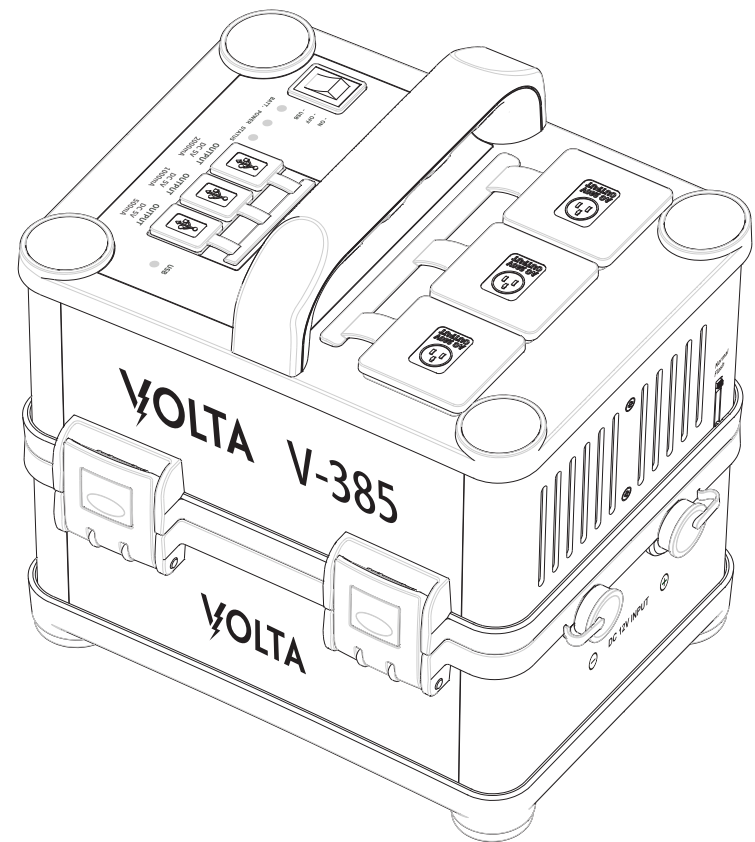


VOLTA

Portable Power Inverter



V-385

Instruction manual

CONTENTS

FOREWORD

Thank you for purchasing the VOLTA V-385 Power Inverter.

The VOLTA Power Inverter is designed in accordance with industry standards. It features excellent performance, powerful function, reliable stability, and a portable design. The Volta Power Inverter is the ideal solution for outdoor AC power supply and indoor emergency supply.

This inverter features a special circuit design for studio flashes to meet their demanding power requirements. With the Volta Power Inverter you'll be able to use your studio flash in the studio, or on location. To get the most out of the durability and performance of the inverter, please read this user manual to understand the proper operation and safety guidelines for the unit.

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I. Safety Instruction

Warning!

- ▲ Children under the age of 18 should have parental guidance when using the inverter.
- ▲ Be careful of electric shock caused by the high-voltage AC output from the inverter!
- ▲ DO NOT use the inverter in fog, rain, or snow without any protection!

Please read the following safety precautions before installing or operating the inverter to avoid damaging the Inverter and to prevent personal injury.

1. Safety Precautions

- The rated power for the V-385 is 750W (At 800W, V-385 can work for only 3 minutes continuously.) DO NOT use the V-385 with any equipment with the rated power of over 750W.
- DO NOT operate the inverter in fog, rain, snow, or dusty conditions. It should be used in a dry and dustless environment.
- Make sure to only power properly working and safe electronics with the inverter. Using unstable or damaged electronics with the inverter may cause damage to the inverter.
- DO NOT place flammable materials on or near the inverter. Never store the inverter or use it in environments where flammable gases exist to prevent combustion in the rare case that the inverter may spark.
- DO NOT cover or block the vents. DO NOT place the Inverter in a narrow or small space. Ensure that the inverter is no less than 12 inches (30 cm) away from nearby objects. Failure to do so might cause the inverter to overheat and result in product malfunction.
- The inverter uses a LiFePO4 battery. The acceptable ambient operating temperature is -10°C to 45°C. Other temperatures may degrade performance or cause product malfunction.
- Please close the socket covers of any unused AC sockets.
- Repairs of the inverter should only be performed by authorized service centers.

