



J90 Lithium Ion UPS

1000VA, 1500VA Models

User & Installation Manual

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1. Important Safety Warning

Please comply with all warnings and operating instructions in this manual strictly. Save this manual properly and read carefully the following instructions before installing the unit. Do not operate this unit before reading through all safety information and operating instructions carefully.

1-1. Transportation

- Please transport the UPS system only in the original package to protect against shock and impact.

1-2. Preparation

- Condensation may occur if the UPS system is moved directly from cold to warm environment.

The UPS system must be absolutely dry before being installed. Please allow at least two hours for the UPS system to acclimate the environment.

- Do not install the UPS system near water or in moist environments.
- Do not install the UPS system where it would be exposed to direct sunlight or near heater.
- Do not block ventilation holes in the UPS housing.

1-3. Installation

- Do not connect appliances or devices which would overload the UPS system (e.g. laser printers) to the UPS output sockets.
- Place cables in such a way that no one can step on or trip over them.
- Do not connect domestic appliances such as hair dryers to UPS output sockets.
- The UPS can be operated by any individuals with no previous experience.
- Connect the UPS system only to an earthed shockproof outlet which must be easily accessible and close to the UPS system.
- When installing the equipment, it should ensure that the sum of the leakage current of the UPS and the connected devices does not exceed 3.5mA.

1-4. Operation

- Do not disconnect the mains cable on the UPS system or the building wiring outlet (shockproof socket outlet) during operations since this would cancel the protective earthing of the UPS system and of all connected loads.
- The UPS system features its own internal current source (batteries). The UPS output sockets or output terminals block may be electrically live even if the UPS system is not connected to the building wiring outlet.
- Prevent no fluids or other foreign objects from inside of the UPS system.

1-5. Maintenance, service and faults

- The UPS system operates with hazardous voltages. Repairs may be carried out only by qualified maintenance personnel.
- Caution -risk of electric shock. Even after the unit is disconnected from the mains (building wiring outlet), components inside the UPS system are still connected to the battery and electrically live and dangerous.
- Before carrying out any kind of service or maintenance, disconnect the batteries and verify that no current is present and no hazardous voltage exists in the terminals of high capability capacitor such as BUS-capacitors.
- Only persons are adequately familiar with batteries and with the required precautionary measures may replace batteries and supervise operations. Unauthorized persons must be kept well away from the batteries.

Caution -risk of electric shock. The battery circuit is not isolated from the input voltage.

Hazardous voltages may occur between the battery terminals and the ground. Before touching, please verify that no voltage is present!

- Batteries may cause electric shock and have a high short-circuit current. Please take the precautionary measures specified below and any other measures necessary when working with batteries:
 - a) Remove wristwatches, rings and other metal objects
 - b) Use only tools with insulated grips and handles.
 - c) Wear rubber gloves and boots.
 - d) Do not lay tools or metal parts on top of batteries.
 - e) Disconnect charging source and load prior to installing or maintaining the battery.
- When changing batteries, install the same number and same type of batteries.
- Do not attempt to dispose of batteries by burning them. This could cause battery explosion.
- Do not open or destroy batteries. Escaping electrolyte can cause injury to the skin and eyes.

It may be toxic.

- Please replace the fuse only with the same type and amperage in order to avoid fire hazards.
- Do not dismantle the UPS system.
- **WARNING:** This is a category C2 UPS product. In a residential environment, this product may cause radio interference, in which case the user may be required to take additional measures. (only for 220/230/240 VAC system)

Only for 110/120 VAC system:

- **NOTE:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
- **WARNING:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

when working on batteries:

- a) Remove watches, rings, or other metal objects.
- b) Use tools with insulated handles.
- c) Wear rubber gloves and boots.
- d) Do not lay tools or metal parts on top of batteries.
- e) Disconnect charging source and load prior to installing or maintaining the battery.
- f) Remove battery grounds during installation and maintenance to reduce likelihood of shock. Remove the connection from ground if any part of the battery is determined to be grounded.

