



LN 400 / 600

**LINE INTERACTIVE KGK
LINE INTERACTIVE UPS**

USER MANUAL

CONTENTS

1. Introduction	1
2. Safety Caution	2
3. System description	3
4. Specification	4
5. Installation and operation	5
6. Battery	7
7. Trouble Shooting	8

LN UPS User's Manual

To insure safe installation and assure the best possible benefit from the product, please read this manual before installing and using your UPS.

1. Introduction

This UPS is specially designed for Personal Computer with multi-functions. Its light weight, compact design perfect fits to the limited working environment. The line of UPS is equipped with boost and buck AVR to stabilize input voltage range. It is also built-in with DC start function. This function enables the UPS to be started up without AC power supplied. Although it's a small UPS, it's equipped with Smart RS-232 Communication Port to offer users more benefits. The download software helps users monitor UPS inside status. The main features of LN UPS are listed below:

- Microprocessor control guarantees high reliability.
- Equipped with Boost and Buck AVR.
- Built-in RS-232 Communication Port.
- Free Software Download from the Internet.
(Please check **Free Software Download** in Installation & Operation for detail information).
- Green Power Function for energy saving.
- DC Start Function.
- Auto restart while AC recovery.
- Compact size, Light Weight.
- Provides Modem/Phoneline surge protection.

2. Safety – CAUTION!

- This UPS utilizes voltages that may be hazardous. Do not attempt to disassemble the unit. The unit contains no user serviceable parts. Only factory service personnel may perform repairs.
- Connection to any other type of receptacle other than a two-pole, three-wire grounding receptacle may result in a shock hazard as well as violate local electrical codes.
- In the event of an emergency, turn the power switch to the “off” position and disconnect the power cord from the AC power supply to properly disable the UPS
- Do not allow liquids or any foreign object to enter the UPS. Do not place beverages or any other liquid-containing vessels on or near the unit.
- Avoid installing the UPS in locations where there is standing or running water, or excessive humidity.
- Do not plug the UPS’ power cord into itself.
- Do not attach a power strip or surge suppressor to the UPS.
- Do not attach non-computer-related items, such as medical equipment, life-support equipment, microwave ovens, or vacuum cleaners to UPS
- To reduce the risk of overheating the UPS, do not cover the UPS’ cooling vents and avoid exposing the unit to direct sunlight or installing the unit near heat emitting appliances such as space heaters or furnaces.
- Unplug the UPS prior to cleaning and do not use liquid or spray detergent.
- Do not dispose of battery or batteries in a fire. The battery may explode.
- Do not open or mutilate the battery or batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.
- A battery can present a risk of electrical shock and high short circuit current. The following precautions should be observed when working on batteries :
 - 1) Remove watches, rings, or other metal objects.
 - 2) Use tools with insulated handles.
 - 3) Wear rubber gloves and boots.
- Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.
- When replacing batteries, replace with the same number of the sealed lead-acid batteries.

★Wichtige Sicherheitshinweise

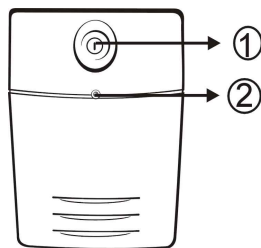
Bitte lesen Sie diese Hinweis sorgfältig durch.

- Vor jedem reinigen ist das Gerät vom Stromnetz zu trennen. Verwenden Sie keine Flüssig- oder Aerosolreiniger. Am besten eignet sich ein angefeuchtetes Tuch zur Reinigung.
- Das Gerät ist vor Feuchtigkeit zu schützen.
- Öffnen Sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von autorisiertem Servicepersonal geöffnet werden.
- Bei der Installation ist darauf zu achten, dass der Gesamtbleitstrom der USV und der an der USV angeschlossenen Verbraucher den Maximalwert von 3.5mA nicht überschreiten.
- VORSICHT: Explosionsgefahr bei unsachgemäßen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

3. System Description

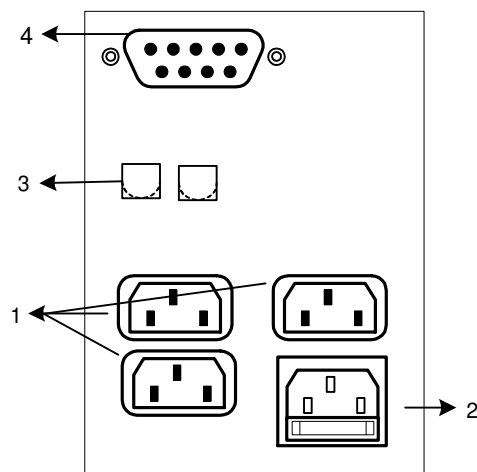
Front Panel

1. **Power Switch**
2. LED Indicators –
AC Mode: Green lighting
Battery Mode: Green flashing



