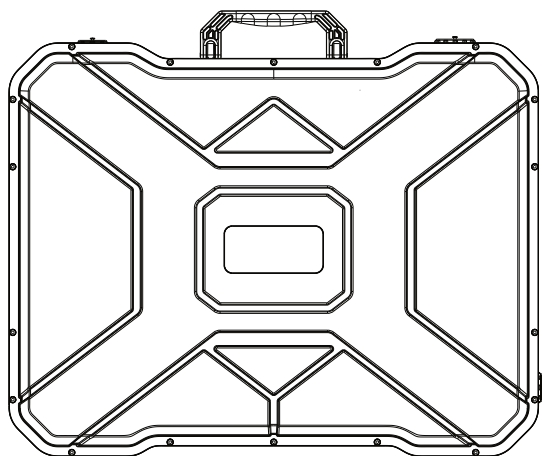


iMontek

X2000L



USER MANUAL

Welcome to the family!

We want to thank you for purchasing your new iMontek product! iMontek was established in 2014 & is proud to be recognized as a highly respected in-home and outdoor new energy technology supplier. We are one of the go-to brands for buyers looking for high-quality products at great prices.

iMontek solar generators alleviate energy shortages and provide electricity to countless households, reducing electricity bills.

Enjoy the perfect RV or camping experience with renewable power, supplied by iMontek for outdoor enthusiasts.

WARNING

This user manual contains instructions for safety, operation and maintenance. It's essential to read the entire user manual carefully before setup and use. Failure to read and follow instructions and warnings in this document may damage the product and personal property and cause serious injury.

This document and all other collateral documents are subject to change at the sole discretion of iMontek Inc. For more updates, please visit iMontek.com