EN 62040-2,C2:

WARNING: This is a category C2 UPS product. In a residential environment, this product may cause radio interference, in which case the user may be required to take additional measures.

FCC Notice: Class A

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

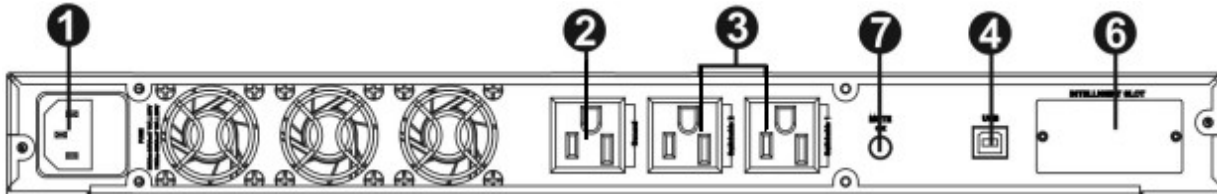
2. Installation and setup

NOTE: Before installation, please inspect the unit. Be sure that nothing inside the package is damaged. Please keep the original package in a safe place for future use.

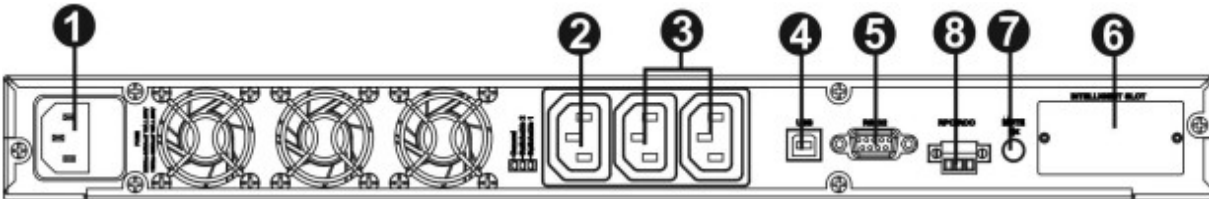
2-1. Rear panel view

J90-1000/J90i-1000/J90-1500/J90i-1500

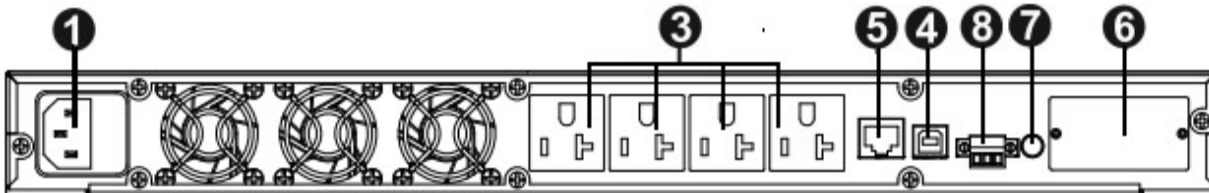
J90-1kLi



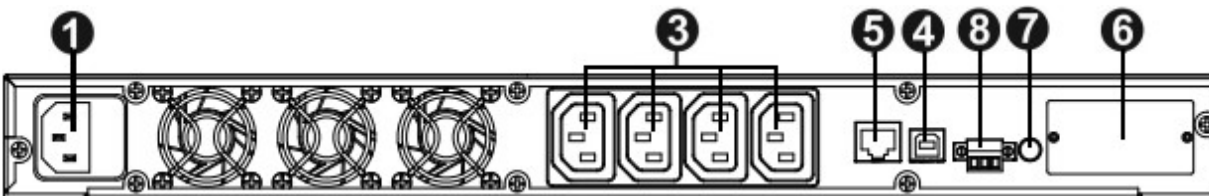
J90i-1kLi



J90-1.5kLi



J90i-1.5kLi



- 1 AC input
- 2 Output receptacle: connect to mission-critical loads.
- 3 Programmable outlets: connect to non-critical loads
- 4 USB serial communication port
- 5 RS232 communication port
- 6 SNMP intelligent slot
- 7 Mute button
- 8 ROO/RPO function connector

2-2. Setup the UPS

Step 1: UPS input connection

Plug the UPS into a two-pole, three-wire, grounded receptacle only. Avoid using extension cords.

