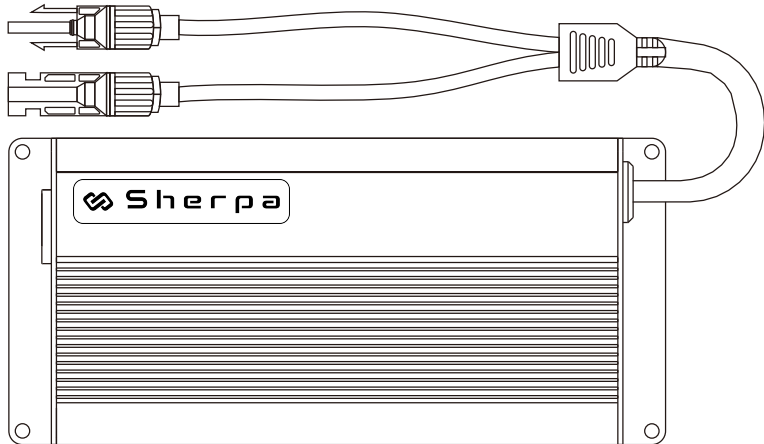




CHARGE-500

SMART CHARGER USER MANUAL



Please read the user manual thoroughly before using

CONTENTS

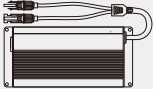



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INTRODUCTION

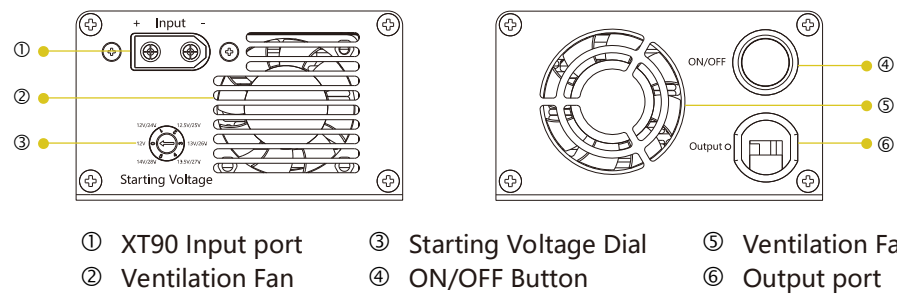
The CHARGE-500 smart charger has been designed to work from any standard 12V or 24V vehicle crank battery. It has an auto-startup function to prevent you crank battery from being drained while the engine is off. When operating, it will output a substantial charge of up to 500W (42V) to your on board power unit. For this reason, it is recommended for charging Sherpa Power units, as they have in-built MPPT modules..

The CHARGE-500 is a very useful companion if your solar panel is not receiving the required energy you need at the time. When the Sun cannot deliver, the Sherpa CHARGE-500 will give you power!

BOX CONTENTS

			
SHERPA CHARGE-500 *1	Input Connection Cable (fused) (approx. 5 meters) *1	Mini Screwdriver *1	User Manual *1

FUNCTION OVERVIEW



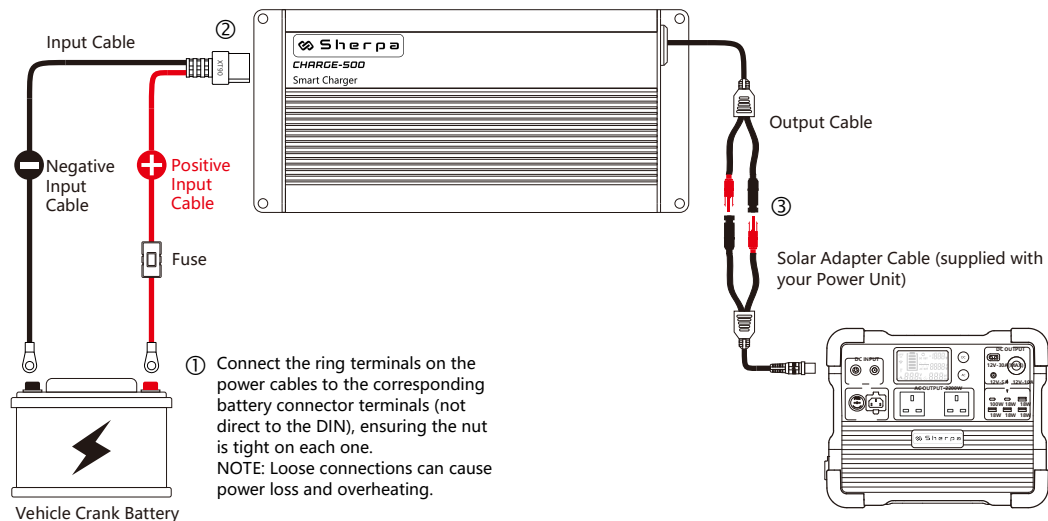
SPECIFICATIONS

Input Specification	12-30V, 50A (MAX)
Output Specification	42V, 13A (MAX)
Fuse Rated Current	100A
Output Power	Up to 500W
Parasitic draw	Approximately 0.1mA when switched OFF and 260 mA when switched ON
Operating Temperature	-10°C~55°C / 14°F~131°F
Storage Temperature	10°C~45°C / 50°F~113°F
Heat Dissipation	Fan cooling
Protective design	Short-circuit protection, over-voltage protection, under-voltage protection, overheating protection.
Dimension	193 x 90 x 52mm / 7.6 x 3.5 x 2 in

WORKING PRINCIPLE

- 1: The CHARGE-500 smart charger can detect the input voltage from the vehicle. If the input voltage is greater than the starting voltage set on the dial, the CHARGE-500 will activate and draw from the vehicle alternator via the crank battery.
- 2: The crank battery voltage will be in a lower state when the engine is off and increase when the engine is running.
- 3: The starting voltage dial of the CHARGE-500 should be set based on the principle of the increasing crank battery voltage. The selected value should be **greater** than the crank battery voltage when the engine is **off**, and should be **less** than the crank battery voltage when the engine is **on**.