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1. What's in the Box



iMontek X2000L



AC Charging Cable



Solar Charging Cable



Car Charging Cable



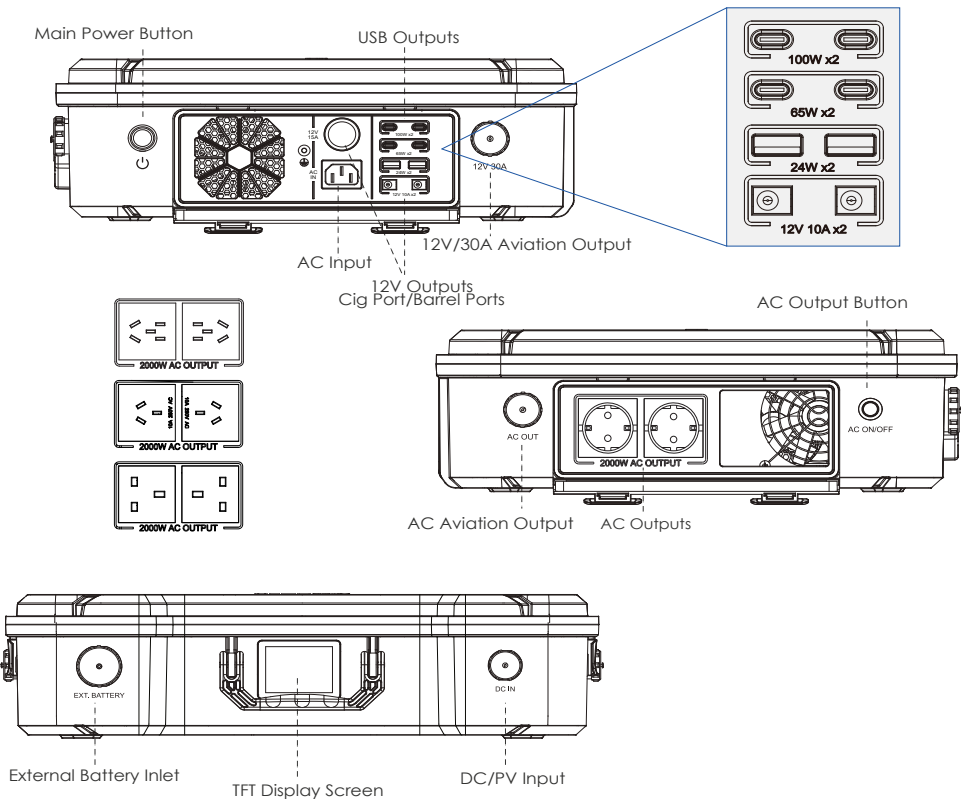
User Manual

2. Product Specifications

BATTERY INFO	
Model:	X2000L
Capacity:	37V 55Ah, 2035Wh
Cell Chemistry:	Prismatic NMC Cells
Lifecycle:	2000 cycles to 80%+ capacity (at 1C/1C)
Management System:	Overcharge Protection, Over Discharge Protection, Overload Protection, Short Circuit Protection, Over Current Protection, High Temperature Protection. Over Voltage Protection
OUTPUT	
AC Output (×3):	220/230/240V 50/60Hz, Total 2000W (Surge 4000W)
UPS Function:	2000W continuous <10ms switch-over time
USB-A Output (×2):	QuickCharge 3.0, 24W Max
USB-C Output (×2):	100W Max (5V, 9V, 12V, 15V, 20V up to 5A)
USB-C Output (×2):	65W Max (5V, 9V, 12V, 15V, 20V up to 3.25A)
DC5521 Output (×2):	13.8V 10A Max, Regulated
Car Port (x1):	13.8V 15A Max, Regulated
Aviation Port (x1):	13.8V 30A Max, Regulated
INPUT	
AC Input:	200-240V 50/60Hz, 1500W Max
PV/DC Input:	12-150V 20A Max, 900W Max
GENERAL	
Weight:	39.6lbs(18kg)
Dimensions:	20.2in x 15.7in x 5.2in (512mm x 400mm x 132mm)
Charging Temperature:	32°F -104°F (0°C - 40°C)
Discharge temperature:	-4°F -104°F (-20°C - 40°C)
Optimal Storage Temperature:	59°F - 95°F (15°C-35°C)
Certification:	CE, FCC
Warranty:	5 years
Optional Accessory:	200W/400W Solar Panel, B2000L
APP Control:	Yes

3. Start Guides for Users

3.1 Details of X2000L

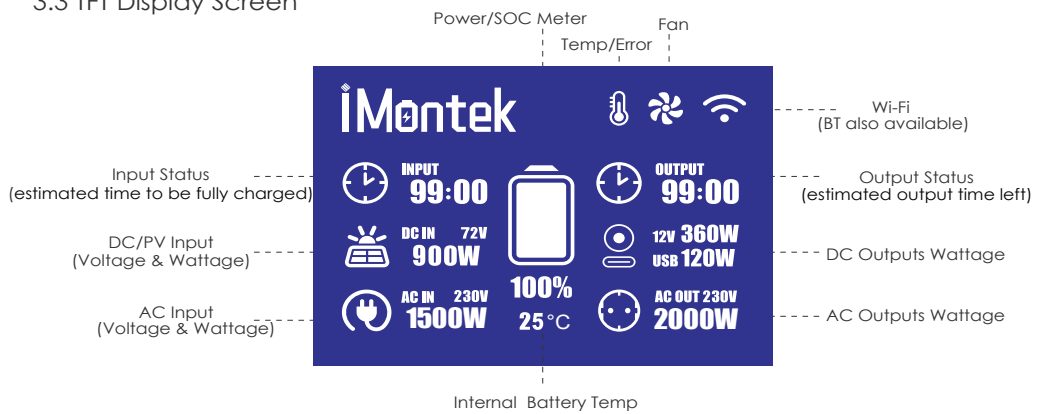


3.2 Quick Start Guide

1. Long press the main power button to turn on or turn off the TFT Display screen.
2. With the power button turned on, short press the AC button to turn on/off inverter for AC outputs.

Please note: DC outputs are enabled whenever the main power button is turned on by default. However, On/Off control for both the AC & DC outputs can be configured within the app or through the device settings interface.

