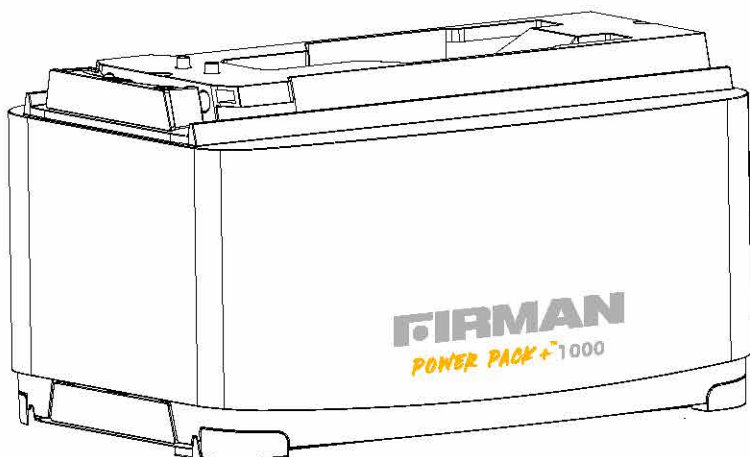


# FIRMAN<sup>®</sup>

## OPERATOR'S MANUAL POWER PACK +1000



**FIRMAN**  
POWER PACK +1000



MODEL NUMBER  
**B104201**

Record Power Pack +1000 information to reference when ordering parts or obtaining warranty coverage.



SERIAL NUMBER: \_\_\_\_\_

PURCHASE DATE: \_\_\_\_\_

**Supplier's Declaration of Conformity**  
**47 CFR § 2.1077 Compliance Information**

FIRMAN POWER PACK +1000 B104201  
FIRMAN POWER EQUIPMENT  
8644 W. Ludlow Dr.  
Peoria, AZ 85381  
Telephone: 1-844-347-6261  
[www.firmanpowerequipment.com](http://www.firmanpowerequipment.com)

**FCC/IC Compliance Statement**

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

1a. This device may not cause harmful interference.

1b. This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the Power Pack +1000 .

**NOTE:** The FIRMAN Power Pack +1000 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 Power Pack +1000 generates, uses and can radiate radio frequency energy and, if not 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 does cause harmful interference to radio or television reception, which can be determined by turning the Power Pack +1000 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 Power Pack +1000 and receiver.
- Connect the Power Pack +1000 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/IC RADIATION EXPOSURE STATEMENT**

This Power Pack +1000 complies with FCC radiation exposure limits set forth for an uncontrolled environment.

Operate the Power Pack +1000 at least 8" (20cm) away from any person.

**KEEP YOUR BOX!**  
**RETURNS CANNOT BE ACCEPTED WITHOUT**  
**YOUR ORIGINAL CARTON.**

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### REGISTER YOUR PRODUCT

Register your product using the QR code provided or at  
[www.firmanpowerequipment.com](http://www.firmanpowerequipment.com).



## INTRODUCTION

Thank you for purchasing FIRMAN Power Pack +1000 . You have selected a high-quality, precision engineered Power Pack designed and tested to give you years of satisfactory service.




This manual contains safety information to make you aware of the hazards and risks associated with the Power Pack +1000 and how to avoid them. It is important that you read and understand these instructions thoroughly before attempting to use this Power Pack +1000. Save these original instructions for future reference.

All information in this publication is based on the latest production information available . The manufacturer reserves the right to change, alter or otherwise improve the Power Pack +1000 and this documentation at any time without prior notice.

**WARNING:** This product can expose you to chemicals including lead, which are known to the state of California to cause cancer or cause birth defects and other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# IMPORTANT SAFETY INSTRUCTIONS

## SIGNAL WORDS

 <b>DANGER</b>	 <b>WARNING</b>	 <b>CAUTION</b>	<b>NOTICE</b>
Indicates a hazard which, if not avoided, will result in death or serious injury.	Indicates a hazard which, if not avoided, could result in death or serious injury.	Indicates a hazard which, if not avoided, could result in minor or moderate injury.	Indicates information considered Important, but not hazard-related.



Safety Alert Symbol- Indicates a potential personal injury hazard.



Operator's Manual- Failure to follow warnings, instructions and operator's manual could result in death or serious injury.