SETUP INSTRUCTIONS

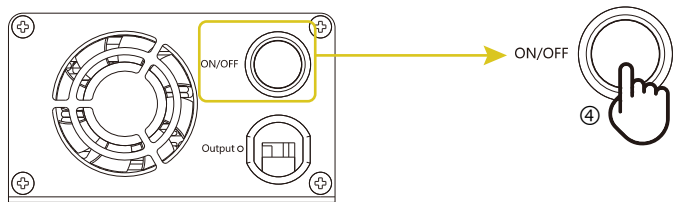


Step 1: Connect the provided input power cable to the car battery terminal connector, ensuring the Charge-500 module is disconnected.

Step 2: Connect the input cable to the CHARGE-500.

Step 3: Connect the Output Cable to your power unit via the solar adapter.

Step 4: When all cables are correctly connected, turn on the CHARGE-500.



Note: If you need to plug or unplug the connector during charging, please turn the CHARGE-500 OFF before doing so.

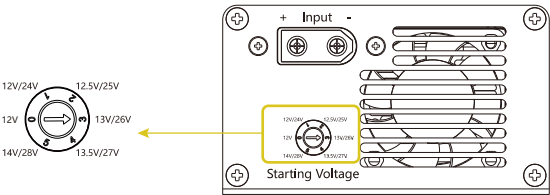
Step 5: Selecting the startup voltage of the CHARGE-500.

Normal working state: The CHARGE-500 does not activate when the engine is off. The CHARGE-500 starts working after the engine is started.

Troubleshoot state: After starting the engine, if the CHARGE-500 does not work, you need to lower the Starting Voltage.

If the CHARGE-500 operates even with the engine off, the starting voltage needs to be increased.

Setting	Starting Voltage Range
0	12V-30V
1	12V-17V / 24V-30V
2	12.5V-17V / 25V-30V
3	13V-17V / 26V-30V
4	13.5V-17V / 27V-30V
5	14V-17V / 28V-30V



Tip: We recommend setting the Starting Voltage to 3 to begin with, then test the operation of the CHARGE-500.

DISCLAIMER

Please read the user manual thoroughly before using this product, and keep this manual in a safe place for future reference. Failure to follow the instructions for proper set up, use, and care for the device can increase the risk of serious personal injury, death, or property damage. Once you use this device, you are deemed to have understood, recognised and accepted all terms and contents of this document. The user shall be responsible for their own actions and all consequences arising from failure to use the device in accordance with the "User Manual", or as authorised in Sherpa's current product literature.

In compliance with laws and regulations, Sherpa Tek reserves all right for final explanation, and to change these terms and conditions at any time without prior notice. In the event that any revisions are made, the revised terms and conditions shall be posted on our website immediately, please visit our website to inform yourself of any changes.

SAFETY ADVICE

- 1 : Make sure to connect the input and output cables according to the instructions.
- 2 : Do not block the fan vent when the CHARGE-500 is operating.
- 3 : Do not subject this product to impacts.
- 4 : The output terminals of this product must not to be short-circuited. The CHARGE-500 has no short-circuit protection.
- 5 : Make sure the engine is started before turning on the CHARGE-500 to prevent the vehicle battery from entering a low-voltage protection state due to insufficient supply voltage.
- 6 : Use standard and original charging cables of this product to avoid abnormalities.
- 7 : Install and use this product in a dry, dust-free environment at normal ambient temperatures.
- 8 : Do not use this product in high-temperature environments such as heat sources or near fire sources.
- 9 : Do not get this product wet, immersed in water or any other liquid.
- 10: Ensure that the input (XT90) and output (MC4) wires of this product are firmly connected to avoid safety issues caused by short circuits and loose connections.
- 11: When not in use for more than 7 days, please turn off the main switch of the charger to avoid parasitic drain of the crank Battery.
- 12: Using the CHARGE-500 via any third party MPPT should be done with caution and prior research. Sherpa Tek Ltd will not be held responsible for any damage to equipment outside of the recommended range we provide.

WARRANTY EXCLUSIONS

1. Misused, abused, damaged by accident or damaged due to force majeure (e.g. lightning strikes, hurricane, floods etc.).
2. Unauthorised modification, repair, dis-assembly or operation not in accordance with the official instructions or manuals.
3. Any defects or damages caused by reliability or compatibility issues when using unauthorised third-party parts.
4. Purchase from unauthorised resellers.
5. Use for special applications other than normal consumer use.
6. Lost, stolen or fully refunded product.
7. Any defect or damage caused by exposure to excessive heat, cold, liquids or other external causes.
8. Invalid proof of purchase.
9. Warranty period expired.
10. The model on the warranty certificate does not match the actual item.
11. Unauthorised alteration on the warranty certificate.
12. Product wear and tear from general use.

CUSTOMER SUPPORT : support@sherpapower.co.uk

www.sherpapower.co.uk
Sherpa Tek LTD



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