forza®
POWER TECHNOLOGIES

FX-1500/2200

FX-1500LCD/2200LCD
FX-1500LCD-U/2200LCD-U

Power Protection
Home theater / Server & network

forza
POWER TECHNOLOGIES

Table of contents

Thank you for purchasing the Forza FX-1500/2200LCD Series UPS system. Please read this manual thoroughly to become familiar and enjoy all the features and benefits of this unit.

Important safety instructions (save this manual)

This manual contains important information for the safe use and maintenance of the Forza FX Series UPS. Please follow the instructions and safety guidelines before unpacking, installing and operating the device.

CAUTION!

- The voltage used by this UPS may be hazardous. The unit contains no user serviceable parts; do not attempt to disassemble the unit. Only factory service technicians can perform maintenance on the unit.
- Connection to any other type of receptacle other than a two-pole, three-wire grounded outlet may result in electrical shock.
- In case of an emergency, turn the power switch "off" and disconnect the power cord from the AC mains outlet.
- Do not plug the UPS AC input power cord into its own output.
- Do not connect any power strip or surge suppressor to the UPS.
- Never connect non-computer-related peripheral devices, such as medical equipment, life-support equipment, microwave ovens, or vacuum cleaners to the UPS.
- Unplug the UPS before cleaning, and do not use liquid or spray detergents.

SAFE HANDLING OF BATTERIES
- The UPS contains an internal 12VDC, sealed, 6-cell lead-acid battery.
- To maintain optimal battery charge, leave the UPS plugged into an AC outlet at all times.
- Do not dispose of batteries in a fire. Batteries may explode if exposed to high temperatures.
- Never try to open a battery. The cell contains a toxic electrolyte which is harmful to the skin and eyes.
- A battery can present the risk of short-circuit current and electrical shock. The following precautions should be taken:
    1) Remove watches, rings, or other metal objects from your hand.
    2) Use tools with insulated handles.
    3) Wear rubber gloves and boots.
    4) Do not place tools or metal parts on the top of batteries.
- Disconnect charging source prior to connecting or disconnecting battery terminals. Servicing of batteries should be performed or supervised by experts who possess the knowledge to closely follow all required precautions. When replacing the battery, make sure to use the same type and number of sealed lead-acid batteries specified.

SAFE OPERATING ENVIRONMENT
- Do not allow any kind of liquid or foreign object to enter this UPS unit. Do not place beverages or any other containers with liquid on or nearby the unit.
- This unit should be installed and operated in an environment that meets the specified conditions: (temperature-controlled indoor area location and free of conductive contaminants). Do not install the UPS in locations nearby running water or excessively humid.
- To reduce the risk of overheating, do not cover the cooling vents. Avoid exposing the unit to direct sunlight or installing the unit nearby heat-emitting appliances, such as electric heaters or furnaces.
- The wall socket shall be located nearby the UPS and must be accessed very easily.

System introduction

The award-winning Forza FX Series, recognized by CHA as the best of its kind, offers an enhanced level of protection for your high performance office equipment, sensitive electronics and home-theater components. In addition to its reliable built-in automatic voltage regulator (AVR), the FX Series comes with the new ForzaTracker, a Power Management Software which controls and monitors the UPS via a USB connection. It also features a coaxial surge protection line and a convenient LCD display that indicates the operating status of the unit in real time. With 8 available outlets combined with its lightweight and compact design, this UPS fits perfectly in limited working spaces.

Features

- LCD displays real time status information
- Easy to read LCD display with bright blue backlight
- Power protection for home and office equipment
- Boost & buck AVR to stabilize voltage
- 8 outlets - Six (6) with surge protection, battery backup and AVR, plus two (2) surge only outlets
- Network, phone, fax & modem protection (RJ-45/11)
- USB communication port
- Long back-up time
- Power management software CD
- 660-joule surge rating
- Coaxial protection

Front panel

1. LCD display
2. Power "on/off" switch
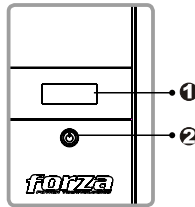
FX1500LCD / FX2200LCD
FX1500LCD-U / FX2200LCD-U