Step 2: UPS output connection

There are two kinds of output receptacles: programmable outlets and general outlet. Please connect non-critical devices to the programmable outlets and critical devices to the general outlets. During power failure, you may extend the backup time to critical devices by setting shorter backup time for non-critical devices.

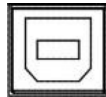
Step 3: Communication connection

Communication port:

RS232 port(DB9 or RJ45)



USB port

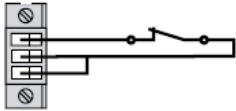


Intelligent slot



To allow for unattended UPS shutdown/start-up and status monitoring, connect the communication cable one end to the RS232/USB port and the other to the communication port of your PC. With the monitoring software installed, you can schedule UPS shutdown/start-up and monitor UPS status through PC.

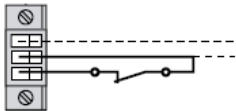
The UPS is equipped with intelligent slot perfect for SNMP card. When installing with SNMP card in the UPS, it will provide advanced communication and monitoring options.

Step 4: Disable/Enable ROO/RPO function**ROO**

Contact open: UPS shuts down.

Contact closed: UPS start-up (UPS is connected to AC power and AC power is available).

Note: The local ON/OFF control by pressing On/Off button overrides the remote-control function.

RPO

Contact open: UPS shuts down and Fault LED (3) will be ON. To return to normal operation, de-activate external remote contact (Fault LED (3) will be OFF) and restart the UPS by pressing button.

Step 5: Turn on/off the UPS

Press the ON/OFF button on the front panel for two seconds to power on the UPS.

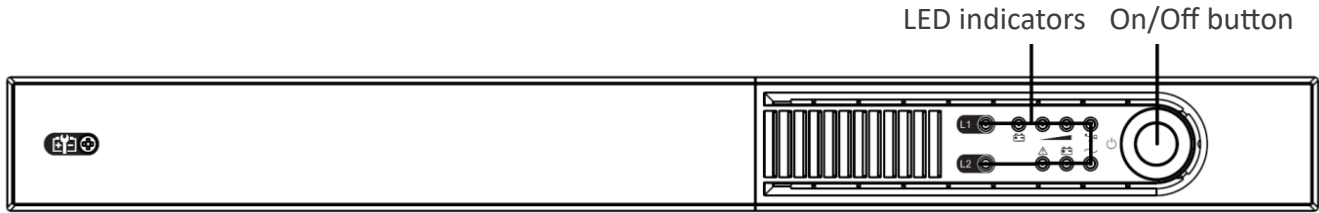
Step 6: Install software

For optimal computer system protection, install UPS monitoring software to fully configure UPS shutdown. You may insert provided CD into CD-ROM to install the monitoring software. If not, please follow steps below to download and install monitoring software from the internet:

1. Go to the website <http://www.power-software-download.com>
2. Click ViewPower software icon and then choose your required OS to download the software.
3. Follow the on-screen instructions to install the software.
4. When your computer restarts, the monitoring software will appear as an orange plug icon located in the system tray, near the clock.