3.3 TFT Display Screen



ICON	Description
Input Status	Indicates that the X2000L is charging. This is an estimated time for the unit to fully reach 100% SOC
DC/PV Input	Indicates the wattage and voltage of the DC/PV Input source. The X2000L is being charged with a solar panel or a car.
AC Input	Indicates the wattage and voltage of the AC Input source. The X2000L is being charged by grid power.
Power/SOC Meter	Indicates overall state of charge of the X2000L with icon and shows battery percentage.
Temp/Error Icon	Indicates that unit is outside its intended temperature zone.
Wi-Fi/BT connection status	Indicates unit is successfully paired via Wi-Fi or BT for mobile app control.
Output Status	Indicates that the X2000L is discharging. This is an estimated time for the unit to fully be depleted.
DC Output Status	Indicates the wattage of the different DC outputs.
AC Output Status	Indicates the wattage of the AC outputs.

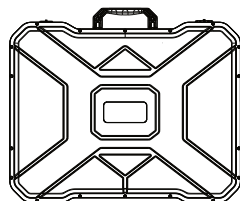
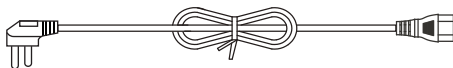
3.4 Multiple Recharging Methods

Before use or storage, plug your X2000L into the wall until it is fully charged. If the display shows less than 20% capacity, it is recommended to plug unit into a power source, like an AC outlet or solar panel as soon as possible. There are many ways to recharge your X2000L:

Wall Charging	Solar Panels	Car Charging	AC & Solar
About 1.6 Hours	About 2.5 Hours	About 20 Hours	About 1 Hour

WALL CHARGING:

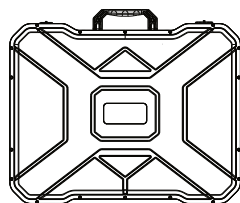
Our bi-directional technology enables the X2000L to get 1500W Max from a wall outlet, with a charging efficiency of up to 90%. That means the X2000L can charge from 0% to 80% in just 1.2 hours. And as an added bonus, you can fully control the AC charging rate from 0W to 1500W through the device setting interface or app.



120W CAR CHARGING:

Connect the included car charging cable to your car's cig outlet and charge through the DC IN port at 12V/10A.

NOTE: Verify proper amperage prior to use, and recommended to use with running vehicle.

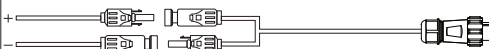
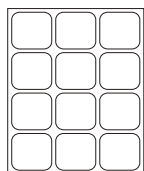


SOLAR PANEL CHARGING:

With a MPPT solar charge controller of 12-150V 20A, the X2000L has a 900W Max solar charging ability.

For example, connecting three iMontek SP400 solar panels in series can achieve a maximum of 1200W. The X2000L can utilize a wide range of solar panels, including large residential panels. Do not exceed a VOC of 150V. It takes only 2.5 hours to fully charge the X2000L under strong sunlight. Use the kickstand to change the panel angle toward the sun for maximum power.

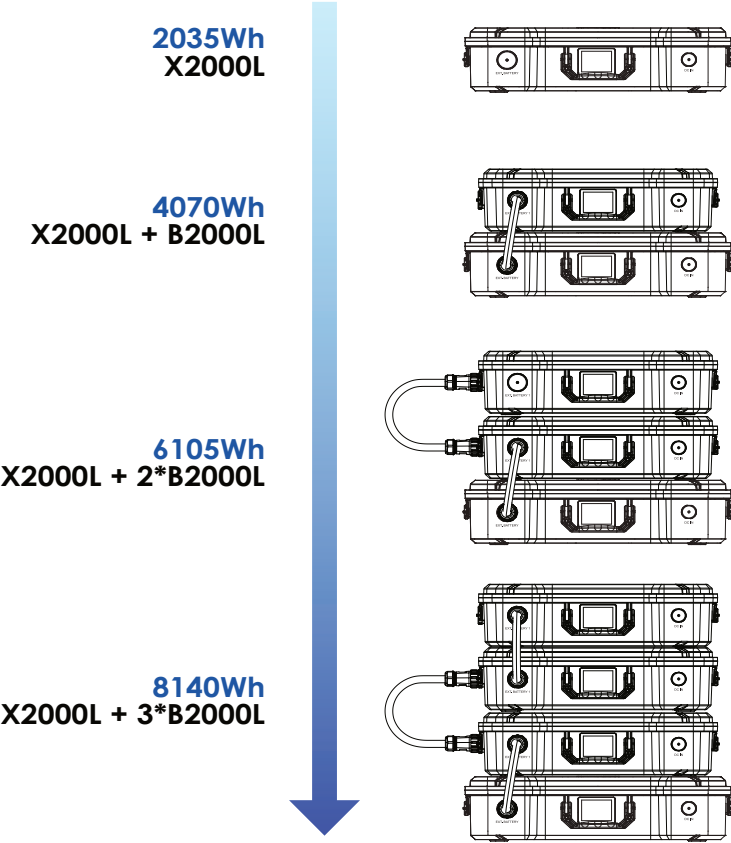
Compared with other solar panels, the solar light harvesting surface of our SP400 provides more power, with a performance conversion efficiency rate up to 23%. Monocrystalline silicon solar cells achieve the best energy conversion.



