



## BATTERY CHARGER 25A

ITEM: 21530



## OWNER'S MANUAL AND SAFETY INSTRUCTIONS

SAVE THIS MANUAL: KEEP THIS MANUAL FOR SAFETY WARNINGS, PRECAUTIONS, ASSEMBLY, OPERATING, INSPECTION, MAINTENANCE AND CLEANING PROCEDURES. WRITE THE PRODUCT'S SERIAL NUMBER ON THE BACK OF THE MANUAL NEAR THE ASSEMBLY DIAGRAM (OR MONTH AND YEAR OF PURCHASE IF PRODUCT HAS NO NUMBER)

FOR QUESTIONS PLEASE CALL OUR CUSTOMER SUPPORT: 909.628.4900 MON-FRI 9AM TO 3PM PST



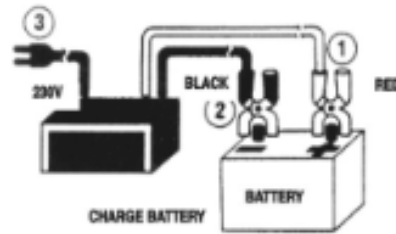
## GENERAL SAFETY WARNINGS

The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator. Read carefully and understand all **ASSEMBLY AND OPERATION INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

- The battery charger should be used in a well ventilated area outdoors, to avoid an accumulation of gasses. Avoid using the battery charger in wet conditions.
- Remove the caps from the battery's elements before beginning to charge.
- Check the level of electrolytic liquids covers the batteries elements; otherwise add distilled water up to the level indicated on the battery.
- Do not touch the battery's electrolytic liquid, it is very corrosive.
- Clean the battery's terminals to ensure correct contact with the pliers.
- Avoid contact between the pliers when the charger is operating.
- If the charger is used for a battery that remains installed on a vehicle, comply with the instructions of the vehicles manufacturer.
- Check that the charger's features are compatible with the battery and the power supply network, a grounded power outlet is necessary.
- Do not expose the battery to rain, snow or other sources of humidity.
- The appliance and battery should be used far away from any flames, sparks and do not smoke while using the charger.
- Only charge rechargeable batteries. The charging of non rechargeable batteries or other products are prohibited.
- Never attempt to charge a frozen battery.
- Do not install or operate a dropped or otherwise damaged charger.
- Remove watches, bracelets or anything of that nature before working on the charger.
- Do not touch any uninsulated parts or components when the power is ON.
- Do not obstruct the ventilation openings or the airflow space.
- The Battery Charger is not intended for use by children, or anyone with reduced sensory or mental capabilities, or lack of experience and knowledge.
- The battery terminal is not connected to the chassis and has to be connected first, the other connection is to be made to the chassis, remote from the battery and fuel line. The battery charger from the supply mains, then remove the chassis connection and the battery connection. If the supply cord is damaged, it must be replaced by the manufacturer.



Do not discard this battery charge with other household wastes. Dispose it at an appropriate recycling, collection point provided in your state or county.



## 1. CHARACTERISTICS :

type	input	output			Battery capacity Ah
		V=	A=	Fuse calibre	
	220-230V-50-60Hz	6/12	4.5	10	25-100
10		12/24	6	15	32-150
15			9	15	32-150
20			11	20	60-200
25			16	25	80-250
30			24	30	
40			30	50	
50					

**Comment:** if this appliance's power supply cable is damaged, it should be replaced with a special cable ordered from the manufacturer.

### BEFORE STARTING TO CHARGE:

Before beginning to charge check that the capacity of the battery (Ah) to charge is not inferior to that indicated on the appliance.

1) Remove the battery's caps (if not sealed) so that the gas produced can escape. Check that the level of the electrolytic liquid covers the battery's elements; otherwise add some distilled water up to 5 to 10mm above the elements. Note that the condition of charge of a battery is given by a battery hydrometer. The following density values (kg/l at 20°C) give reference marks:

1.28= battery charged

1.21= half charged

1.14= battery discharged

An off-load battery output inferior to 9V for a 12V battery indicates an insufficient charge.

**Caution:** take precautions when handling batteries, the electrolyte is a very corrosive and dangerous product.

2) The power supply cable not being plugged into the power supply, select with the switch (option according to model) the voltage of the battery to charge.

