

ABOUT CH-1000 UNIBAT

CH-1000 UNIBAT represents some of the most innovative and advanced technologies on the market, making every charge simple and easy. This is most likely the safest and most effective charger you will use. CH-1000 UNIBAT is designed to charge all types of 12V lead-acid batteries, including wet (full charge), gel, MF (maintenance free), EFB (enhanced full charge), AGM (absorbent glass mat) and lithium batteries & 6V lead acid batteries. It is suitable for charging batteries up to 30 Ah and supports all battery sizes.

WARNINGS

- Before using the product, please read and understand the following safety information carefully!
Before using this charger, please check the battery manufacturer's specifications
- During charging, explosive gas may escape from the battery. Provide ventilation to prevent flames and sparks. Do not expose the charger to sunlight and high temperature.
- Battery acid is corrosive. If the acid comes in contact with skin or eyes, rinse immediately with water.
- Do not charge frozen or damaged batteries. Do not charge non-rechargeable batteries. Do not recharge dry charged batteries.
- Do not put the charger on the battery while charging.
- Be careful to reduce the risk of dropping metal tools onto the battery. It may cause a short circuit.
- When charging lead-acid batteries, please remove personal metal items such as rings, bracelets, necklaces, and watches. Do not smoke or generate sparks or flames while charging.

To reduce the risk of electric shock, Disconnect the charger from the AC socket before maintenance or cleaning. It must not be used by children or anyone who does not follow the instructions in this manual unless they are supervised by an adult to ensure the correct use of the charger.

WHAT'S IN THE BOX?

1. 1*CH-1000 UNIBAT Smart Battery Charger
2. 1*Battery clip cable
3. 1*O-Ring cable
4. 1*User Manual
5. 1*INTEGRATED 220V EURO PLUG

CH-1000 UNIBAT is a direct wall-mounted charger, please pay attention to the distance between the charger and the battery. Consider the length of the DC cable of the charger, the length of the connecting wire with the battery clamp or the terminal connecting wire.

CHARGING MODES

CH-1000 UNIBAT has five modes:

- Standby
- 12V lead-acid battery
- 12V AGM battery
- 12V lithium battery
- 6V lead-acid battery.

If change the charging mode, please disconnect the charger output clip and enter the standby mode. Press the "MODE" button to switch the battery type you will need. Please note: before selecting the battery type, Please understand the difference of each rechargeable battery mode. Do not operate the charger before confirming the charging mode of the battery. The following is a brief description:

Mode	Explanation
Standby	In standby mode, the charger does not charge or supply power to the battery. In this mode, the energy-saving function is on, and standby power get from the AC socket. The power LED will light green after the percentage LED(25%/50%/75%/100% LED) flash 2 times.
12V NORM	For charging 12-volt Wet, Gel, Enhanced Flooded, Maintenance-free and Calcium, etc..batteries. this white LED will light up when selected this mode.
12V AGM	For charging 12-volt AGM batteries, this white LED will light up when selected this mode.
12V Lithium	For charging 12-volt Lithium batteries, This white LED will light up when selected this mode.
6V NORM	For charging 6-volt Wet, Gel, Enhanced Flooded, Maintenance-free and Calcium, etc..batteries. this white LED will light up when selected this mode.

Using 6V NORM. [Press & Hold the “mode” button to switch]

6V NORM charge mode is designed for 6-volt lead acid batteries only, like Wet, Gel, Enhanced Flooded. Maintenance-free and Calcium batteries etc...

CAUTION.

THIS MODE IS FOR 6-VOLT LEAD-ACID BATTERIES ONLY

CONNECTING THE BATTERY

Please note: before connect the AC power plug please confirm the correct polarity of the battery terminals on the battery. The positive battery terminal is typically marked by these letters or symbol(POS, P+). The negative battery terminal is typically marked by these letters or symbol(NEG, N,-).Do not make any connections to the carburetor, fuel lines, or thin, sheet metal parts.