NOTE:
For X2000L, there is an input protection for short circuit inside and it is enabled automatically. If you experience issue with charging, unplug input, shut down unit, wait 60 seconds, and try again. It should reset & turn back on automatically.

3.5 Expanding your System

One iMontek X2000L can be connected to up to 3x B2000L NMC expansion units to increase your capacity up to 8140Wh



3.5 Usage of expansion

One iMontek X2000L can be connected to up to three B2000L Extra Batteries at the same time. In the off state, connect the expansion ports of X2000L and B2000L Extra Battery with the expansion cable. You have now successfully expanded your available capacity up to 8140Wh.

Please note:

- 1) When connecting or disconnecting the X2000L and B2000L Extra Battery, always turn them off first.
- 2) Do not touch the expansion ports of X2000L and B2000L Extra Battery.
- 3) Never connect the 30 amp DC output of one unit to the input of another unit while two or more units are connected together by the main battery connection cable.

3.6 Accessing Settings Menu

- 1) Make sure the Main button is OFF.
- 2) Connect the AC charging cord.
- 3) When the display lights up, long press the AC button for 10 seconds.
- 4) Press the AC button 1-2 seconds to scroll thru the highlighted lines, and then quick press the AC button to set the value or status.
- 5) Unplug the AC charging cord; the display will time out in about 20 seconds.

NOTE: WIFI/BT can also be turned off/on manually within the unit settings interface; Turn on the main button, then quick press to turn off, then turn on. Do this twice to allow the unit to be re-bound to the app.

3.7 Use of APP



You can view energy forecasting, state monitoring and estimation, and anomaly detection via the App. For more details, please scan the above QR code and download it on the App Store or Google Play.

3.8 Uninterruptible Power Supply (UPS)

This power generator supports a $\leq 10\text{ms}$ UPS function. When connected to the wall outlet, in UPS mode, if the load power is below 1700W, there will be AC Charging and AC Power from the wall outlet. If the load power is 1800W-1900W, there is only AC power from wall outlet, no AC charging. If the load power is over 1900W, the unit will shut down UPS mode, the inverter will kick in and provide power, no AC charging.

Please Note:

- 1) This function does not support 0ms switching. Therefore, it is not recommended to be used as a UPS for highly sensitive equipment, such as data servers and workstations without confirming compatibility or proper testing before use. It is also recommend to only use the UPS function for one device at a time to avoid overload protection. iMontek assumes no responsibility and is therefore not liable for data loss or damage caused by the use of this product in setups that it was not intended for and the disregard of this recommendation
- 2) iMontek's recommended UPS settings: $<2000\text{W}$.

3.9 Safety Guidelines

- 1. DO NOT immerse the product in water or get it wet.
- 2. DO NOT put the product near heat sources, such as a fire or heater, while using or storing.
- 3. DO NOT pierce the product casing with a nail or other sharp object, use a hammer to break it open, or step on it.
- 4. DO NOT let the product make contact with corrosive objects.
- 5. DO NOT attempt to disassemble this product in any way.
- 6. DO NOT forcibly lock the fan during use or place the product in an unventilated or dusty area.
- 7. DO NOT clean the product with water directly. Instead, use a dry cloth to gently clean it.
- 8. DO NOT replace any components of the product without any official iMontek permissions.
- 9. Please contact the official iMontek channels to get more information if you want to replace any components.
- 10. DO NOT dispose of the battery directly in a battery recycling box. You should contact a professional recycling company for further processing.
- 11. DO NOT put the product in an area where children or pets can reach.