3) Put the red cable pliers on the (+) terminal of the battery and the black cable pliers on the (-) terminal;

**Comment:** If the battery is charged in place, first connect the charging cable to the battery terminal that is not grounded (car body), the other connection should be done on the car body, far from the battery and fuel pipes.

Plug the power supply cable into the electric source and switch the main button to the "ON" position.

The ammeter indicates the current sent to the battery (beginning of charge); during the load the pointer deflects slowly towards very small current values, depending on the battery.

When the battery is completely charged, the liquid starts to boil; charging should be stopped as soon as the boiling starts to keep the battery in good condition and to avoid risks of explosion of the gasses emitted.

### Comment:

Case of "no maintenance" type batteries, often sealed.

Charging should be carried out with the greatest vigilance possible.

Charge slowly and closely watch the voltage at the battery's terminals with a multimeter (not supplied).

Stop the charging when you obtain the following values:

7.2 V for a 6V battery; 14.4V for a 12V battery and 28.8V for a 24V battery.

### Simultaneously charging several batteries

Serial or parallel connections are used to simultaneously charge several batteries. A serial connection is preferable for it allows controlling with the ammeter the current passing in each of the batteries.

**Note:** for the serial connection of 2 batteries the voltage selected should be doubled,

**Example:** for two 12V batteries select 24V.

### End of charge

When the charging is finished, first put the main switch on the OFF position "O" and unplug the power supply cable from the electric source. Then remove the cable pliers from the battery's terminals. Do not forget to put the caps back on the battery.

**Comment:** if the battery is charged in place, after having unplugged the power supply cable from the electric source first remove the charger cable on the grounded terminal (car body).

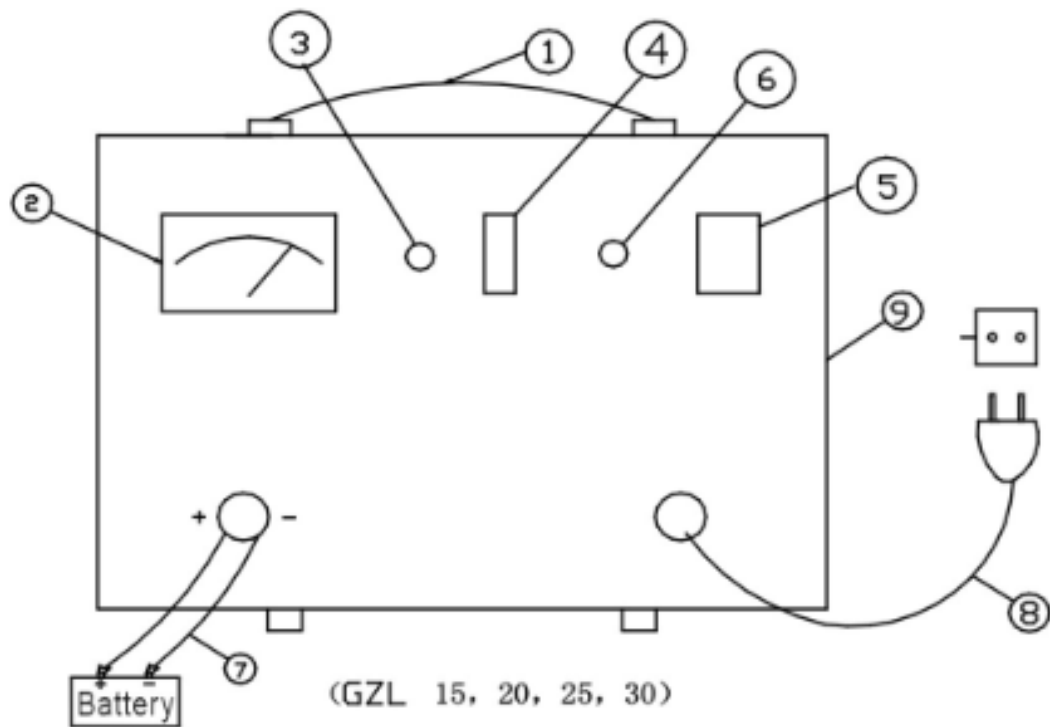
Protection (options according to model)

The fuse protects:

- From overloads (too much current supplied to the battery);
- From short-circuits between the cable pliers;
- From inversed polarities of the battery.

