



12V

Battery
Charger

HU6552

Charging Current
3.8 Amp

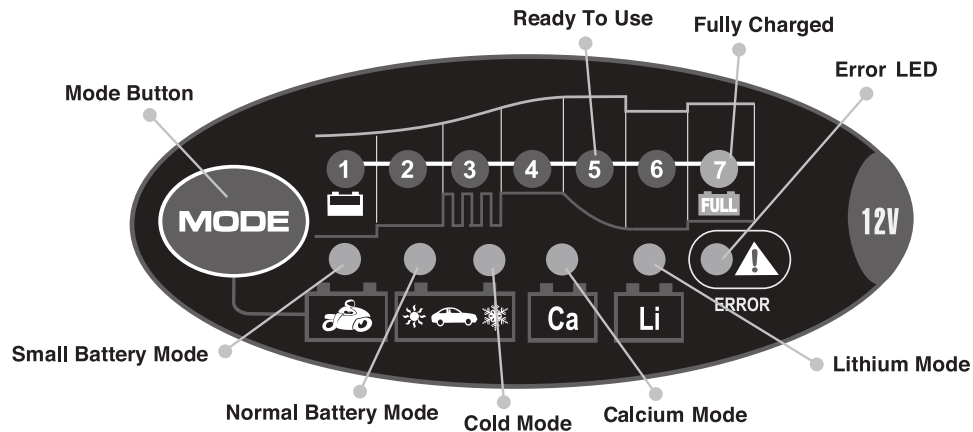
Battery Capacity
1.2-120Ah

User Manual

For Lead Acid / Lithium / Calcium Batteries

7 Step
Charging

User's Manual And Guide To Professional Battery Charging



For Your Safety

This manual contains important safety and operating instructions. Read this manual carefully before using the charger for the first time and keep the manual in a safe place for future reference.

Safety Information

HULK Professional 3.8A Battery Charger is designed for charging 12V 1.2-120Ah Lead-Acid rechargeable batteries. It is not intended to supply power to low voltage electrical system. Do not use it for any other purpose

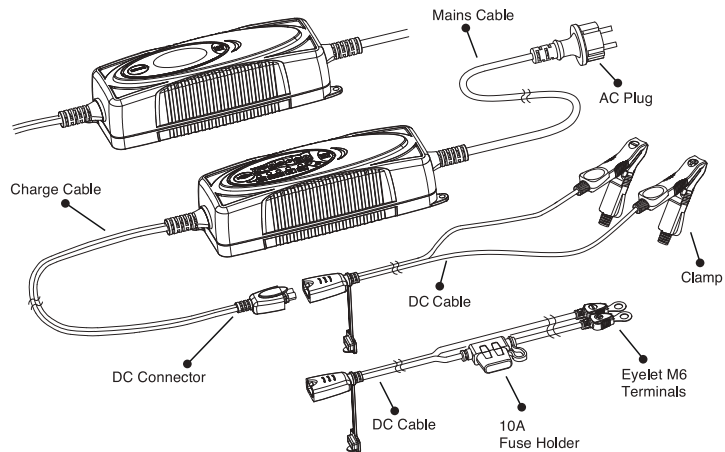
⚠ WARNING! DO NOT ATTEMPT TO CHARGE A NON-RECHARGEABLE BATTERY (PRIMARY CELLS)

- Before charging make sure the input power is as per rated specifications, otherwise the charging performance may be seriously affected.
- **Do not** use the charger with a damaged cable. It must be replaced by the manufacturer, its service agent or similarly qualified technician in order to ensure safety.
- Never charge a damaged battery.
- Never charge a frozen battery.
- Never place charger above battery being charged, gases from battery will corrode and damage charger.
- **Do not** cover the charger while charging.
- During charging the battery must be placed in a well ventilated area.
- While charging always use safety glasses, gloves, protective clothing and keep your face away from the battery.







- **Explosion hazard!** A battery being charged could emit explosive gasses. Avoid smoking, open sparks or flames in the vicinity of the battery. Explosive and flammable substances such as fuel or solvents should not be kept in the vicinity of the charger or the battery.
- **Danger of chemical burns!** Battery acid is highly corrosive. If your skin or eyes come into contact with acid, immediately rinse the affected part of the body with excessive water and seek medical advice.
- All batteries eventually fail. If that happens during charging, charger's advance control system will detect it, but there may some rare errors still exist in the battery, so do not leave charging unattended for a long period of time.
- Normally, a battery is grounded either, on negative or positive terminal to the vehicle's chassis. The charger's DC Clips are to be connected to the battery terminal **not connected to the chassis first**. The other connection is to be made to the terminal **connected to the chassis**, far from the battery and fuel line. The battery charger is then to be connected to the power supply.
- After charging, disconnect the battery charger from supply mains. **Remove the chassis connection and the battery connection**, respectively. This will reduce back drain current.
- Keep away from children.