Back panel

1. Coaxial lines
2. USB data port
3. Network, telephone, fax & modem protection (RJ-45/11)
4. User-resettable circuit breaker
5. AC power input

6. Cooling fan
7. Six (6) outlets with surge protection, battery backup and automatic voltage regulation (AVR)
8. Two (2) surge-only protected outlets
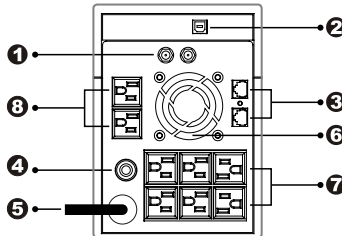
FX1500LCD / FX2200LCD
FX1500LCD-U / FX2200LCD-U

# Installation and operation

1. Inspection

Remove the UPS from its package and look for damages that may have occurred during shipping. If any damage is discovered, repack the unit and return it to the place of purchase.

2. Choose location

Install the UPS unit in any protected environment that provides adequate airflow around the unit, and free from excessive dust, corrosive fumes and conductive contaminants. Do not operate your UPS in an environment where the ambient temperature or humidity is high. Place the UPS unit at least 20cm away from monitors to avoid interference.

3. Charge the UPS

This unit is shipped from the factory with its internal battery fully charged; however, some charge may be lost during shipping. Therefore, it is recommended to charge the battery prior to initial use. Simply plug the unit into an appropriate AC outlet, and allow it to recharge to full capacity for at least 8 hours.
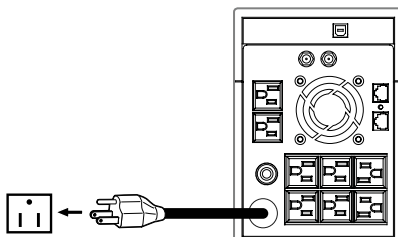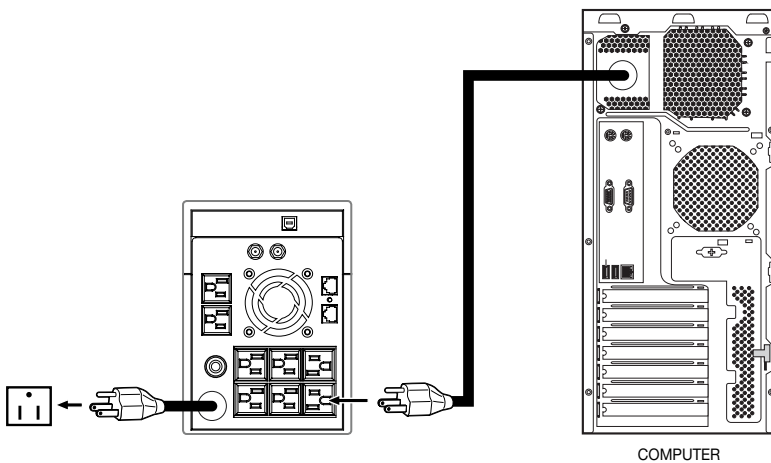

4. Connect to home theater or server PC

Connect your TV/receiver or computer-related device into each power receptacle supplied on the back of the UPS, as shown below.

Home theater

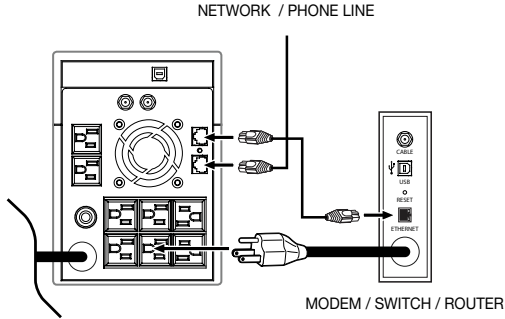
TV

SATELLITE / CATV / CABLE MODEM

Server/PC

COMPUTER
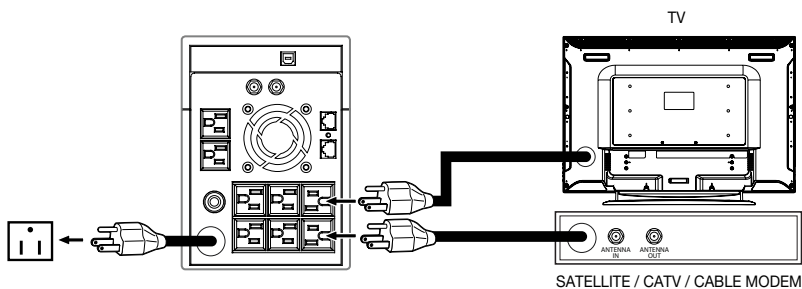
5. Network/Modem/Phone line connection

Connect the incoming internet line into the input surge protected jack on the back of the UPS. Then connect another network cable from the output jack on the UPS to the modem input socket, as shown in the figure below.