Power Pack +1000 could cause electrical shock resulting in death or serious injury.



Power Pack +1000 could cause burns or fire resulting in death or serious injury.

# IMPORTANT SAFETY INSTRUCTIONS

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**WARNING!** - When using this Power Pack +1000 , basic precautions should always be followed, including the following:

- a) Read all the instructions before using the Power Pack +1000 .
- b) This Power Pack +1000 is intended to be used indoors only. Do not use outdoors.
- c) Keep out of reach of children.
- d) Do not put fingers or hands into the Power Pack +1000 .
- e) Use of an attachment not recommended or sold by FIRMAN could result in fire, electric shock, or injury.
- f) To reduce risk of damage to the electric plug and cord, pull the plug rather than the cord when disconnecting the Power Pack +1000 .
- g) Do not use a Power Pack +1000 or appliance that is damaged or modified.  
Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion, or risk of injury.
- h) Do not operate the Power Pack +1000 with damaged cords, plugs, or cables.
- i) Do not disassemble the Power Pack +1000 , take it to a qualified service person if service is required. Incorrect service could result in fire, electric shock, or injury. Service only with identical replacement parts.
- j) To reduce the risk of electric shock, unplug the Power Pack +1000 prior to servicing.
- k) Charge Power Pack +1000 in a well ventilated area and do not restrict ventilation in any way.
- l) Do not expose a Power Pack +1000 to fire or excessive temperature.  
Exposure to fire or temperature above 265°F (130°C) could cause fire or explosion.
- m) DO NOT operate in a humid environment, e.g., bathroom and rain.
- n) DO NOT insert foreign objects into the output and ventilation holes.
- o) DO NOT puncture the Power Pack +1000 with sharp objects. Doing so could result in fire or explosion.
- p) DO NOT install or remove any Power Packs modules when the Power Pack +1000 is turned on.
- q) DO NOT dispose Portable Power Station or Power Pack +1000 with domestic 'regular' waste, consult your local laws and regulations on battery recycling.
- r) DO NOT smoke, strike a match, or cause a spark in the vicinity of the Power Pack + 1000.
- s) DO NOT use the Power Pack +1000 when the input voltage exceeds the preset threshold.  
See Troubleshooting - Specifications for more information.
- t) DO NOT flip the Power Pack + 1000 upside down. If Power Pack + 1000 is overturned and damaged, turn it off, place the Power Pack + 1000 in an open area away from combustibles and people. Dispose of Power Pack +1000 Portable Power Station in accordance with local laws and regulations.

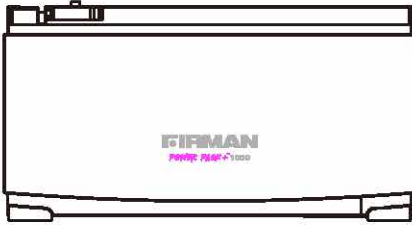
## NOTICE

- Charge the Power Pack +1000 within an ambient temperature of 32-104°F (0 - 40°C) and a relative humidity of 0 - 65%.
- Make sure the Power Pack +1000 is properly secured when transporting.
- Avoid exposing the Power Pack +1000 to excessive shock or vibration.
- If any unusual smell, overheating, or abnormal performance issues occur, stop using the Power Pack +1000 immediately and contact FIRMAN customer service.
- Exceeding wattage/ampere capacity could damage the Power Pack +1000 and/or electrical devices.
- This Power Pack +1000 is not intended for use in a commercial repair facility.

# WHAT'S IN THE BOX

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## What's In The Box



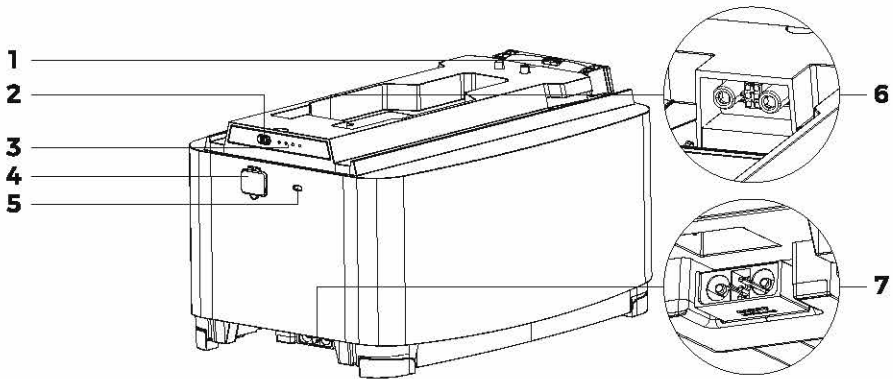
**Power Pack +1000**



**Operator's Manual**



**Quick Reference Guide**



### 1. Telescopic Handle

Push the PRESS button to pull out telescopic handle for moving and handling the Power Pack +1000 .