2. Safety Instruction for Battery Use

- The LiFePO4 battery has a large capacity, high voltage and rapid discharge. DO NOT short circuit the negative and positive terminals. Doing so will result in a huge current and high temperature which may result in injury, battery damage, or even explosion.
- Should battery acid come into contact with skin or clothes, rinse with soap and water immediately. Should battery acid come into contact with eyes, rinse the eyes with cold water for no less than 20 minutes and then get medical attention immediately.
- DO NOT place any metal tool on the battery unit to prevent accidental short circuits which may result in injury, battery damage, or even explosion.
- DO NOT place metal objects such as a ring, a bracelet, a necklace, or a watch near and around the inverter to prevent any accidental short circuits and bodily injury.

II. Product Introduction

1. Features:

- 1.1 The inverter has been designed using leading technology to meet industry standards and professional demands.
- 1.2 Dual working modes: flash mode (for demanding studio lights) and non-flash mode.
- 1.3 26,000 mAh LiFePO4 battery. The battery unit is user replaceable and detachable from the control unit. The battery can also be charged independently from the inverter.
- 1.4 3 USB sockets are available for powering electronics with the USB interfaces. Such as iPhones, iPads, Android tablets, and smartphones.
- 1.5 Optional battery cables can be connected to a car battery, or other large cell battery, to allow you to use the inverter longer.
- 1.6 Battery Indicator LED lamp changes color to indicate the remaining battery level.
- 1.7 Power Level Indicator LED lamp changes color to signal output power level.
- 1.8 Pure sine wave output. Output voltage is 110/60Hz or 220V/50Hz depending on model
- 1.9 Continuous power up to 750W (At 800W, the V-385 can work for only 3 minutes continuously.) The conversion efficiency is up to 91%.
- 1.10 The inverter is equipped with the built-in self-adjustable cooling fan.
- 1.11 High-end microelectronics processing system ensures reliable performance.

2. Automatic Protection

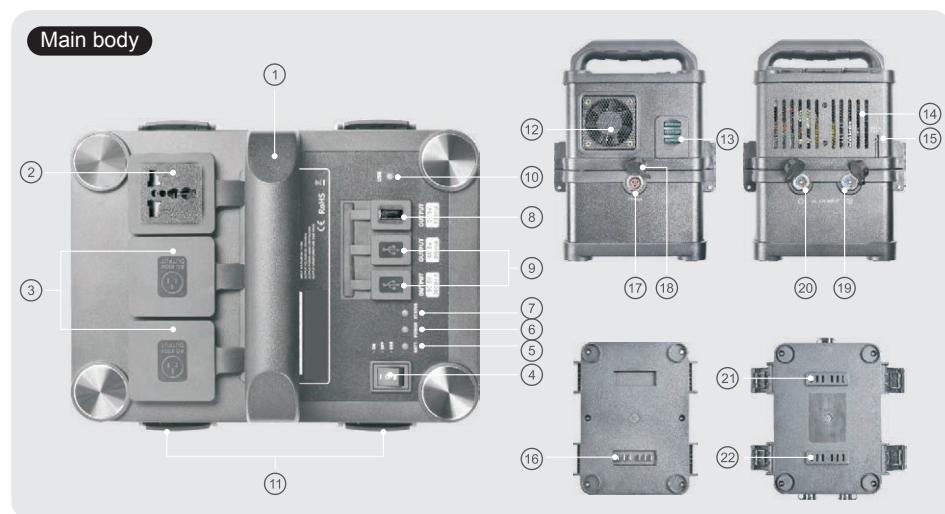
- 2.1 Low-voltage input protection
- 2.2 Overload protection
- 2.3 Short-circuit protection
- 2.4 Low-electricity alert
- 2.5 High-voltage input protection
- 2.6 Overheating protection
- 2.7 Positive and negative reverse connection protection of power supply

3. For Use With

- Photographic equipment: Studio flashes, LED lamps, quartz lights, and other continuous lights.
- Household electrical entertainment products: TV sets, camcorder, cameras, video lights, radios, mobile phones, etc.
- Household appliances: Dust collectors, fans, lamps, shavers, fridges, blenders, food processors, etc.
- Office supplies: Desktop computers, laptops, printers, fax machines and scanners, etc.
- Electric tools: Electric saws, electric drills, grinders, sanders, etc.
- Any other equipment with the rated power of no more than 750W (At 800W, the V-385 can work for only 3 minutes continuously.)