Back Panel—

1. Output receptacles
2. AC input with AC fuse
3. Modem/Phoneline Surge Protection
4. Communication Port



4. Specification

MODEL		LN 400	LN 600
CAPACITY	VA/W	400VA/240W	600VA/360W
INPUT	VOLTAGE	220VAC	
	VOLTAGE RANGE	165-260VAC	
	FREQUENCY	47-63 Hz (Auto Sensing)	
OUTPUT	VOLTAGE	220VAC	
	VOLTAGE REGULATION (Batt. Mode)	+/-10%	
	FREQUENCY	50Hz or 60Hz	
	FREQUENCY REGULATION (Batt. Mode)	+/-1 Hz	
	OUTPUT WAVEFORM	MODIFIED WAVEFORM	
BATTERY	BATTERY TYPE & NUMBER	12V/7AH x 1pcs	12V/7AH x 1pc
	BACK UP TIME	10 MINUTES AT HALF LOAD	8 MINUTES AT HALF LOAD
	RECHARGE TIME	8 HOURS TO 90% AFTER COMPLETE DISCHARGE	
TRANSFER TIME	TYPICAL	LESS THAN 3MS	
INDICATOR	AC MODE	GREEN LIGHTING	
	BACKUP MODE	GREEN FLASHING	
AUDIBLE ALARM	BACKUP MODE	SOUNDING EVERY 10 SECONDS	
	BATTERY LOW	SOUNDING EVERY 1 SECOND	
	OVERLOAD	SOUNDING EVERY 0.5 SECONDS	
	FAULT	CONTINUOUS SOUNDING	
PROTECTION	FULL PROTECTION	DISCHARGE, OVERCHARGE, AND OVERLOAD PROTECTION	
PHYSICAL	DIMENSION (MM), DXWXH	330X100X140	
WEIGHT	NET WEIGHT	5KGS	6KGS
	OPERATING ENVIRONMENT	0- 40°C, 0-90 % RELATIVE HUMIDITY (NON-CONDENSING)	
ENVIRONMENT	NOISE LEVEL	LESS THAN 40dB	
INTERFACE	SMART RS-232	SUPPORT WINDOWS 95/98/NT/2000, NOVELL AND LINUX	

5. Installation and Operation

1. Inspection

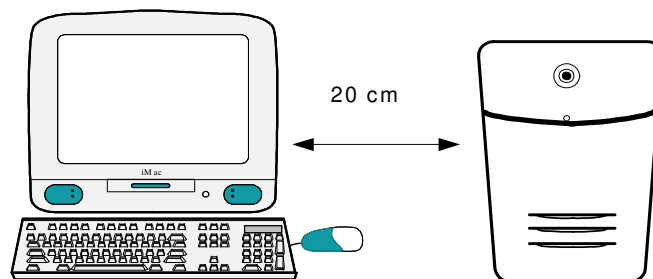
Remove the UPS from its packaging and inspect it for damage that may have occurred during shipping. If any damage is discovered, repack the unit and return it to the place of purchase.

2. Charging

This unit is shipped from the factory with its internal battery fully charged, however, some charge may be lost during shipping and the battery should be recharged prior to use. Plug the unit into an appropriate power supply and allow the UPS to charge fully by leaving it plugged in for at least 8 hours with no load (no electrical devices such as computers, monitors, etc.) connected.

3. Placement

Install the UPS unit in any protected environment that provides adequate airflow around the unit, and is 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. On the other hand, place the UPS away from the monitor at least 20cm to avoid interference.



4. Connection

Plug the UPS into a 2-pole, 3-wire grounded receptacle. Then connect one computer-related device into each of the power receptacles supplied on the back of the UPS.

5. Turn On/Off

To turn on the UPS unit, press the power switch lightly. To turn off the UPS unit, press the power switch again.

6. DC Start

All LN Series are equipped with DC Start. To start the UPS when AC utility power is not available, simply press the power switch.

7. Green Power Function

All LN UPS is equipped with Green Power Function. If no load connects to the UPS, it will automatically shut down in 2 minutes for energy saving while power failure.

8. Free Download Software – Commander Pro

- Go to Website <http://www.ups-software-download.com>
- Click Commander Pro Icon to enter software download area.
- Choose operating system you need for your computer and double click to download the software automatically.
- Type in Serial No: **511C1-01220-0100-478DF2A** to install the software.

Note: The Power Switch must be kept in the 'ON' position, otherwise, the UPS will be disabled and your equipment will not be protected during a power failure.

6. Battery

UPS has a battery that expected trickle life 3-5 years. The battery is stored without charging 3 Months and temperature above 40°C trickle life is shorter than expected. Store the battery after fully charging it otherwise its life may be shortened. Battery must be charged every three months.

Battery discharge time is changed load and charge level.

Caution

1. When replacing batteries, replace with the same number of the sealed lead-acid batteries.
2. The following precautions should be observed when working on batteries :
 1. A battery can present a risk of electrical shock and high short circuit current
 2. Do not short the battery terminals.
 3. Do not charge in a gas tight container.
 4. Do not dispose of battery or batteries in a fire.
 5. Flush with water at once if contact is made with electrolyte (acid)

Store

The Battery gradually loses its capacity due to self discharge during storage. If the battery is used without being charged, its capacity may not be fully utilized.

- The battery is not stored without charging.
- The stored Temperature of battery below 40°C
- The battery is charged every three months.

Trouble Shooting

Symptom	Possible Cause	Remedy
No LED display on the front panel.	1. Missing battery.	1. Charge battery up to 8 hours.
	2. Battery defect.	2. Replace with the same type of battery.
	3. Power switch is not pressed at least 5 seconds.	3. Press and Hold power switch for at least 5 seconds.
Alarm buzzer beeps continuously when AC supply is normal.	Overload of the UPS.	Verify that the load matches the UPS capability specified in the specs.
When power failure, back-up time is shorten.	1. Overload of the UPS.	1. Remove some noncritical load.
	2. Battery voltage is too low.	2. Charge battery 8 hours or more.
	3. Battery defect due to high temperature operation environment, or improper operation to battery.	3. Replace with the same type of battery.
Mains normal but LED is flashing.	1. Fuse is blown.	1. Replace the same type of fuse.
	2. Power cord is loose.	2. Reconnect the power cord properly.

AGKK2061 01/2012