NETWORK / PHONE LINE

MODEM / SWITCH / ROUTER

6. USB data cable connection (only for server/PC connections)

To enable unattended system shutdown via power monitoring software, connect the USB as shown in the diagram below.


COMPUTER
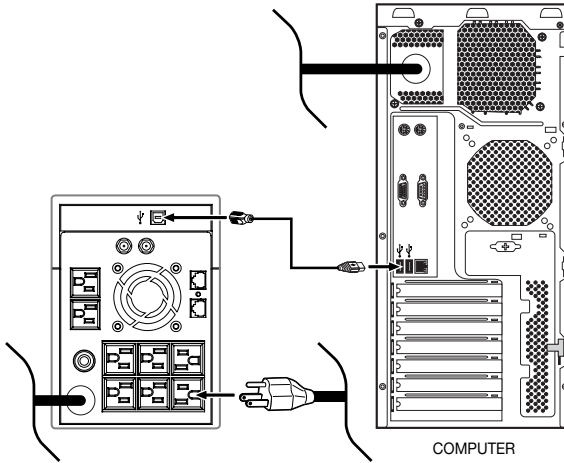
7. Coaxial line connection

Connect your incoming cable/antenna, digital satellite system line to the input connector on the UPS. Connect the coaxial cable into the output connector on the UPS, and then plug the other end of the coaxial cable to the input connector of the device you want to protect. (Coaxial cable not included).

CABLE / ANTENNA

SATELLITE / CATV / CABLE MODEM
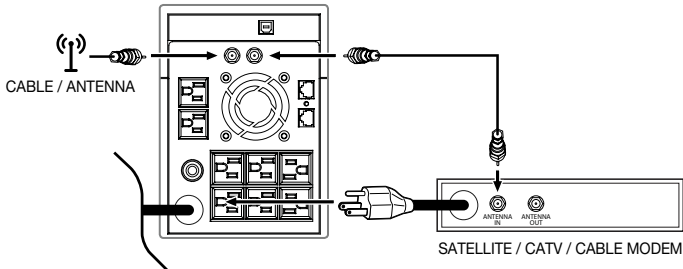
8. Turn On/Off UPS

Press and hold the power switch on the front panel to start the UPS. The LED lights up when switch is on. To turn the unit off, simply press and hold the power button until the LED goes off.
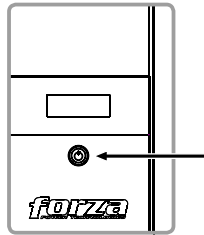
9. DC start function

DC Start Function enables UPS to be powered up when AC utility power is not available and battery is fully charged. Simply press the power switch to turn on the UPS.

10. LCD display

The Forza 1500/2200LCD/LCD-U Series comes equipped with an easy to read LCD and a blue backlight that displays the battery status, input voltage, output voltage, and operation mode of the UPS.

<table>
<tr>
<td>When the LCD is initially powered on, the LCD will display all information at once.

INPUT/BATTERY (Unit: VDC/Hz/VAC)
OUTPUT/LOAD/FAULT (Unit: %/Hz/VAC)
LOAD LEVEL
BATTERY CAPACITY
LINE MODE (AVR)
BACKUP MODE</td>
<td>1). When operating in normal mode, the display appears as shown below.

</td>
</tr>
<tr>
<td>2).When in AVR mode, it will display as below. And the mark ∿ will blink once every second.

</td>
<td>3).When in battery mode, it will display as below. And the mark ⊞ will blink once every second.

Note: If I/P-V<40V, input voltage will be displayed as **000**</td>
</tr>
<tr>
<td>4).When in off / charging mode, it will display as below.