III. Production Description

1. Name of Parts

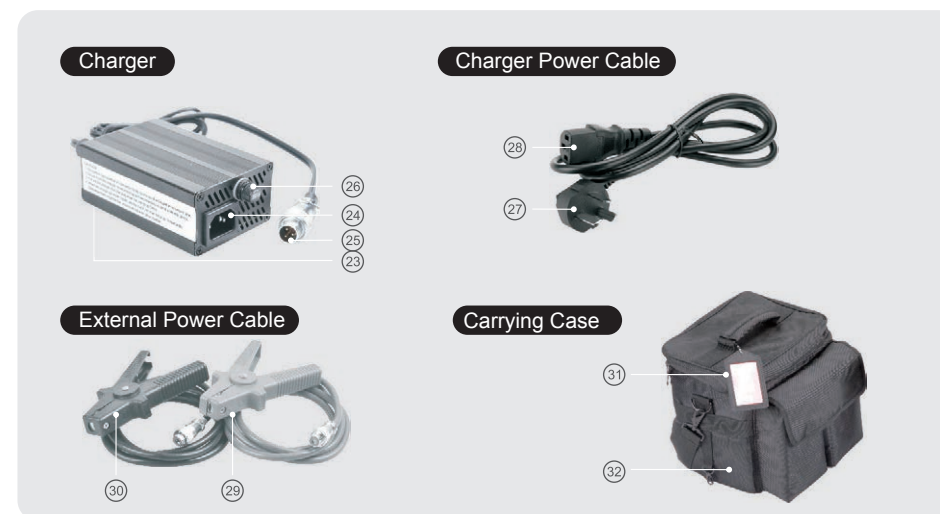


Control Unit

- 01. Handle
- 02. AC Output Socket (110V/60Hz or 220V/50Hz)
- 03. Socket Cover
- 04. Power Switch
 - ON (Power on)
 - OFF (Power off)
 - USB (USB charge)
- 05. Battery Indicator (displays battery level)
- 06. Power Indicator (displays power output level)
- 07. Status Indicator (displays inverter status)
- 08. USB Socket (USB1, USB2, USB3)
- 09. USB Socket Cover
- 10. USB ON Indicator
- 11. Locking Clasp (Two on the left and two on the right)
- 12. Air Inlet
- 13. Fuse
- 14. Air Outlet
- 15. Mode Selection
 - Flash (Flash mode)
 - Normal (Non-flash mode)
- 16. Power Input

Battery Unit

- 17. Charging Socket
- 18. Charging Socket Cover
- 19. Positive Input Socket for External Battery
- 20. Negative Input Socket for External Battery
- 21. Built-in Battery Output
- 22. External Power Output



Charger

- 23. Charging Indicator
- 24. AC Input Socket
- 25. Charging Connection Cable
- 26. Fuse

External Power Cable (sold separately)

- 29. Positive Battery Cable (Red)
- 30. Negative Battery Cable (Black)

Charger Power Cable



28

27

Carrying Case



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32

Charger Power Cable

- 27. AC Input Plug
- 28. AC Output Plug

Carrying Case

- 31. Warning Label
- 32. Air Vent Flap

2. Function Description

2.1 LED Indicators

(1) Battery Indicator (05) (displays battery level)

Battery LED	Battery Voltage
RED, blinking	<10.7V or >15.4V
RED	10.7~11.2V
ORANGE	11.2~12.3V
GREEN	12.3~14.6V
ORANGE, blinking	14.6~15.4V

- When using the inverter, the LED light changes as the battery voltage goes down. The higher the load power is, the more abruptly LED light changes.
- During operation, the inverter will shut down automatically if the Power Indicator (06) blinks frequently and the buzzer alarms for over 5s. In this case, the remaining battery power is too low for the current load. The battery will need to be charged before further use.