4. How to Store or Use

- 1. For long-term storage (more than 3 months), the battery needs to be maintained at 50% of the rated capacity (recharged once every 3 months), stored in a dry and cool place and kept away from fire, heat sources, and corrosive substances. Unit consumes <6% per month even in "off" setting.
- 2. Recommended to cycle battery every month.
- 3. To extend the life of the product, it's better to recharge the product before the power drops to 20%.
- 4. The operating temperature of the iMontek power station is -4°F -104°F (-20°C - 40°C), and the storing temperature is 59°F - 95°F (15°C - 35°C)

5. Settings Menu and Functions

Setup	
AC Auto OFF: Never	
DC Auto OFF: Never	
AC Frequency: 60Hz	
LCD Brightness: 100%	
Low Power Remind: 10%	
Car Input Max: 8A	
AC Charging Max: 1500W	
Max SOC: 100%	
Min SOC: 0%	
AC Always On: Never	
DC Always On: Never	
PV/AC Priority: 100%	
Temperature: °F	
Beep: ON	
WiFi/BT: ON	
Cycles: 1	
Health: 100%	

WiFi/BT:
This option allows the user to be able to turn ON/OFF the WiFi/BT function.
(NOTE: If turned "OFF", app control is lost until re-enabled.)

AC Auto OFF:
This option will turn off the AC output if you have used less than 10 watts for the number of hours set here.

DC Auto OFF:
This option will turn off the DC output if you have used less than 5 watts for the number of hours set here.

Low Power Remind:
Set the percentage state of charge at which a reminder pop-up will alert you the battery charge is low.

Car Input:

Set the max amperage based on your usage and the vehicle's specifications.

AC Charging Rate:

Set the maximum number of watts that will be used for AC charging. Temperature or battery state can cause slower charging.

MAX SOC:

Set the maximum percent state of charge you would like, eg. 80%

MIN SOC:

Set the minimum percent state of charge you would like, eg. 20%

AC Always On:

If the unit is connected to a DC power source, such as solar, when the battery capacity is over the set percentage, then AC power button will be turned on automatically. When set to Never, you will need to turn on the AC power button manually. If the unit is connected to an AC power source and any percentage is set, then the AC power button will be turned on automatically after AC grid power is restored. If this is set to Never, you will need to turn on the AC power button manually.

DC Always On:

If the unit is connected to a DC power source, such as solar, when the battery capacity is over the set percentage, then DC power button will be turned on automatically. When set to Never, you will need to turn on the DC power button manually or within the app. If the unit is connected to an AC power source and any percentage is set, then the DC power button will be turned on automatically after AC grid power is restored. If this is set to Never, you will need to turn on the DC power button manually or within the app.

PV/AC Priority:

If the battery capacity is above the setting percentage here, the input power will be from solar charging only even though AC charging and solar charging are both available. If the battery capacity is below the setting percentage, the input power will be mainly from AC charging, and part from solar charging. If AC charging and solar charging are both available, dual charging total input power will not exceed the battery limit.

UPS function (<10ms):

- For optimal UPS function, keep the AC output load below 1,440 watts.

- When in UPS mode and connected to an AC source, AC charging will occur if the output load is less than 1700W.
- When the output load is 1700W-1900W, there is only AC power from wall outlet and no AC charging will occur.
- When the output load exceeds 1900W, the unit will shut off UPS mode, the AC inverter will supply output power and no AC charging will occur.

6. Frequently Asked Questions

What is the material of case?

- It is PC+ABS.

What are the battery capacity and battery chemistry?

- X2000L is 37V 55Ah, 2035Wh, Prismatic battery cell.

What is the battery life cycle?

- X2000L is 2000 cycles at 1C/1C to 80%. (1C rate means full discharge or charge in 1 hour)

What is the rated power and surge power?

- Rated power is 2000W, continuous 2400W maximum, surge power 4000W within 1 second.

