconds. Make sure the circuit breaker is depressed and then turn the UPS on.
- Your UPS is equipped with an auto-charge feature. When the UPS is plugged into an AC outlet, the battery will automatically recharge.
- To maintain optimal battery charge, leave the UPS plugged into an AC outlet at all times.
- To store your UPS for an extended period, cover it and store with the battery fully charged. Recharge the battery every three months to ensure battery life.

### BASIC OPERATION

#### DESCRIPTION



#### ① Power On/Off Switch

Press the power switch to turn the UPS ON or OFF.

#### ② LCD Function Selected Switch

Press the LCD function selected switch to know the UPS status.

#### ③ LCD Display

The LCD will display the UPS status including input voltage, output voltage, runtime, percentage of load and battery, etc.

#### ④ AC outlet

The UPS provides 3 outlets for connected equipment to insure temporary uninterrupted operation during a power failure and against surges and spikes.

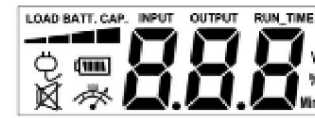
#### ⑤ USB Port to PC

#### ⑥ Input Circuit Breaker

The Circuit Breaker provides optimal overload protection.

### DEFINITIONS FOR ILLUMINATED LCD INDICATORS

LCD Indication



#### Line mode

Select SW Press	UPS Status Display				Capacity Display		Digital Value Display				
					Load Cap.	Battery Cap.	Input Voltage	Output Voltage	Run Time	% of Load	% of Batt.
Initial	V	X	--	X	V	X		V			
1st	V	X	--	X	V	X			V		
2nd	V	X	--	X	V	X				V	
3rd	V	X	--	X	V	X					V
4th	V	X	--	X	V	X	V				
5th(Return)	V	X	--	X	V	X		V			
Press >3sec (Sound Disable)	V	X	V	X	--	--	--	--	--	--	--
Press >3sec again (Sound Enable)	V	X	X	X	--	--	--	--	--	--	--
(Overload)	V	X	--	V	--	--	--	--	--	--	--

"V": Illuminated, "X": Not Illuminated, "--": Either

#### Battery mode

Select SW Press	UPS Status Display				Capacity Display		Digital Value Display				
					Load Cap.	Battery Cap.	Input Voltage	Output Voltage	Run Time	% of Load	% of Batt.
Initial	X	V	--	X	X	V		V			
1st	X	V	--	X	X	V			V		
2nd	X	V	--	X	V	X				V	
3rd	X	V	--	X	V	X					V
4th	X	V	--	X	V	V	V				
5th(Return)	X	V	--	X	V	V		V			
Press >3sec (Sound Disable)	X	V	V	X	--	--	--	--	--	--	--
Press >3sec again (Sound Enable)	X	V	X	X	--	--	--	--	--	--	--
(Overload)	X	V	--	V	--	--	--	--	--	--	--

"V": Illuminated, "X": Not Illuminated, "--": Either

### TECHNICAL SPECIFICATIONS

Model	DL450ELCD	DL650ELCD	DL850ELCD
Capacity (VA)	450	650	850
Capacity (Watts)	270	360	490
<b>Input</b>			
Frequency Range	47~63Hz (Auto Sensing)		
<b>Output</b>			
On Battery Output Voltage	Simulated Sine Wave at 230Vac +/-7%		
On Battery Output Frequency	50/60Hz +/-1%		
Overload Protection	On Utility: Circuit Breaker and Internal Current Limiting On Battery: Internal Current Limiting		
<b>Surge Protection</b>			
Lightning / Surge Protection	Yes		
<b>Physical</b>			
Total # of UPS outlets	3 Battery Backup & Surge Protected Outlets		
Maximum Dimensions (DxWxH)	235 x 90 x 190mm		
Weight (kg)	2.2	2.9	3.1
<b>Battery</b>			
Sealed Maintenance Free Lead Acid Battery	12V / 3.6Ah x1	12V / 4.5Ah x1	12V / 7Ah x1
Typical Recharge Time	8 hours		
<b>Status Indicators</b>			
Indicators	LCD		
Audible Alarms	On Battery, Low Battery, Overload		
<b>Environment</b>			
Operating Temperature	0°C to 40°C		
<b>Communication</b>			
PowerPanel® Personal Edition Software	Windows 7/Vista/XP/2000/Server 2003, Linux		
Relative Humidity	0 to 90% (Non-condensing)		
<b>Management</b>			
Auto-Charger	Yes		
Auto-Restart	Yes		

### CYBERPOWER GREENPOWER UPS™ TECHNOLOGY

#### CyberPower's Green Commitment

CyberPower is dedicated to the development of green products, and has adopted Green practices throughout its business, including: membership in Climate Savers Computing Initiative (CSCI), accordance with the Restriction on Hazardous Substances (RoHS), Waste Electrical and Electronic Equipment (WEEE) protocols, as well as ISO 14001 and IECQ QC080000. CyberPower pledges to provide the advanced energy solution for the environment and become a leading eco-friendly organization in the UPS industry.



#### Reduce Energy Cost with GreenPower UPS™ Technology

CyberPower's goal is not only to provide eco-friendly products but also to bring the best value for consumers. The advanced energy-saving design improves the operating efficiency and eliminates waste energy consumption. As a result, consumers will enjoy significant energy cost savings with the adoption of GreenPower UPS™ technology.

### TROUBLESHOOTING

Problem	Possible Cause	Solution
The outlets stop providing power to equipment. Circuit breaker button is projecting from the side of the unit.	Circuit breaker has tripped due to an overload.	Turn the UPS off and unplug at least one piece of equipment. Reset the circuit breaker by depressing the button, and then turn the UPS on.
The UPS does not perform expected runtime.	Battery not fully charged.	Recharge the battery by leaving the UPS plugged in.
	Battery is slightly worn out.	Contact CyberPower Systems about replacement batteries at <a href="http://www.cpsww.eu">www.cpsww.eu</a>
The UPS will not turn on.	The on/off switch is designed to prevent damage by rapidly turning it off and on.	Turn the UPS off. Wait 10 seconds and then turn the UPS on.
	The battery is worn out.	Contact CyberPower Systems about replacement batteries at <a href="http://www.cpsww.eu">www.cpsww.eu</a>
	Mechanical problem.	Contact CyberPower Systems at <a href="http://www.cpsww.eu">www.cpsww.eu</a>

Additional troubleshooting information can be found at [www.cpsww.eu](http://www.cpsww.eu)

For more information, visit [www.cpsww.eu](http://www.cpsww.eu) or contact

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