IV. Operation Instruction

(2) Power Indicator (06) (displays power output level)

Power LED	Output Power (LP450x)	Output Power (V-385)
OFF	0~35W	0~35W
GREEN	35W~200W	35W~230W
ORANGE	200W~350W	230W~520W
RED	350W~460W	520W~670W
RED, blinking	>460W	>670W

(3) Status Indicator (07) (displays working status)

Status LED	Working Status
RED	No
GREEN	Yes

2.2 Mode Selection (15)

The inverter is designed with two operating modes: "Normal" (non-flash mode) and "Flash" (flash mode). Users can choose either operating mode depending on the equipment being powered. The "Flash" (flash mode) is specially designed for the use with monolights. Please note that in this mode the power saving function is not available so the built-in battery can stand by for only 13 hours.

In "Normal" (non-flash mode), the use of monolights is not available. In this mode there is a power saving function which allows the built-in battery to stand by for 55 hours. Therefore, non-flash electronics are recommended to use this mode.

For details, refer to Section VI "Introduction to Function Mode".

2.3 Power Switch (04)

"OFF": The inverter is powered off.

"ON": The inverter is powered on and the AC sockets can be used.

"USB": The inverter enters into USB charging mode. Portable electronics with USB interfaces such as iPhones, iPads, Android tablets, and smartphones can be charged from the USB sockets. In USB mode, no AC power output is available.

USB1: Output 5V/2000mA

USB2: Output 5V/1000mA

USB3: Output 5V/500mA

2.4 AC Output Socket (02)

- Three AC output sockets are in parallel connection, and each of them can output the maximum power.
- The AC sockets are universal and accepts most foreign power cords. No adapter is required.
- The AC output standard voltage is 120V/60Hz or 220V/50Hz depending on the model you purchase.

1. Installation and Detachment of Battery Unit

● Installation

1. Place the control unit on the battery unit so that the control unit power input (16) connects to the built-in battery output (21).
2. Snap the four locking clasps to securely latch the units together.

● Detachment

1. Push the button on each locking clasp to open the four locking clasps.
2. Remove the control unit from the battery unit.

1.1 Charging

The AC charger works with 100-240V.



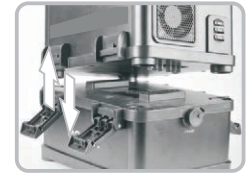
1. Turn the inverter off before charging.



2. Insert the "Charging Connection Cable (25)" of the charger into the "Charging Socket (17)" on the inverter.



3. Insert the "AC Output Plug (28)" of the Charger Power Cable into the "AC Input Socket (24)" of the charger, and connect the "AC Input Plug (27)" to any AC power for charging.



This battery unit can be charged using AC power supply (100-240V). However, an adapter may be needed when charging the inverter in different countries.

1.2 LED Lamps of the Charger

- (1) The red lamp is blinking: Issue with charging.
- (2) The red lamp is lit continuously: Currently charging.
- (3) The green lamp is lit: Charging is complete.



It takes about 6 hours to fully charge the inverter when the battery power is empty. Ensure to pull out the "Charging Connection Cable" when the charging is complete. To maintain the expected service life of the battery, ensure to fully charge the inverter in the following circumstances:

- Each time after using the VOLTA Inverter.
- Before using the inverter if it has not been used in more than 100 days.

V. Connecting an External Storage Battery

2. Connecting to the VOLTA V-385



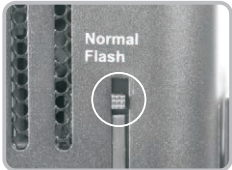
1. Turn "Power Switch (04)" to "OFF".



2. Connect your device to the "AC Output Socket (02)".



3. Turn "Power Switch (04)" to "ON".



4. Turn "Mode Selection (15)" to "Flash (flash mode)" or "Normal (non-flash mode)".



5. Turn your device on. Now your device will draw power from the inverter.

i Power the modeling lamp off while using the inverter with monolights. Otherwise, the battery unit of the inverter may run out of power within a short time.