### 2. Power Button

The Power Button has the following two functions only when it is not connected to the ZERO E Portable Power Station (stand-alone status).

- A. In stand-alone status, long press the Power Button to turn ON/OFF the Power Pack +1000 , and the USB-C Port output will be subsequently ACTIVATED/DEACTIVATED.
- B. In stand-alone status, press the Power Button to switch ON the Battery Gauge Indicator.

### 3. Battery Gauge Indicator

Indicate the Power Pack +1000 state of charge (SoC%).

### 4. AC/DC(XT60 Port)

Dedicated port for charging the Power Pack +1000 in stand-alone status with optional charging cables, including an AC/DC Charger and a Maximum Power Point Tracking (MPPT) Solar Charger (purchased separately).

### 5. USB-C Port (In/Out)

It can be used for:

- A. charging other devices that supports USB Type-C;
- B. charging the Power Pack +1000 from other power devices that support USB Type-C, e.g., USB-C Charger. Please note that the power device's output needs to be more than 30W to start the charging process.

### 6. Expansion Port (Top)

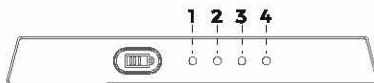
Used for connecting to the ZERO E Portable Power Station or another Power Pack +1000.

### 7. Expansion Port (Bottom)

Used for connecting to another Power Pack +1000 .

# FEATURES

## Battery Level Indicator



STATUS	LED 1	LED 2	LED 3	LED 4
ERROR	●	●	●	●
OUT OF BATTERY	★	●	●	●
< 25%	◎	●	●	●
25% - 50%	◎	◎	●	●
51% - 75%	◎	◎	◎	●
76% - FULL	◎	◎	◎	◎

● RED

◎ WHITE

★ WHITE FLASHING

● DIMMED

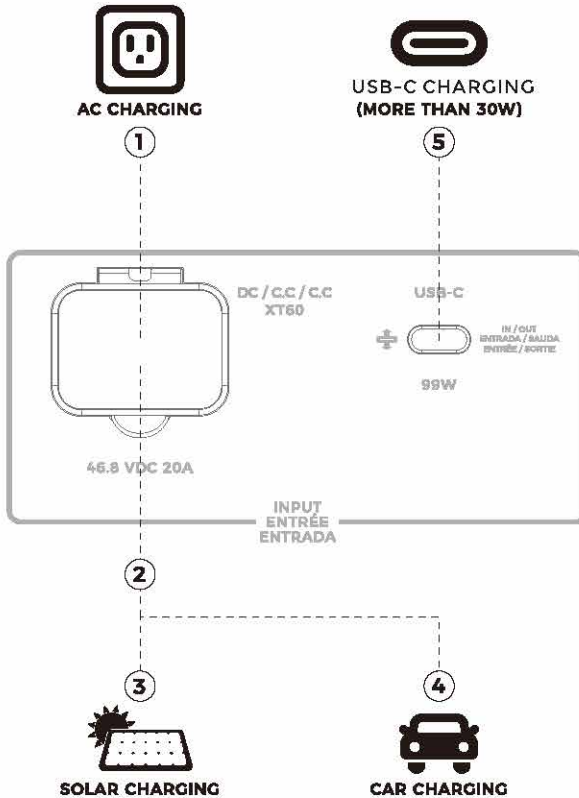
The gauge consists of 4 cool-white LEDs, each representing approx. 25% battery capacity.

### NOTICE

1. While charging, the LEDs will be lit up and dimmed in sequence showing a running effect.
2. LED 1 will be in white flashing if battery is about to run down.
3. When battery is dead or there is an error detected, LED 1 will be red.