- 1) Connect the AC power plug of the battery charger into a suitable power socket and select the battery type you will need.
- 2) Connect the positive (red) battery clip or terminal to the positive (POS, P +) battery terminal of the battery.
- 3) Connect the negative (black) battery clip or terminal to the negative battery (NEG. N-) battery terminal.
- 4) When disconnecting the battery charger, first disconnect the AC power plug, and then remove the negative and positive clamps from the battery poles.

START CHARGING

- 1) Connect the AC plug to power socket.
- 2) Confirm the battery voltage and battery type you will need.
- 3) The charger will start in standby mode with a green LED indication. In this state, the charger does not provide any power. Then press the mode button to switch the charging mode which suitable for the battery.
- 4) Confirm that the positive and negative terminals or clamps of the battery connected correctly to the battery.
- 5) The mode LED which you have selected the charging mode will light up, and the power charging LED will light up also (depending on the health of the battery), indicating that the charging process has started.

BMS UNLOCK FUNCTION

When the charger charge a Lithium battery with BMS locked, it will unlock the BMS automatically after you connected the Lithium battery.

LED DESCRIPTION

The charger has some charging LEDs. The charging LEDs indicates the charging status of the connected battery. Please refer to the following instructions:

LED	Explanation
Power LED Solid on Green	Connect the AC plug, the percentage LED of battery capacity will turn on twice, the power LED is always on green
Charge percentage LED light	During the charging process, 25% or 50% or 75% of the charging LED will flash slowly. It indicate the charging status and the current battery capacity. When the battery is about to be fully charged, the 100% charge LED will flash slowly. When the battery is charged complete full, all percentage LED(25%/50%/75%/100% LED) are always on white. The charger can be connected to the battery all the time for maintenance.

ADVANCED DIAGNOSTIC

Advanced Diagnostic is used when displaying Error Conditions, It will display a series of blink sequences that help you identify the cause of the error and potential solutions. All Error Conditions are displayed with the Error LED and Standby LED flashing back and forth. The number of flashes between each pulse denotes a potential Error Condition.

Fault LED lights on red	Cause/Solution
One flash	When the DC output clip is connected in reverse, the charging red LED flashes once and goes off once. The charger will protect the battery from reverse polarity connection.
Two flash	When the DC output clip is short-circuited, the charging red LED flashes twice and goes off once. The charger will protect the battery from short circuit.
Three flash	The charger is in the overheat protection, the charging red LED flashes three times and goes out once. The charger will protect the battery from overheat protection.
Fault LED Solid on Red	In 6V battery mode, connected the 12V battery, the red LED light is always on, and the charger is locked. You need cut off the AC power and reconnect the AC and connect the correct battery

BATTERY CHARGING TIME

The estimated battery charging time is below: The size of the battery (Ah) and its depth of discharge (DOD) greatly affect its charging time. The charging time is based on the average depth of discharge of a fully charged battery, it is for reference only. Actual charging time will depend on battery conditions, Below charging time is based on 50% DOD.

Battery Size (Ah)	Approx. Time to Charge in hours	
	6V	12V
8	5.3	5.3
12	8.0	8.0
18	12.0	12.0
24	16.0	16.0
30	20.0	20.0

TECHNICAL SPECIFICATION

Input Voltage AC:	200V~250VAC 50Hz (± 2)
Efficiency:	80% Max
Power:	18W Max
Charging Voltage:	6V/12V
Charging Current:	1000mA(6V) 1000mA(12V)
BMS unlocking:	Yes
No-load current:	≤5mA
Ambient Temperature:	-10°C to +40°C
Charging modes:	5 modes
Type of Batteries:	6V & 12V
Battery Chemistries:	Wet, Gel, MF, CA, EFB, AGM, Lithium battery (Lithium battery with BMS only)
Battery Capacity:	Less than 30ah, Supports all battery sizes
Housing Protection:	IP60
Cooling:	Natural Cooling
Dimensions (L x W x H):	118*70*81mm(European type)
Weight:	0.170kg