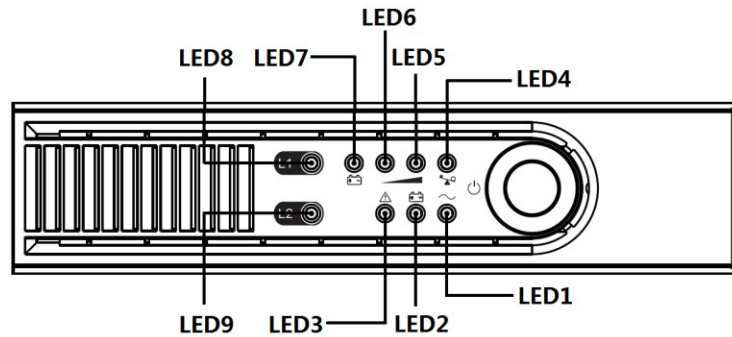
3. Operations

3-1. Button operation



Button	Function
ON/OFF Button	<ul style="list-style-type: none"> Turn on the UPS: Press and hold button for at least 2 seconds to turn on the UPS. Turn off the UPS: Press and hold this button at least 2 seconds to turn off the UPS. UPS will be in standby mode when utility power is normal or transfer to bypass mode if bypass mode is enabled via software.

3-2. LED Indicators



UPS Status	LED	Function	Lighting/Flashing
Line Mode	LED1	Green	Lighting
	LED4 to LED7 indicate load level during line mode. LED4: > 75% load level LED5: 50% ~ 75% load level LED6: 25% ~ 50% load level LED7: 0% ~25% load level	Green	Lighting
Battery Mode	LED2	Yellow	Flashing
	LED4 to LED7 indicate battery capacity during battery mode. LED4: battery voltage > 26V LED5: battery voltage > 24.5V LED6: battery voltage > 23V LED7: battery voltage > 21V	Green	Lighting

UPS Status	LED	Function	Lighting/Flashing
Low battery	LED7	Green	Lighting
	LED3	Red	Lighting
Battery replacement	LED3	Red	Flashing
Fault	LED3	Red	Lighting
On/off status of output receptacles	LED 8: indicating on/off status of general output receptacles (2) LED 9: indicating on/off status of programmable outlet (3)	Green	Lighting
Input too high	LED 8: indicate input voltage is too high	Red	Lighting
Battery too high	LED 9: indicate input voltage is too high	Red	Lighting

3-3. Audible Alarm

Battery Mode	Sounding every 4 seconds
Low Battery	Sounding every second
Overload	Sounding twice every second
Fault	Continuously sounding
Bypass Mode	Sounding ever 10 seconds

4. Troubleshooting

Symptom	Possible cause	Remedy
No indication and alarm even though the mains is normal.	The AC input power is not connected well.	Check if input power cord firmly connected to the mains.
	The AC input is connected to the UPS output.	Plug AC input power cord to AC input correctly.
The mains is normal but fault LED is flashing. The alarm is sounding every second.	The mains is normal but fault LED is flashing. The alarm is sounding every second.	Please re-connect battery wires with correct polarity.
The alarm is sounding twice every second and fault LED is flashing.	UPS is overload	Remove excess loads from UPS output.
	After repetitive overloads, the UPS is locked in the Bypass mode. Connected devices are fed directly by the mains.	Remove excess loads from UPS output first. Then, shut down the UPS and restart it.
The mains is normal. But the unit is on battery mode.	Battery is not fully charged.	Please charge battery at least 5 hours. If battery is still in low battery level, please contact local dealer.
	Battery defect.	Replace the battery with the same type of battery.
Fault LED is on and alarm is sounding continuously.	UPS fault.	Please contact local dealer directly.

5. Storage and Maintenance

Operation

The UPS system contains no user-serviceable parts. If the battery service life (3~5 years at 25°C ambient temperature) has been exceeded, the batteries must be replaced. In this case, please contact your dealer.



Be sure to deliver the spent battery to a recycling facility or ship it to your dealer in the replacement battery packing material.

