

# Automatic Portable Battery Charger

PCH-051

PCH-052

## User Manual



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*Please read all warnings and safety guide before operating PCH-051/052. Users are responsible for any regulations required by special applications. Please do not connect AC power before installation. Warranty will be void if installation was not followed by the user manual and may risk of electrical shock, fire or injury.*

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## Important Safety Guide

1. Do not place the charger under rain, direct sunlight, dust condition, acidic or corrosive gas environment.
2. To prevent over heating, do not block ventilation area or installed in a sealed area.
3. PCH-051/052 is equipped with automatic charging loop detection. User do not need to turn off the charger or disconnect from the battery, it stops charging after the battery is been fully charged.
4. Please use only factory parts and suggested accessories. Unauthorized parts may risk of shock, fire, or injury.
5. Please do not disassemble PCH-051/052. Attempting to repair the machine may risk of fire and shock.
6. PCH-051/052 still contains residual electricity even if the power and battery are been removed.
7. Please make sure the AC ground wire from PCH-051/052 is been properly grounded. Improper connection may risk of electrical shock, fire, or injury.
8. Please remove ac power and battery wire before performing cleaning or maintenance.
9. Please do not use PCH-051/052, if high pitch pop sound occurred.
10. Please do not use damaged or low grade wires.
11. Due to the nature of lead acid battery, hydrogen and oxygen gas are been released during charging period. Please operate the charger in a well ventilated area.
12. Please do not press and hold the forced output button for a long period of time or tape the button. Fuse should only be replaced with the same specification.

# 1、Installation

1. To prevent sparks during power up, please make sure the power switch is in off position before plug-in the ac power cord.
2. Connect the positive and negative clamp to the battery before switch the power to "ON" position.
3. PCH-051/052 is equipped with battery detection; PCH-051/052 will not output voltage before battery is properly connected or reverse polarity occurred.
4. PCH-051/052 is equipped with automatic charging loop detection. User do not need to turn off the charger or disconnect from the battery, it stops charging after the battery is been fully charged.
5. PCH-051/052 is equipped with short circuit, over load, and reverse polarity protections.
6. When the battery is lower than minimum charging voltage, the PCH-051/052 will not output any voltage. Pressing the forced output button, the PCH-051/052 starts charging the battery regardless of the voltage. If error LED lights up, the overload or reverse polarity is occurred, please check the wiring connections.
7. Please use input voltage between 80~250 VAC, 50~60Hz, exceeding the input range might cause output errors or damage the charger.
8. Due to the nature of lead acid battery, hydrogen and oxygen gas are been released during charging period. Please operate the charger in a well ventilated area.
9. Do not place the charger under rain, direct sunlight, dust condition, acidic or corrosive gas environment.
10. The voltage of 12V (24V) battery must be greater than 4V (6V), otherwise the PCH-051/052 detects as battery error and cease the output.
11. Please do not press and hold the forced output button for a long period of time or tape the button. Fuse should only be replaced with the same specification.
12. PCH-051/052 automatically switches between float and bulk mode according to the feedbacks of voltage and current.
13. To maintain the best performance of the charger, please keep the environment between -25°C to 35°C. The cooler the better.
14. Please make sure the charger is installed in a well ventilated area. To prevent bad circulation or reduce the life of charger, keep at least 10CM between wall and ventilation area.

## 2、Specifications

### AC Input:

Voltage: 80~250 VAC (commonly used on 110/220 V)

Frequency: 50/60 Hz

### DC adjustable power output range:

PCH-051 float charging: 12.5~14.5 VDC, factory default: 13.5 VDC (fully charged voltage)

PCH-051 bulk charging: 13.5~15.5 VDC, factory default: 14.5 VDC

PCH052 float charging: 25.6~27.6 VDC, factory default: 26.6 VDC (fully charged voltage)

PCH052 bulk charging: 26.6~28.6 VDC, factory default: 27.6 VDC

DC output current : PCH051 : 12 V / 5A

PCH052 : 24 V / 5A

Charging method : Bulk and float

Protections : Over load, short circuit, reverse polarity

Efficiency : Greater than 75 % at full load

Working temperature : -30~ 60 °C

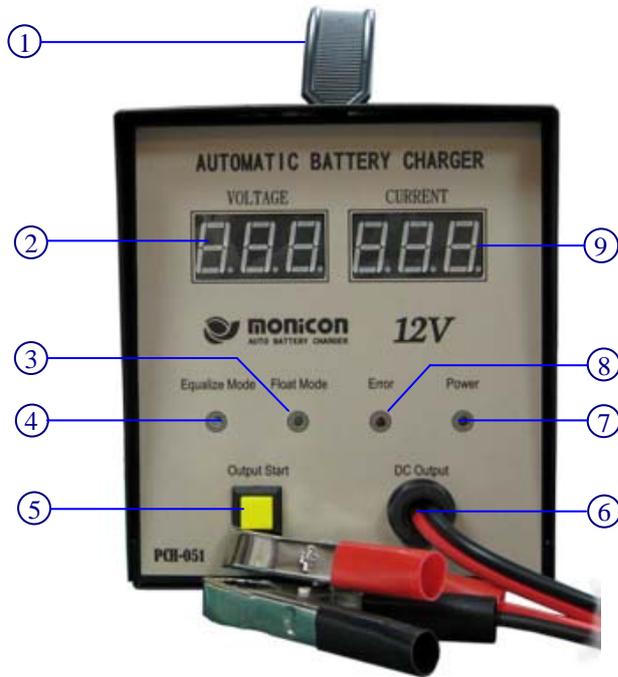
Storage temperature : -40~85 °C

Relative humidity : 90 % Maximum

Dimensions : 198 mm(L)\* 112mm (W) \* 138mm (H)

Weight : 1180 g ±10 g

### 3、Panel Description



- PCH-051/052 :
- (1) Handle
  - (2) DC output voltage
  - (3) Float charging indicator
  - (4) Bulk charging indicator
  - (5) Forced output button
  - (6) DC output clamp
  - (7) Power indicator
  - (8) Error indicator
  - (9) DC output current
  - (10) Power switch
  - (11) Fuse
  - (12) AC power socket
  - (13) Cooling fan



**使用說明**

1. 注意電源線應妥善切斷與插妥，在將電源線插入適宜的插座防止過熱產生火花。  
 2. 切勿將任何液體或粉狀物弄到充電器上，以免引起短路。  
 3. 切勿將任何液體或粉狀物弄到電池上，以免引起短路。  
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## 4、Dimensions

