

# 12V6A

## 3-STAGE AUTOMATIC SMART BATTERY CHARGER FOR MOTORCYCLE, CAR, ATV, ETC...

(AGM, GEL, SLA, WET, DEEP CYCLE... BATTERIES)

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model: TK-360

# USER MANUAL



THIS MANUAL CONTAINS IMPORTANT SAFETY  
AND OPERATING INSTRUCTIONS

# IMPORTANT SAFETY INSTRUCTIONS

Please read this manual and follow the instructions carefully before using.

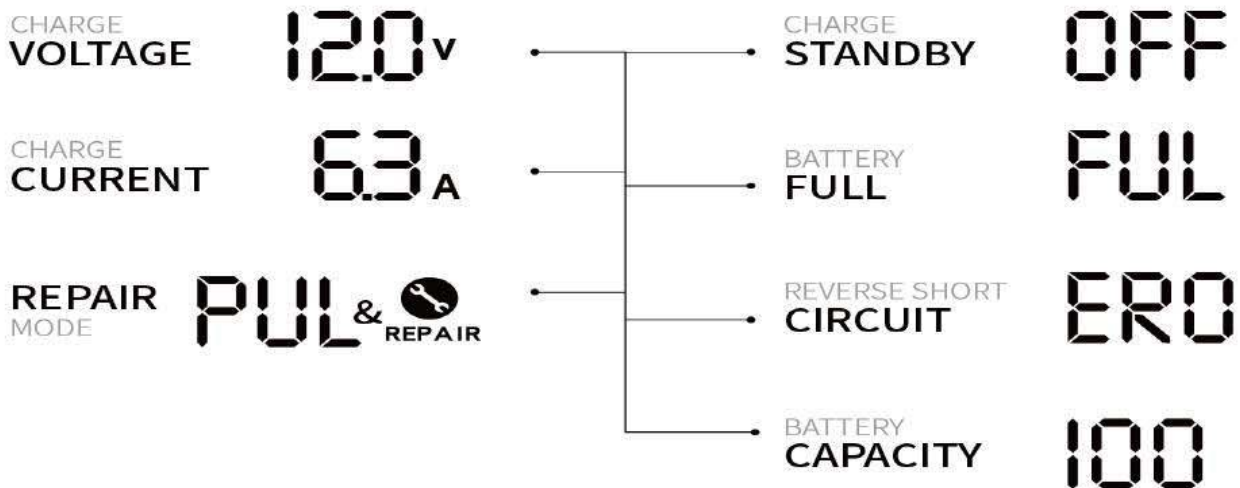
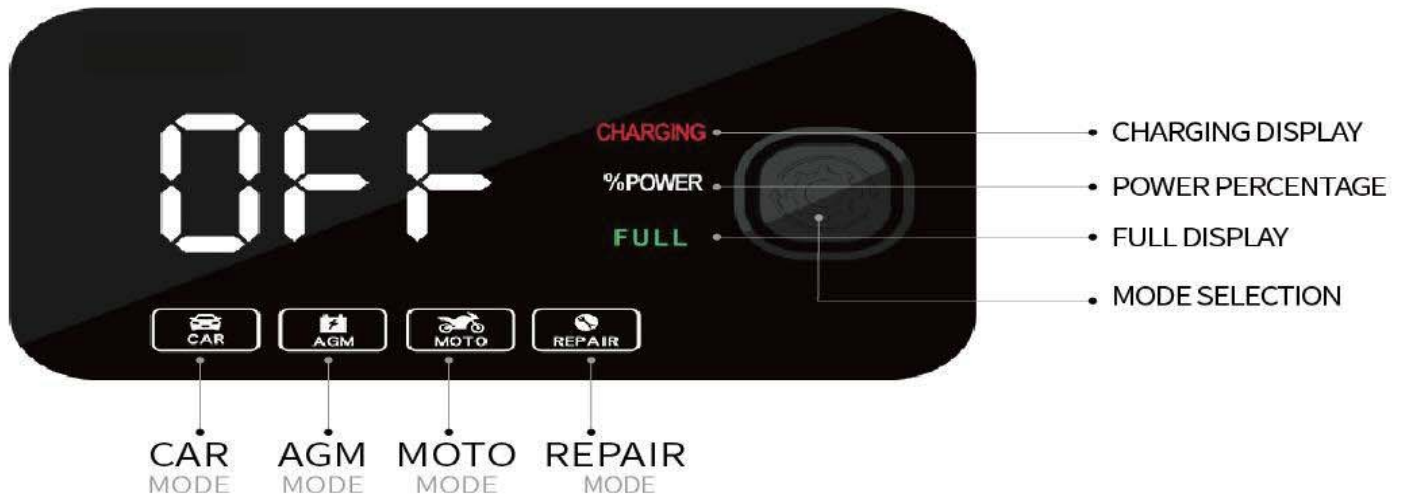
## WARNING:

- (1) Before charging, observe whether the battery is damaged and whether there are abnormal phenomena such as liquid overflow around the battery. If there are abnormal phenomena, please charge carefully
- (2) Do not charge in air melting environment.
- (3) Avoid high temperature and high humidity around when charging
- (4) When charging, the surface of the battery should not cover objects, and the battery should be erected and placed directly without skewing.
- (5) When the sulfide at both ends of the positive and negative electrodes of the battery is too high, the sulfide should be removed first, so that the battery can be charged better
- (6) When the voltage of the rechargeable battery is very low, please repair it before charging it
- (7) When the output end of the charger is connected to the battery, it is operated with one hand, that is, after clamping the black clip on the negative electrode of the battery with one hand, it is clamped on the positive electrode of the battery with the red clip.

## MAIN FEATURES:

- ▶ High efficiency (>85%).
- ▶ GEL, Standard, AGM, MOTO battery type can selectable
- ▶ The 3-stage microprocessor controlled charging process provides the best possible application and enables efficient battery charging.
- ▶ Charging voltage adapts to temperature, that can prevent over- or under-charging of battery.
- ▶ Capable of recharging severely discharged or heavily sulfated battery.
- ▶ Reverse polarity protection, short circuit protection, over-charge protections, parks free contact.
- ▶ LCD display: voltage, current, temperature etc.
- ▶ Ease of use. Clear charging status display.
- ▶ Full microprocessor controlled.
- ▶ Do not over-charge your battery even it is kept connecting in any mode.

## LCD DISPLAY:



## BRIEF INTRODUCTION OF PRODUCT FUNCTIONS:

- (1) Output short circuit and anti-reverse connection: the product has the prompt of output short circuit and reverse connection battery (reverse connection 1-2S detection, when reverse connection or short circuit is detected, the display panel displays "ERO", and the product will not be damaged due to reverse connection or short circuit in the detection process), and when reverse connection is processed by microprocessor program, there will be no reverse connection spark phenomenon;
- (2) Battery power detection: No AC input voltage is connected, the battery is clamped at both ends of the positive and negative poles of the battery (red, positive, black and negative), and the current and voltage parameters of the battery can be displayed (the display panel displays the voltage and power, and the power is displayed in percentage form, and the first power-on is self-tested for 6 seconds, and the data is displayed after self-test)
- (3) Overtemperature protection and overcharge protection

(4) Battery full progress bar: The charging progress bar is displayed during the charging process, which is displayed in the form of percentage, and the full display is 100%

(5) LCD display status:

A: Full status: "FUL"

B: Clip disconnect mode: "OFF"

C: Failure mode: "ERO"

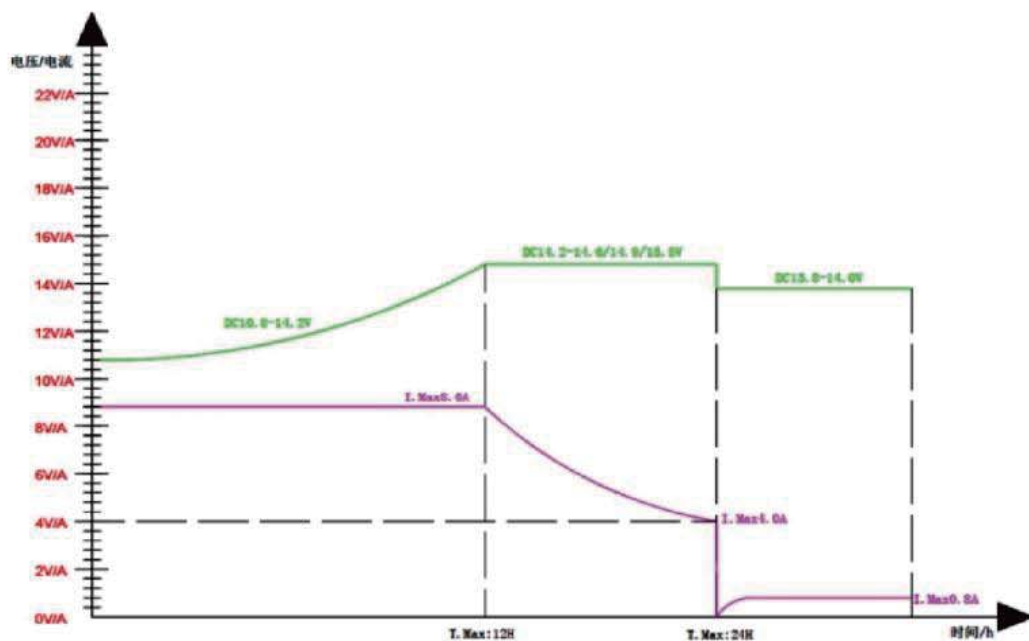
E: Charging status: Voltage, current and charging progress