Storage

Before storing, charge the UPS 5 hours. Store the UPS covered and upright in a cool, dry location. During storage, recharge the battery in accordance with the following table:

Storage Temperature	Recharge Frequency	Charging Duration
-25°C -50°C	Every 3 months	1-2 hours
50°C -55°C	Every 2 months	1-2 hours

Specifications

MODEL NUMBER		J90-1KLi	J90-1.5KLi
CAPACITY	Power rating	1000VA (800W)	1500VA (1350W)
INPUT	Voltage/frequency	120VAC +25/-33% / 50/60 Hz auto-sensing	
	Power factor	≤0.99 @ Nominal voltage (full load)	
OUTPUT	Voltage	110/120VAC	
	Waveform	Pure sine wave: ≤3% THD (linear load), ≤5% THD (non-linear load)	
	Frequency	50/60Hz ± 0.5Hz	
	Efficiency	Up to 98% ECO mode, 93% online mode	
	Overload capacity	≤ 130% for 2 min; ≤ 200% for 10 sec; >200% for 1 sec	
BATTERY	Battery type	Lithium-ion battery	
	Battery quantity & size	(1) 25.6V /6Ah	(1) 36V/ 6Ah
	Typical recharge	3.3 hours to 90%	
PHYSICAL	Dimensions (W x D x H)	17.2 x 18.8 x 1.7 in	17.2 x 20 x 1.7 in
	Weight	18 lbs	20 lbs
	Line cord	C14 inlet, 5ft 5-15P to C13 line cord	
	Receptacles	(3) 5-15R, two are switchable	(4) 5-15R, all are switchable
ENVIRONMENT	Operating temperature	32-104°F (0-40°C)	
	Altitude	11,500 ft above sea level	
APPROVALS		UN38.3 , UL, cUL, RoHS, FCC A (pending)	
WARRANTY		6 years electronics, 6 years battery warranty (USA and Canada)	
COMMUNICATIONS INTERFACE		EPO, intelligent slot for optional cards (Web/SNMP, Relay/dry contact, Modbus)	
INCLUDED IN BOX		ViewPower software, horizontal brackets, user manual	
AVAILABLE OPTIONS		Bypass distribution (XBDM), power distribution (XPDU), 4-post rail kit, 2-post shelf kit	

Rack depth is front bracket to unit panel. Add 1" for depth including front bezel.

MODEL NUMBER		J90i-1KLi	J90i-1.5KLi
CAPACITY	Power rating	1000VA (800W)	1500VA (1350W)
INPUT	Voltage/frequency	200/208/220/230/240VAC / 40-70Hz	
	Power factor	≤0.99 @ Nominal voltage (full load)	
OUTPUT	Voltage	200/208/220/230/240VAC	
	Waveform	Pure sine wave	
	Frequency	50/60Hz ± 0.5Hz	
	Efficiency	Up to 98% ECO mode, 93% online mode	
	Overload capacity	≤ 130% for 2 min; ≤ 200% for 10 sec; >200% for 1 sec	
BATTERY	Battery type	Lithium-ion battery	
	Battery quantity & size	(1) 25.6V/6Ah	(1) 36V/6Ah
	Typical recharge	3.3 hours to 90%	
PHYSICAL	Dimensions (W x D x H)	17.2 x 18.8 x 1.7 in	17.2 x 20 x 1.7 in
	Weight	18 lbs	20 lbs
	Line cord	C14 Inlet	
	Receptacles	(3) IEC C13 , two are switchable	(4) IEC C13, all are switchable
ENVIRONMENT	Operating temperature	32-104°F (0-40°C)	
	Altitude	11,500 ft above sea level	
APPROVALS		UN38.3, CE, RoHS (pending)	
WARRANTY		6 years electronics, 6 years battery warranty (USA and Canada)	
COMMUNICATIONS INTERFACE		EPO, intelligent slot for optional cards (Web/SNMP, Relay/dry contact, Modbus)	
INCLUDED IN BOX		ViewPower software, horizontal brackets, user manual	
AVAILABLE OPTIONS		Bypass distribution (XBDM), power distribution (XPDU), 4-post rail kit, 2-post shelf kit	

Rack depth is front bracket to unit panel. Add 1" for depth including front bezel.