Is the solar charge controller MPPT?

- Yes, X2000L has a built-in MPPT solar charge controller. Solar input parameters are 12-150V 20A 900W MAX.

Is the DC 12V output regulated?

- Yes, regulated at 13.8V 10-30A Max.

Is the USB-C output bi-directional?

- No. USB-C is only for output.

Could I charge and discharge this unit simultaneously?

- Yes, it supports pass through function for AC and DC outputs, NOTE: Do not connect the 30 amp DC output of one unit to the input of another unit while two or more units are connected together by the main battery connection cable.

Does it have UPS function?

- Yes, The X2000L has UPS functions that react within 10ms. The B2000L extra batteries do not have AC outputs, so a UPS function is not directly available on those units when in a standalone mode.

How many external batteries could I link to X2000L Max.?

- You could add three B2000L to X2000L.

How long does it take to charge X2000L by AC charging?

- It takes 1.6 hours to fully charge X2000L.

How long does it take to charge X2000L by solar charging?

- There are a lot of factors affecting solar charging time. For example, if you use 3x400W iMontek solar panels (1200W), under great sunlight, it takes about 2.5 hours to charge X2000L, assuming you get 900W from the solar panel.

How long does it take to charge X2000L by car outlet?

- Car charging is about 12V 10A, it takes about 20 hours to fully charge X2000L. So car charging is for emergency, solar charging and AC charging are recommended.

Could I recharge X2000L by solar charging and AC charging simultaneously?

- Yes, But total power can not exceed 2400W for X2000L. If you use dual charging, it takes 1 hour to charge X2000L.

Could I recharge X2000L by solar charging and car charging simultaneously.

- No, solar charging and car charging are using the same port--DC IN.

What kind of solar panel should I choose?

- As the input voltage range is 12-150V, it is compatible with most solar panels. Folding solar panels are typically used in portable outdoor/camping use-cases, not designed for long term stationary use. If you plan to use them often and in permanently mounted arrays, It might be better for you to choose rigid glass solar panels.

Could I use third party solar panels?

- Yes, just make sure the solar panel has attached MC4 connectors, and that the solar array is within spec. 12-150V 20A Max for X2000L.

What is the noise level?

- It has smart fan start-up mode. Fans turn on/off based on the internal temperature and the loads. Max. noise is about 45dB at 1m.

What is the length of charging cables?

- MC4 solar charging cable, car charger cable, AC charging cable are 5ft (1.5m). External battery connection cable is 1.5ft (0.45m).

How frequently do I need to charge or discharge the unit?

- It is recommended to charge and discharge the unit at least once every 3-4 months.

What is the idle power loss of the unit?

- If main power button is on, DC is enabled & consumes 2.5W. If AC inverter is enabled, unit consumes 20W idle consumption.

(NOTE: If unit is being stored or not in use, its recommended to completely power off the unit.)

What is the warranty period?

- The warranty period for power station is five years. The warranty for solar panels is one year.

Can I connect two X2000L together through battery expansion port?

- Yes, when you connect two X2000L through the battery expansion port, the battery capacity is doubled, and the AC output would be 2*2000W, you still get 2000W from each unit. NOTE: When doing this, you can not connect extra batteries then.

If you are experiencing issues, please contact us at support@imontek.com
And for additional information, check our official website: www.iMontek.com

7. FCC Caution

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off

and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and

operated with a minimum distance of 20 cm between the radiator and your body.

8. UL2743 Caution

Within the iMontek unit, when using a photovoltaic panel as an input for charging the internal battery, an inverter and/or a charge controller is included in accordance with UL 1741 or UL 62109-1; The external power supply shall be a power source in accordance with the Standard UL 60950-1 and CAN/CSA C22.2 No. 60950-1, or UL 1310 and No. 1, CAN/CSA C22.2 No. 223, or No.1, CAN/CSA C22.2 No. 223; A vehicle adapter that complies with the enclosure and input contacts requirements in the Standard for Vehicle Battery Adapters, UL 2089, and Power Supplies, CAN/CSA C22.2 No. 107.1. The connector plug shall incorporate a fuse or other protective device having a current rating not greater than 15A.