Contents

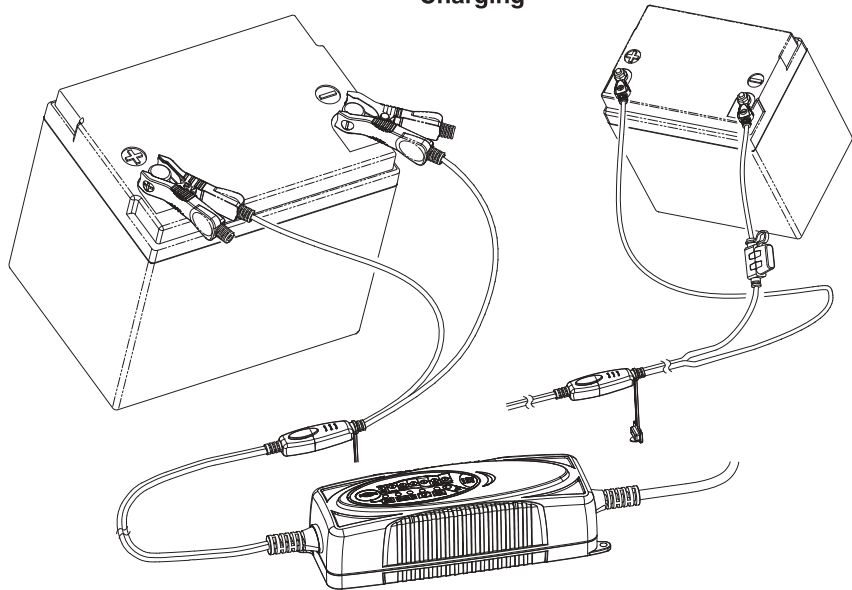
- 1) HULK Professional 3.8A Battery Charger
- 2) Quick connect battery leads with clamps
- 3) Quick connect battery leads with eyelet terminals (Ø 6.3mm) with in-line battery protection fuse (10A) for permanent attachment to the battery posts to allow quick connection/disconnection through snap-connector.
- 4) User Manual



Charging Modes

Symbol	Description
	Mode 12V/0.8A This mode is suitable for batteries less than 14 Ah
	Mode 12V/0.8A This mode is suitable for Calcium batteries less than 14 Ah
	Mode 12V/3.8A This mode is used for WET, MF, VRLA, EFB and GEL batteries
	Mode 12V3.8A This mode is recommended for AGM batteries. This mode is also suitable for charging batteries in sub-zero temperatures.
	Mode 12V/3.8A This mode is used for Calcium batteries.
	Mode 12.8V/3.8A This mode is used for 10-80Ah Lithium batteries

Charging



1) Charging of a permanently installed battery in a vehicle

- a) Before connecting or disconnecting the battery leads, the power cord should be removed from the mains.
- b) Check polarity of the battery post. A positive (“+”) battery post usually has a larger diameter than a negative (“-”) post.
- c) Identify the pole of battery which is connected to the chassis (earth). Normally the negative terminal is connected to the chassis.
- d) **Charging of negatively earthed battery:**
 - Connect the red (+) clamp to the positive (+) terminal of the battery.
 - Connect the black negative (-) clamp to the vehicles chassis away from the fuel line or any moving parts.
- e) **Charging of positively earthed battery:**
 - Connect the black negative (-) clamp to the negative (-) terminal of the battery.
 - Connect the red positive (+) clamp to the vehicles chassis away from the fuel line or any moving parts.

2) Charging of a battery not connected to a vehicle

- a) Before connecting or disconnecting the battery leads, the power cord should be removed from the mains.
- b) Connect the red clamp or eyelet terminal (“+”) to the positive (“+”) pole of the battery and the black clamp or eyelet terminal (“-”) to the negative (“-”) pole.

3) Connect charger to the mains.

4) Select charging mode

Press MODE button once to change charge to different options.




For Small batteries less than 12Ah








Ca+

For normal batteries larger than 12Ah

Press MODE button for 3 second to change to  .