F: Repair mode: "PUL" and repair icon flashes

H: Repair finished: "FUL" repair icon always on

G: Detect battery charge: Voltage, battery charge in percentage form

### 3-STAGE CHARGING PROCESS

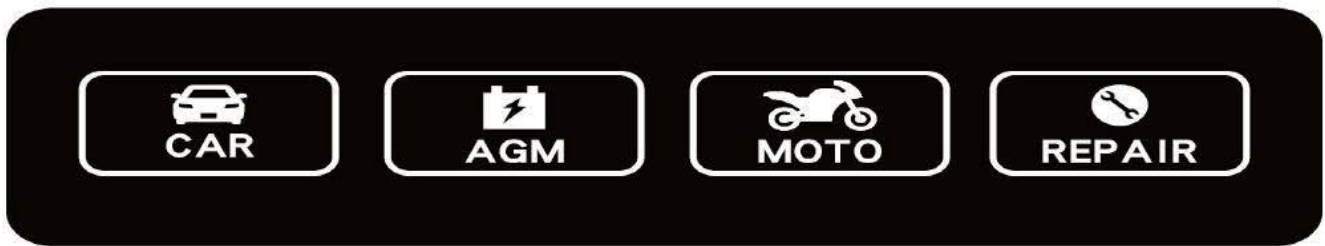


Voltage/current

Time

1-stage: constant current, 2-stage: constant pressure, 3-stage: floating charge

## CHARGER MODES:



①



**CAR**

### **CAR**

Automobile mode

Standard Batteries Mode

For SLA, WET, DEEP CYCLE, EFB, Calcium Batteries

②



**AGM**

### **AGM**

Standard Batteries Mode

For charging AGM batteries

③



**MOTO**

### **MOTO**

Motorcycle Batteries Mode For charging motorcycle batteries

④



**REPAIR**

### **REPAIR**

Repair Mode (16 hours)

An advanced battery recovery mode for repairing and storing, old, idle, damaged, stratified or sulfated.

Not all batteries can be recovered, only can use on Motorcycle and Car batteries

## CONNECT TO THE BATTERY:

Do not connect the AC power plug until all other connections are made. Identify the correct polarity of the battery terminals on the battery. Do not make any connections to the carburetor, fuel lines, or thin, sheet metal parts. The below instructions are for a negative ground system (most common). If your vehicle is a positive ground system (very uncommon), follow the below instructions in reverse order.

- 1.) Connect the positive (red) clamp to the positive (POS,P,+) battery terminal.
- 2.) Connect the negative (black) clamp to the negative (NEG,N,-) battery terminal.
- 3.) Connect the battery charger into a suitable electrical outlet. Do not face the battery when making this connection.
- 4.) When disconnecting, disconnect in the reverse sequence, removing the negative first (or positive first for positive ground systems).

## BEGIN CHARGING:

- 1.) Verify the voltage and chemistry of the battery.
- 2.) Confirm that you have connected the battery clamps or eyelet terminal connectors properly and the AC power plug is plugged into an electrical outlet.
- 3.) Press the mode button to toggle to the appropriate charge mode.
- 4.) The mode LED will illuminate the selected charge mode and the Charge Icon will illuminate (depending on the health of the battery) indicating the charging process has started.
- 5.) The charger can now be left connected to the battery at all times to provide maintenance charging.

## TECHNICAL SPECIFICATIONS:

	<b>MODEL:</b> TK-360
<b>TYPE:</b> Smart & Automatic	<b>AC INPUT:</b> 100-240V 50/60HZ
<b>OUTPUT VOLTAGE:</b> 12V	<b>OUTPUT CURRENT:</b> 6Amax.
<b>COOLING:</b> Fan	<b>APPROVAL:</b> CE/FCC
<b>MINIMUM START VOLT:</b> Battery Voltage >7.0V	
<b>INPUT POWER WITH LOAD:</b> Max. 96W	
<b>INPUT POWER UNDER NO LOAD:</b> 2.6W	