Obtaining Service

If the UPS requires Service:

1. Use the TROUBLESHOOTING section in this manual to eliminate obvious causes.
2. Verify there are no circuit breakers tripped.
3. Call your dealer for assistance. If you cannot reach your dealer, or if they cannot resolve the problem, call Xtreme Power Conversion Corp Technical Support at 800.582.4524. Technical support inquiries can also be made at support@xpcc.com. Please have the following information available BEFORE calling the Technical Support Department:
 - Your name and address.
 - The serial number of the unit.
 - Where and when the unit was purchased.
 - All of the model information about your UPS.
 - Any information on the failure, including LED's that may or may not be illuminated.
 - A description of the protected equipment, including model numbers if possible.
 - A technician will ask you for the above information and, if possible, help solve your problem over the phone. In the event that the unit requires factory service, the technician will issue you a Return Material Authorization number (RMA).

If you are returning the UPS to Xtreme Power for service, please follow these procedures:

1. Pack the UPS in its original packaging. If the original packaging is no longer available, ask the Technical Support Technician about obtaining a replacement set of packaging material. It is important to pack the UPS properly in order to avoid damage in transit. Never use Styrofoam beads for a packing material.
2. Include a letter with your name, address, daytime phone number, RMA number, a copy of your original sales receipt, and a brief description of the problem.
3. Mark the RMA number on the outside of all packages. Xtreme Power cannot accept any package without the RMA number marked on the outside of the boxes.
4. Return the UPS by insured, prepaid carrier to the address provided by the Technician.
5. Refer to the Warranty statements in this manual for additional details on what is covered.

Xtreme Power Conversion Limited Warranty

Xtreme Power Conversion (XPC) Corporation warrants Xtreme Power Conversion equipment, when properly applied and operated within specified conditions, against faulty materials or workmanship for a period of **five years (USA & Canada) or three years (outside USA & Canada) for J90-Series products** from the date of purchase. XPC Corporation warrants **internal batteries for a period of five years** from the date of purchase. For equipment sites within the United States and Canada, this warranty covers repair or replacement, at the sole discretion of XPC Corporation. The customer is responsible for the costs of shipping the defective product to XPC Corporation. XPC Corporation will pay for ground shipment of the repaired or replacement product. For equipment outside the US & Canada, the warranty does not include shipping to and from XPC service depot. This warranty applies only to the original purchaser.

If equipment provided by XPC Corporation is found to be **Dead-on-Arrival (DOA)**, XPC Corporation will be responsible for the costs of shipping product to and returning equipment from the customer in a timely manner as agreed to with the customer, once the customer has requested and received a **Return Material Authorization (RMA)** number. DOA equipment is defined as equipment that does not properly function according to user documentation when initially received and connected in conjunction with proper procedures as shown in the user documentation or via support provided by XPC Corporation personnel or authorized agents.

This warranty shall be void if (a) the equipment is repaired or modified by anyone other than XPC Corporation or a XPC Corporation approved third party; (b) the equipment is damaged by the customer, is improperly used or stored, is subjected to an adverse operating environment, or is operated outside the limits of its electrical specifications; or (c) the equipment has been used or stored in a manner contrary to the equipment's operating manual, intended use or other written instructions. Any technical advice furnished by XPC Corporation or a XPC Corporation authorized representative before or after delivery with regard to the use or application of Xtreme Power Conversion equipment is furnished on the basis that it represents XPC Corporations best judgment under the situation and circumstances, but it is used at the recipient's sole risk.

EXCEPT AS STATED ABOVE, XPC Corporation DISCLAIMS ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

EXCEPT AS STATED ABOVE, IN NO EVENT WILL XPC Corporation BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF Xtreme Power Conversion EQUIPMENT, including but not limited to, any costs, lost profits or revenue, loss of equipment, loss of use of equipment, loss of software, loss of data, cost of substitutes, or claims by third parties. Purchaser's sole and exclusive remedy for breach of any warranty, expressed or implied, concerning Xtreme Power Conversion equipment, and the only obligation of XPC Corporation under this warranty, shall be the repair or replacement of defective equipment, components, or parts; or, at XPC Corporations sole discretion, refund of the purchase price or substitution of an equivalent replacement product.