When you turn the "Power Switch (04)" ON the inverter will beep and run a short automatic detection. During the detection the LED indicators on the control panel will change colors. The detection will last a few seconds. When it is done the unit will beep and the "Status Indicator (07)" will turn green signalling the unit is ready to use

For outdoor photography, the inverter can be used while placed inside the carrying case to avoid any dust, sand, or water. Before use, make sure to open the "Air Vent Flap (32)" on both sides of the carrying case and use the hook buckles to keep them opened. DO NOT cover the "Air Inlet (12)".

1. Connecting an External Battery

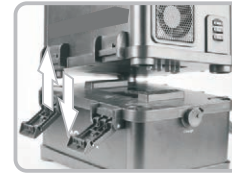
Instead of using the built-in battery, an external power cable (sold separately) can be used to power the inverter with an external battery (11-15V). As some external batteries have larger capacities, the inverter can work longer than that in using the built-in battery. You can purchase external batteries with different capacities based on your requirements to prolong the continuous service time of the inverter.



1. Take the VOLTA Inverter out of the carrying case.



2. Check and ensure that the inverter is powered off.



3. Interlock the "Power Input (16)" of the control unit and the "External Power Output (22)" on the battery unit.



4. Connect the "External Power Cable" to the battery unit. Ensure a CORRECT positive and negative connection to the external battery.



5. Verify that preceding steps are properly performed, and then power the inverter on.

2. Standard of External Power Cables

2.1 external power cable

2.2 Standard of external power cables provided by other manufacturers

- (1) Allowing 100 A current
- (2) No longer than 2m



External power cable
(Sold Separately)

Warning!

- ▲ DO NOT REVERSE the positive and negative connection on the external battery. Reversal will cause the fuses to blow and may even cause irreparable damage to the inverter. These damages are not covered by the warranty.
- ▲ DO NOT use the inverter in or around explosive and flammable gases.
- ▲ Ensure that the "Power Input (16)" of the control unit and the "External Power Output (22)" on the battery unit are securely interlocked.

- When the inverter uses an external battery, the built-in battery of the inverter will not be charged.
- The required voltage of an external battery is 11-15V.
- The symbol [+] indicates anode (positive), and [-] indicates cathode (negative).

1. Normal Mode

In this mode, the use of flashes is not available but non-flash electrical appliances with the rated power can use the normal mode. Taking as an example, the maximum power is 800W (At 800W, can work for only 3 minutes continuously.) The power saving function is available in this mode.

When the operated power exceeds 800W, "Power Indicator (06)" turns red (blinking) and the buzzer alarms. Meanwhile, the "Status Indicator (07)" turns red and the inverter will perform an auto protective shutdown. The following circumstances are for your reference:

- For the equipment with the power of about 800W, the inverter can work for 3 minutes continuously. The inverter stops working after a buzzer alarm.
- For the equipment with the power of 1000-1400W, the inverter can only work for 2-3 seconds. The inverter stops working after a buzzer alarm.
- For the equipment with the power of 1400-1800W, the system of the inverter starts but shuts down within 3 seconds.
- For the equipment with the power of more than 1800W, the system of the inverter CANNOT start.
- As for the equipment with other power, it should be regulated based on the preceding values.

On non-flash device that has a rated power smaller than 45W, the Power Inverter should be switched to Flash Mode for a normal operation. Otherwise, the Power Inverter will automatically enable power saving function and cut off AC output.

2. Flash Mode

The "Flash" (flash mode) is specially designed for the use of flashes. It is also applicable to electrical appliances with rated power. However, in this mode, power saving function is not available. For the use of non-flash electrical appliances with rated power, see the preceding section "Normal Mode".

While using a flash:

2.1 Maximum service energy for the flash with the VOLTA Inverter

(Using the V-385) Maximum service energy for the flash

- (1) Will be 1500ws (cumulative, similarly hereinafter) if the flash recycles in 1 second.
- (2) Will be 3000ws if the flash recycles in 2-3 seconds.
- (3) Will be 5000ws if the flash recycles in 5 seconds.
- (4) As for the flash recycling differently, refer to the preceding values.