INSTRUCTIONS PERTAINING TO RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

8.1 IMPORTANT SAFETY INSTRUCTIONS

WARNING – When using this product, basic precautions should always be followed, including the following:

1. Read all the instructions before using the product.
2. To reduce the risk of injury, close supervision is necessary when the product is used near children.
3. Do not put fingers or hands into the product.
4. Use of an attachment not recommended or sold by power pack manufacturer may result in a risk of fire, electric shock, or injury to persons.
5. To reduce risk of damage to the electric plug and cord, pull the plug rather than the cord when disconnecting the power pack.
6. Do not use a battery pack or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
7. Do not operate the power pack with a damaged cord or plug, or a damaged output cable.
8. Do not disassemble the power pack, take it to a qualified service person when service or repair is required. Incorrect reassembly may result in a risk of fire or electric shock.
9. To reduce the risk of electric shock, unplug the power pack from the outlet before attempting any instructed servicing.
10. **WARNING – RISK OF EXPLOSIVE GASES.**
To reduce risk of battery explosion, follow these instructions and those published by battery manufacturer and manufacturer of any equipment you intend to use in vicinity of the battery. Review cautionary marking on these products.
11. **PERSONAL PRECAUTIONS**
 - A) Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes.
 - B) Wear complete eye protection and clothing protection. Avoid touching eyes while working near battery.
 - C) If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye with running cold water for at least 10 minutes and get medical attention immediately.
 - D) NEVER smoke or allow a spark or flame in vicinity of battery or engine.
 - E) Be extra cautious to reduce risk of dropping a metal tool onto battery. It might spark or short-circuit battery or other electrical part that may cause explosion.
12. When charging the internal battery, work in a well ventilated area and do not restrict ventilation in any way.
13. Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
14. Do not expose a power pack to fire or excessive temperature. Exposure to fire or temperature above 130°C may cause explosion. The temperature of 130°C can be replaced by the temperature of 265°F.
15. Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.

SAVE THESE INSTRUCTIONS

9. Warranty Info

Your iMontek purchase of the X2000L is covered by 6 year warranty.

Thank you for choosing iMontek.

Please read the terms and conditions and visit <https://www.imontek.com/pages/warranty-return> if you have any issues.

The warranty period starts from the date of product receipt.

Item	Warranty Period
Main Unit (including batteries)	60 Months
Solar Panel	12 Months
Accessories (adapter/cables/others)	12 Months

9.1 Exclusions and Limitations

Not covered under warranty:

- Products that are damaged or modified.
- Product operated with a damaged cord, plug, or output cable.
- Products that are disassembled.
- Products cleaned with harmful chemicals or detergents.
- Non-quality related issues (after 30 days of purchase).
- Products purchased from unauthorized resellers.
- Products without sufficient proof of purchase.
- Products that have been refunded.
- Products with an expired warranty.
- Lost, stolen products.
- Damage from outside sources.
- Damage from misuse of products (including, but not limited to falls, use of the product in excess of its output rating, exposure of the product to rain or snow, extremely low air pressure, extreme temperatures, water, operating devices improperly).
- Purchases from illegitimate resources.

Shipping costs must be covered by buyer in the following situations:

- Returning products for any reason other than a proven defect.
- Warranty claims on items taken outside the original country of purchase.
- Buyer's accidental returns.
- Returning personal items.
- Returning items claimed to have defects but found by iMontek quality control to be in working condition.
- Returning defective items in international shipping.
- Costs associated with unauthorized returns (any returns made outside of the approved warranty process).



Batteries or battery packs must be recycled or disposed of properly. When this product has reached the end of its useful life, it should not be disposed of with other household waste. The Waste Electrical and Electronic Equipment Regulations require it to be separately collected so that it can be treated using the best available recovery and recycling techniques. This will minimize the impact on the environment and human health from soil and water contamination by any hazardous substances, decrease the resources required to make new products and avoid using up landfill space. Please do your part by keeping this product out of the municipal waste stream! The "wheelie bin" symbol means that it should be collected as "waste electrical and electronic equipment". You can return an old product to your retailer when you buy a similar new one. For other options, please contact your local council.



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