Note: the output voltage will always be displayed as **000** when in off/charging mode.</td>
<td>5).When in fault mode, the display appears as shown below. Only the **FAULT** indicator and the reason of the malfunction will be displayed in this case.

Note: a fault code will appear every time the UPS enters into the fault mode.</td>
</tr>
</table>

6).Load level definition:		7).Battery capacity definition:		
Load LEVEL	Load bar indication	Battery / LEVEL	Backup mode	AC mode
⚡▪	0%~25%	⊞▪	Battery voltage <22.0V	Battery voltage <25.4V
⚡▪▪	25%~50%	⊞▪▪	Battery voltage 22.0V	Battery voltage 25.4V
⚡▪▪▪	50%~75%	⊞▪▪▪	Battery voltage 23.0V	Battery voltage 26.4V
⚡▪▪▪▪	75%~100%	⊞▪▪▪▪	Battery voltage 25.0V	Battery voltage 27.0V
8.) When in overload condition, the ⚡ icon blinks once every second.				
9). When battery is low, the ⊞ icon blinks once every second.				

Battery removal*

Follow the steps 1 to 3 to replace the batteries. Disconnect all sources of power before replacing the battery.

1. Remove the front panel.
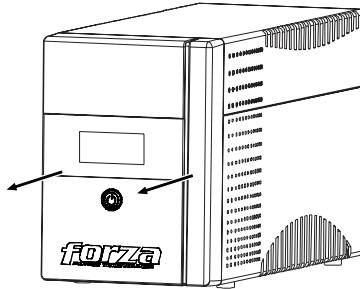
2. Remove the battery cover.
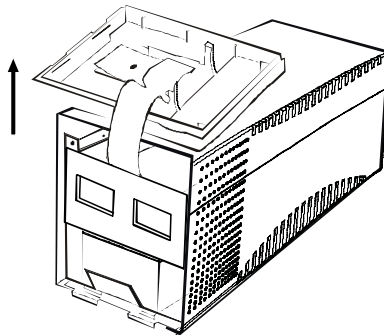
3. After removing battery cover, gently extract the battery by disconnecting the two wires connected to the UPS. Be sure to replace the same type of batteries and dispose of old batteries properly at an appropriate recycling facility.

*Battery removal by technician recommended.

Software installation

ForzaTracker is a new generation of UPS monitoring software, which provides user-friendly interface to monitor and control your UPS system. This unique software provides safe auto shutdown for multi-computer systems during power failures. With this software, users can remotely monitor and control any UPS on the same LAN, no matter how far the unit is located.
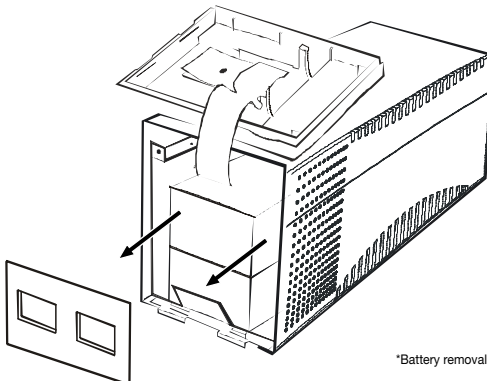
Installation procedure:

1. Go to the website: http://www.forzaups.com/us/driver-downloads/
2. Choose the type of operation system and follow the instructions on the website to download the software.
3. When downloading all required files from the internet, enter the serial No: **5242-87f6-64re-di8d-986u** to install the software (including hyphens).
4. When your computer restarts, the management software will appear as a green plug icon located in the system tray, near the clock.
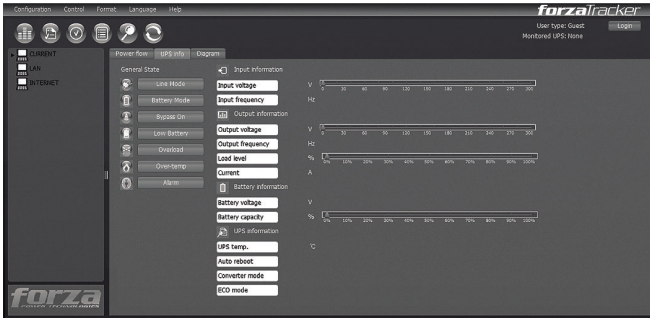
5. To access the Forza Tracker management software as an administrator, you must enter the password: **111296**

Troubleshooting guide

When the Forza UPS is not working normally, please refer to the following trouble shooting table for solving installation or operation problems. If any abnormal situation not listed above occurs, please call our service department for further assistance.