2.2 Recycling time of the flash using the VOLTA Inverter

(Using the V-385) Recycling time of the flash

- (1) The recycling time does not change if the flash recycles in 1 second and does not exceed 800ws (cumulative, similarly hereinafter).
The time will increase if the flash recycles in 1 second but exceeds 800W/S. The recycling will become longer but will not exceed 5 seconds.
- (2) If the flash recycles in 2-3 seconds and does not exceed 2400ws, the time will not change.
The recycling time will increase if the flash recycles in 2-3 seconds but exceeds 2400W/S. The time becomes longer but will not exceed 5 seconds.
- (3) The time does not change if the flash recycles in 3 seconds and does not exceed 3000W/S.
However, it will increase if the flash recycles in 3 seconds but exceeds 3000W/S. The recycling becomes longer but does not exceed 5s.

2.3 Amount of Full-Powered Flashes with a Fully Charged V-385

- (1) Approximately 9 00 for one 5 00ws flash.
- (2) Approximately 7 00 for one 7 50ws flash.
- (3) For the values of flashes with other power levels, refer to the preceding values.

3. LED Lamp Alarm

When a flash is first energized by the inverter, the transient current of the flash is no less than 3 times its full-load current. For example, a 100ws flash may have a transient current equal to the full-load current of a 300ws lamp. Therefore, when the V-385 is used for specific flashes, the "Power Indicator (06)" will blink with a short beep. This is normal when the transient current of the flashes exceed 800W.

If the "Power Indicator (06)" blinks and beeps for over 5 seconds, the equipment will automatically shut down.

Should this happen, turn "Power Switch (04)" to power the inverter on for use.

VII. Replacing Fuses

The VOLTA V-385 is equipped with three 30A fuses.

Should the inverter fail to operate properly, check if the fuses are melted. If so, replace with new fuses.

Ensure that the inverter is turned off before replacing any fuses. Unplug the bad fuses and insert new ones.

VIII. Product Compatibility

The inverter can be used with a wide range of electrical products such as studio lights and non-flash electrical appliances. We have yet to find any incompatible products. If you find a product that does not work with the inverter please contact us at info@studio-assets.com.

IX. Maintenance and Warranty

To avoid performance degradation caused by accumulated dust, wipe the surface of the inverter with a damp clean cloth. If the inverter has been stored for a long period of time, please charge before using to obtain the best performance.

Each Volta V-385 Power Inverter goes through a detailed inspection and quality check before leaving the factory.

A Limited One-Year Warranty is provided for the Volta Power Inverter. The warranty guarantees, under normal use, that the product will be free from defects in workmanship and in materials for the period of one year from the purchase date. Any accidental and user damage is not covered under the warranty. Any signs of tampering, unauthorized service, or modifications will void the warranty.

Should any issues occur, please email us at info@studio-assets.com or visit our website www.studio-assets.com.

X. Product Kit

- 1* V-385 VOLTA Inverter
- 1* Charger
- 1* Charger Power Cable
- 1* Shoulder Bag



XI. Technical Data

Model	V-385
Continuous Output	750W (At 800W, it can work for only 3 minutes continuously.)
Peak Power	1400W
Input Voltage Range	11-15.5V
Output Voltage/Frequency	AC 110V/60Hz or AC 220V/50Hz (depending on model)
Output Waveform	Pure Sine Wave
High Harmonic Distortion	< 3%
No-Load Current Consumption	Normal mode:0.25A Flash mode:0.9A
Conversion Efficiency	91%
Low-Voltage Alarm	Yes
Low-Voltage Shutdown	Yes
Storage Temperature Range	-30°C to 70°C
Operating Temperature Range	-10°C to 45°C
Battery Type	LiFePO4
Nominal Battery Capacity	26Ah (14.8V)
Charging Time	Approx. 6 hours (used the included 5A charger)
Fuse	3*30A
Dimension	10.5 x 8.1 x 11.5" (267 x 206 x 292 mm)
Weight	Approx. 16.4 lbs (7.4 kg)