## Charging the Power Pack +1000



### AC Charging

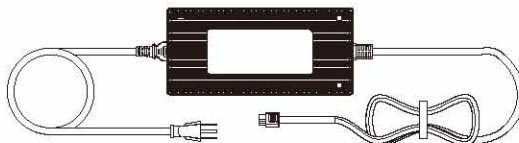
#### NOTICE

Over-voltages (e.g., in the event of lightning or AC grid power surge) can be further conducted into the building and to other connected devices if there is no surge protection.

- Ensure that all devices in the same network and the Power Pack +1000 are integrated into the existing surge protection.

1. Connect the XT60 female connector of the AC adapter (AC adapter with XT60 female connector sold separately) to the DC input port of the Power Pack +1000.
2. Connect the male connector of the AC adapter to the wall socket or generator.
3. The Power Pack +1000 will charge automatically, and the Battery Indicator will be illuminated.

①



# OPERATION

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## Solar Charging

**WARNING!** Shock hazard do not connect or disconnect the solar panels when they are open, make sure all solar panels are closed before connecting them.

**NOTICE** MPPT Solar Charging supports 11-50V DC input voltage, exceeding 50V could cause damage to the MPPT. Do not use solar panels with voltage higher than 50 volts.

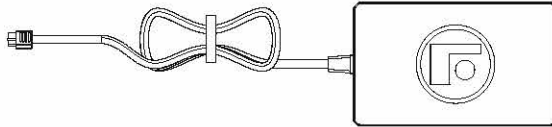
1. Select solar panels that conform to the input voltage range (11V-50V) of MPPT Solar Charger.
2. Connect the solar panel to the EC5 connector of the MPPT charger (sold separately) with the EC5-MC4 cable .
3. Plug in the XT60 connector of the MPPT Solar Charger (sold separately) to the DC Input Port of the Power Pack +1000 .
4. The Power Pack +1000 will charge automatically, and the Battery Indicator will be illuminated.

## Car Charging

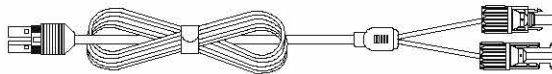
This product can be charged separately through the MPPT solar charger (sold separately) and EC5 - Cigarette Lighter charging cable (included in purchase of ZERO E E201001 Portable Power Station).

1. Connect the car cigarette lighter to the MPPT charger with the Car Charging Cable.
2. Connect the MPPT Solar Charger(sold separately) to the DC Input Port at the Power Pack +1000.
3. The Power Pack +1000 will charge automatically, and the Battery Indicator will be illuminated.

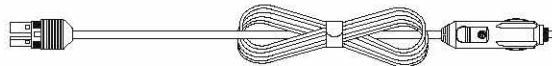
②



③



④

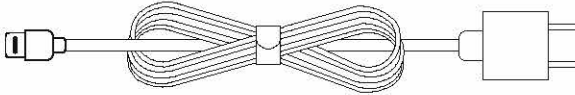


## Charging through USB-C Port

The product can be charged separately by USB-C power supply in accordance with specifications. For the best charging effect, please use a charger supporting 99W power standard on the charging line; Please note that USB-C power below 30W will not properly charge the Power Pack +1000.

1. Connect the USB-C output connector to the Type C input port of the Power Pack +1000.
2. The Power Pack +1000 will automatically charge the battery. When charging, the LED light of the battery level indicator will illuminate.

5



# OPERATION

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## Power Pack +1000 Stacking

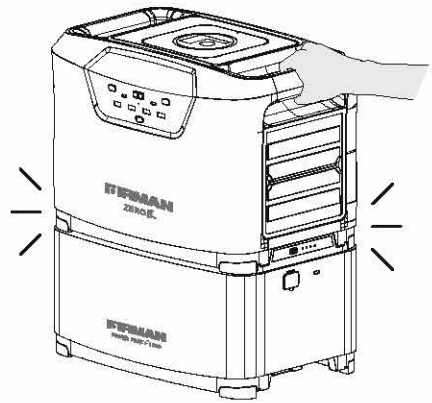
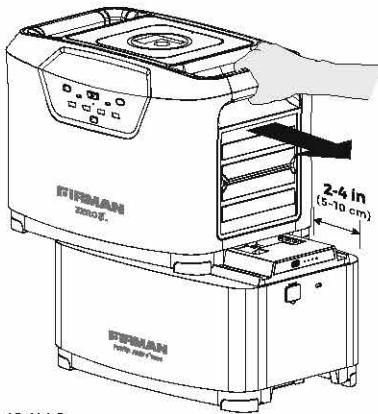
### NOTICE

Power Pack +1000 is heavy, get help transporting or lifting.  
Make sure both Power Pack +1000 and ZERO E Portable Power Station are turned off before stacking.