The UPS does not turn on and no LED display

Possible Cause	Solution
Low battery voltage	Charge battery for at least 8 hours
The battery is defective	Replace it with the same type of battery
Power switch is not in the depressed position	Press the power switch again

Audible alarm buzzer beeps continuously when AC input line is normal

Possible Cause	Solution
The UPS is overloaded	Verify that the load matches the UPS capability specified in the specs

When power fails, the backup time is shortened than the normal status

Possible Cause	Solution
The UPS is overloaded	Remove the least critical load
Low battery voltage	Charge battery for at least 8 hours
Battery failure due to high temperature or degraded performance	Replace it with the same type of battery

Communication lost between UPS and computer

Possible Cause	Solution
Software is not installed correctly.	Check the settings of the software.
Cable is not properly connected.	Check the USB cable is firmly connected to COM1/COM2 of the computer and confirm the setting again.

Even when mains supply is normal, the LED still displays battery mode

Possible Cause	Solution
Circuit breaker trips	Reset the circuit breaker.
Power cord is loose.	Reconnect the power cord properly.

* For further assistance, please contact us at tech@forzaups.com• When replacing your batteries, we recommend using a Forza FUB-1290.

Technical specifications

MODEL		FX1500LCD	FX2200LCD	FX1500LCD-U	FX2200LCD-U
CAPACITY	VA / W	1500VA/840W	2200VA/1200W	1500VA/840W	2200VA/1200W
INPUT	Nominal voltage	120V		220V	
	Voltage range	89-145VAC		166-280VAC	
	Frequency	45-65Hz (autosensing)			
	AC plug style	NEMA 5-15P			
OUTPUT	Nominal voltage	120V +/- 10%		220V +/- 10%	
	Frequency	50/60Hz			
	Frequency stability	+/- 1Hz battery mode			
	Waveform	Modified sine wave			
	Total outlets	8 (NEMA 5-15R)			
	Full battery / Surge protection outlets	6			
	Surge protection outlets only	2			
	Internet protection	RJ-45			
	Phone/Modem/Fax protection	RJ-11			
	Coaxial protection	Included			
	USB management	Included			
BATTERY	Type and quantity	12V/9Ah (2)			
	Backup time	64 min **			
	Recharge time	6 hours to 90% after complete discharge			
VOLTAGE REGULATION	Automatic voltage regulation	Included			
FREQUENCY REGULATION	Automatic frequency selection	Included			
LINE/BATTERY TRANSFER	Typical transfer time	2-4ms			
	Low line transfer to battery (120/220V)	89VAC		166VAC	
	High line transfer to battery (120/220V)	145VAC		280VAC	
ALARMS/ INDICATORS	Visual indicators	Easy to read LCD with a blue backlight that displays the battery status, input voltage, output voltage, and operation mode of the UPS			
	Audible alarm	Battery mode: sounds every 10 seconds Low battery: sounds every second Overload: sounds every 0.5 second Fault: continuous sound			
PROTECTION	Full protection	Line mode: 110%+20%/-10%; shutdown after 5 minutes and go to fault mode. 120%+20%/-10%; shutdown immediately and go to fault mode. Battery mode:120%+20%/-10%; shutdown immediately			
	Joules	660J			
SPECIAL FEATURES	"Cold start" option	Included			
	Auto charge	Included			
ENVIRONMENT	Operating temperature	32-104° F			
	Storage temperature	5-113° F			
	Relative humidity	0-90% non-condensing			
	Audible noise	<40 dB at one meter			
PHYSICAL APPEARANCE	Power switch	Included (lighted)			
	Housing	ABS plastic (flame retardant)			
	Color	Black			
	Cord length	3ft			
	Dimensions	15.3x5.6x7.7in			
	Weight	25lb			
ADDITIONAL INFORMATION	Warranty	3 years*			

* 2 years on batteries
**Calculated with a single PC plus monitor

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