Bulk Charging Time

Battery Size (Ah)	Mode	For about 80% Charge (hours)
1.2		2
6		7
8		9
12		14
20		6
60		16
80		22
120		32

Batteries below 12 Ah should not be charged with 3.8A current

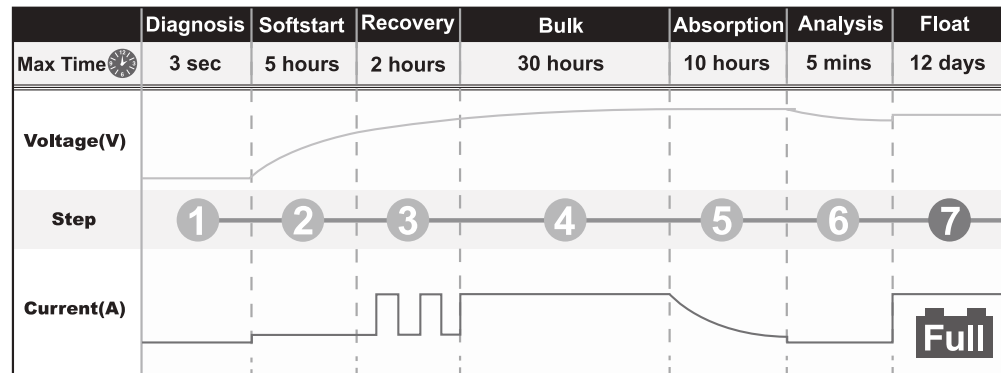
Technical Data

Model	3.8 Amp
Input Voltage AC	220 - 240VAC, 50Hz
Output Voltage	Nominal: 12V
Input Current	0.6A RMS max
Minimum Battery Voltage	> 3.0V
Output Power	57W
Efficiency	> 80%
Charging Current	3.8A max
Back Current Drain*	< 10 mA
Standby Power	< 1W
Operating Temperature	0°C to 40°C
Type of Charger	Seven step, fully automatic, switch mode charging
Type of Batteries	12V Lead-acid rechargeable batteries (<i>WET, MF, VRLA, AGM, GEL, EFB and Calcium</i>) Lithium: 12.8V; 4-cells LiFePO4
Battery Capacity	Lead-acid: 1.2 - 120Ah (charging) Lithium: 10 - 80 Ah
Dimensions (L x W x H)	188.6 x 62.3 x 48.8mm
Housing Protection	IP65 (Dust and Splash proof) Indoor
Weight	0.7kg
Noise Level	< 50 dB (Tested from a distance of 50cm)

* = Back current drain is the amount of current drawn by the charger from battery, when the charger is connected to the battery, without power cord connected. **HULK Professional 3.8A Battery Charger** has extremely low back current drain.





Charging Phases


HULK Professional 3.8A Battery Charger performs a 7-step fully automatic charging cycle.



- 1) Diagnosis** : The unique diagnostic function checks status of battery and ascertains if battery can accept charging.
- 2) Softstart** : Recovers severely discharged batteries over 3V under small current charge.
- 3) Recovery** : A deeply discharged battery of over 7.5V can be recovered and charged with pulse charging small current.
- 4) Bulk** : 80% of energy is returned in this phase with maximum charging current.

- 5) Absorption** : With use of declining current charging up to almost 100% is achieved.
- 6) Analysis** : Checks status of charge. If battery does not retain energy, it must be replaced.
- 7) Float** : Battery is fully charged and ready to use. The battery is maintained at maximum level by applying low current charge.

Problem	Indication	Possible Cause	Solution
Charger does not work	Indicator lights are not on	a) Charger is not plugged in b) Poor electrical connection c) AC outlet is dead d) Charger is not connected to a battery over 2 mins	a) Plug in b) Check AC connections and make sure mains is switched on c) Check receptacle d) Charger is in energy save mode
Charger has no DC output	 Flashing  ERROR	a) Poor contact from charger to battery b) Charging is interrupted in Phase 2 c) Charging is interrupted in Phase 3 d) Charging is interrupted in Phase 6 e) Battery may be defective / excessive current draw f) Battery may be severely sulfated	a) Check connectors are not greasy or corroded and making a clean connection and there are no loose or damaged connections b) Battery cannot accept charge, it must be replaced c) Battery is extremely sulphated, it must be replaced d) Battery cannot retain charge, it must be replaced e) Dead battery, it should be replaced f) If battery cannot be de-sulfated, it must be replaced
Charger has no DC output	  ERROR	a) Battery is connected with reverse polarity poles	a) Check DC connections between charger and battery and make sure they are not short circuited

Tested and approved by  and conforms to -
 EN 60335-1
 EN 60335-2-29
 EN 62233:2008
 EN 55014-1
 EN 55014-2
 EN 61000-3-2
 EN 61000-3-3

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Made in China

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