The slide-lock system only takes two steps: Positioning and Sliding. The packs will be securely self-locked after the Sliding step is finished.

### 1. POSITIONING:

The design of the guide slot makes Slide-lock action easy to operate and eliminates any misalignment. Place the ZERO E Portable Power Station onto the Power Pack +1000 as shown.



### 2. SLIDING:

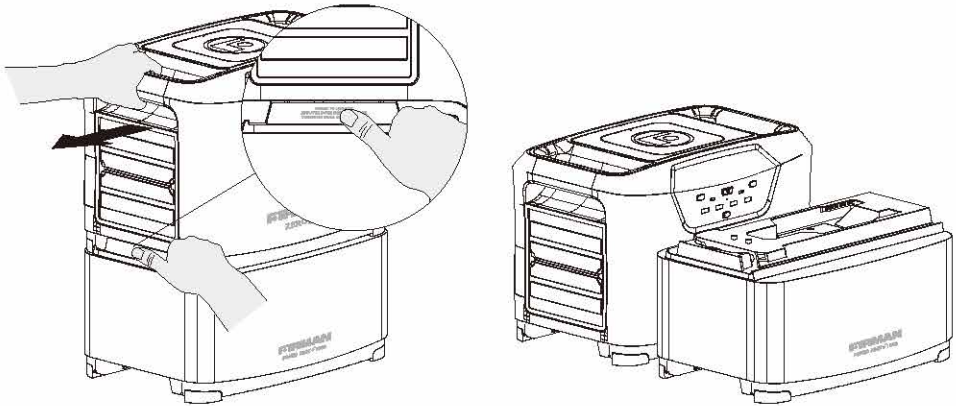
Pull the upper ZERO E Portable Power Station until you hear a click. Once a click is heard the ZERO E Portable Power Station and the Power Pack +1000 are connected. The same procedure is used to connect two or more Power Packs together.

**NOTICE** The ZERO E Portable Power Station ON/OFF button will turn ON and OFF all connected Power Packs.

## Unstacking

Make sure all Portable Power Stations and Power Packs are powered off before unstacking.

1. Starting at the top of the stack press the button marked "PRESS TO UNLOCK" on the next lower Power Pack +1000.
2. At the same time secure the lower battery packs and using the handle slide the upper battery pack to separate them. This same procedure is used to unstack multiple Power Packs.



### NOTICE

- Unstack Portable Power Station and all Power Packs prior to moving or lifting. Do not move or lift stacked Portable Power Station and Power Packs.

# STORAGE AND MAINTENANCE

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## STORAGE AND MAINTENANCE

THIS PRODUCT CONTAINS LITHIUM-ION BATTERIES.

Lithium-Ion rechargeable batteries require routine maintenance and care in their use and handling. Read and follow the guidelines in this document to safely use Lithium-Ion batteries and achieve the maximum battery life span. Rechargeable Lithium-Ion batteries have a limited life and will gradually lose their capacity to hold a charge. This loss of capacity (aging) is irreversible. As the battery loses capacity, the Power Pack +1000 run time decreases. Lithium-Ion batteries continue to slowly discharge (self-discharge) when not in use or while in storage.

Tips for storage:

1. Always store in clean, dry and well-ventilated area where the ambient temperature is 77°F ±9°F (25 ° C ±5 ° C) and the relative humidity does not exceed 75%.
2. Avoid contact with corrosive substances.
3. Keep Power Pack +1000 away from source of fire and heat.
4. Keep Power Pack +1000 away from source of water and moisture.

Recommendation for maintenance every 3~6 months while in storage.

1. At 77°F ±9°F (25 ° C ±5 ° C) ambient temperature, charge the Power Pack +1000 to full.
2. Then discharge battery to empty using the output port.
3. And finally charge the Power Pack +1000 to 45%-55% SoC.

**NOTICE** When the Power Pack +1000 shuts down due to low battery voltage, the user must charge the Power Pack +1000 within 30 days, otherwise it will cause irreversible damage to the battery.

## SPECIFICATIONS

<b>Model</b>	<b>B104201</b>
Net Weight	28.6lbs (13kg)
Dimensions	15.4"×10.6"×8.3"(392×269×210 mm)
Capacity	1040Wh, 41.6V/25000mAh
<b>Input/Output</b>	
DC Input Port (XT60)	Rated up to 46.8V/20A
USB-C (Bidirectional x 1)	5V→3A/9V→3A/12V→3A/15V→3A/20V→4.95A 99W
Expansion Port	41.6V / 65A max.
<b>Battery</b>	
Cell Chemistry	LiFePO <sub>4</sub> (LFP)
Discharge Temperature	-4~104°F (-20~40°C)
Charge Temperature	32~104°F (0~40°C)
Shelf Life	Charge Every 3~6 Months
Lifecycles	More than 4000 charge cycles to 80% + capacity
Certification	FCC, UN38.3, RoHS

# SERVICE – WARRANTY

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FOR SERVICE INFORMATION CONTACT FIRMAN PRODUCT TECHNICAL SUPPORT AT 1-844-347-6261 or at [www.firmanpowerequipment.com](http://www.firmanpowerequipment.com) to obtain warranty service information or to order accessories.

## FIRMAN 3 Years Limited Warranty

### Warranty Qualifications

Register your product using the QR code provided or at [www.firmanpowerequipment.com](http://www.firmanpowerequipment.com). FIRMAN will also register the warranty upon receipt of your Warranty Registration Card and a copy of your sales receipt from one of FIRMAN's retail locations as proof of purchase. Please submit your warranty registration and your proof of purchase within ten(10) days of the date of purchase.



### Repair/Replacement Warranty

FIRMAN warrants to the original purchaser that the mechanical and electrical components will be free of defects in material and workmanship for a period of one(1) year(parts and labor) and 3 years (parts and technical support) from the original date of purchase. Transportation charges on Power Pack +1000 submitted for repair or replacement under this warranty are the sole responsibility of the purchaser. This warranty only applies to the original purchaser and is not transferable. **KEEP YOUR BOX! RETURNS CANNOT BE ACCEPTED WITHOUT YOUR ORIGINAL CARTON.**

### Do Not Return the Power Pack +1000 to the Place of Purchase

Contact the FIRMAN Technical Service Center and FIRMAN will troubleshoot any issue via phone or e-mail.If the problem is not corrected by this method, FIRMAN will, at its option, authorize evaluation,repair or replacement of the defective part or component. FIRMAN will provide you with a case numberfor warranty service. Please keep it for future reference. Repairs or replacements without priorauthorization will not be covered by this warranty.

### Warranty Exclusions

This warranty does not cover the following repairs and equipment.

#### Normal Wear

This warranty does not cover repair when normal use has exhausted the life of a part or the Power Pack +1000 as a whole.



## Installation, Use and Maintenance

This warranty will not apply to parts and/or labor if your Power Pack +1000 is deemed to have been misused, neglected, involved in an accident, abused, loaded beyond the Power Pack +1000's limits, modified, installed improperly or connected incorrectly to any electrical component.

### Other Exclusions

This warranty excludes:

- cosmetic defects
- accessory parts
- failures due to acts of God and other force majeure events beyond the manufacturer's control
- problems caused by parts that are not original FIRMAN parts

## Limits of Implied Warranty and Consequential Damage

FIRMAN disclaims any obligation to cover any loss of time, use of this Power Pack +1000, freight, or any incidental or consequential claim by anyone from using this Power Pack +1000.

**THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

A Power Pack +1000 provided as an exchange will be subject to the warranty of the original Power Pack +1000 . The length of the warranty governing the exchanged Power Pack +1000 will remain calculated by reference to the purchase date of the original Power Pack +1000 .

This warranty gives you certain legal rights which may change from state to state. Your state may also have other rights you may be entitled to that are not listed within this warranty.

## Contact Information

You may contact FIRMAN at:

### Address

Firman Power Equipment Inc.  
Attn: Customer Service  
8644 W. Ludlow Dr.  
Peoria, AZ 85381  
[www.firmanpowerequipment.com](http://www.firmanpowerequipment.com)

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P/N:705747002 Rev:01