A burnt fuse should be replaced with an exactly identical fuse otherwise serious risk of accident to people and deteriorations of equipment are probable.

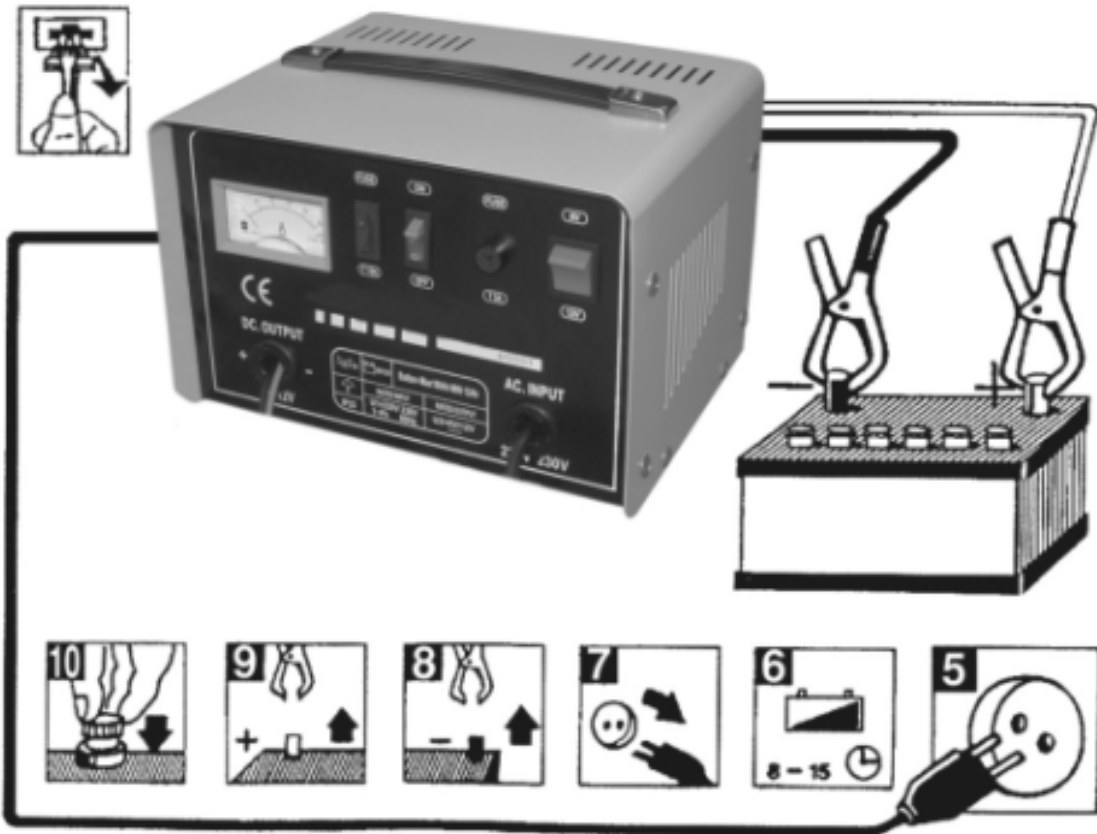
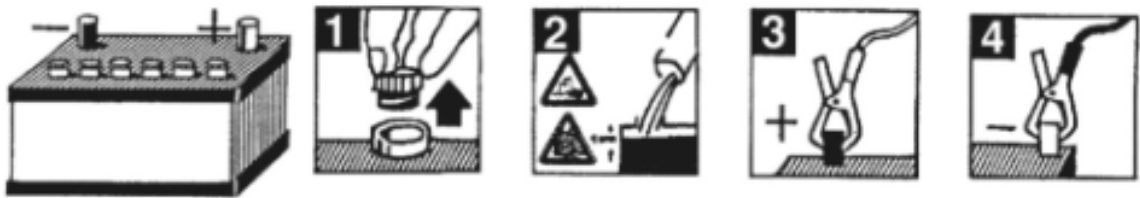
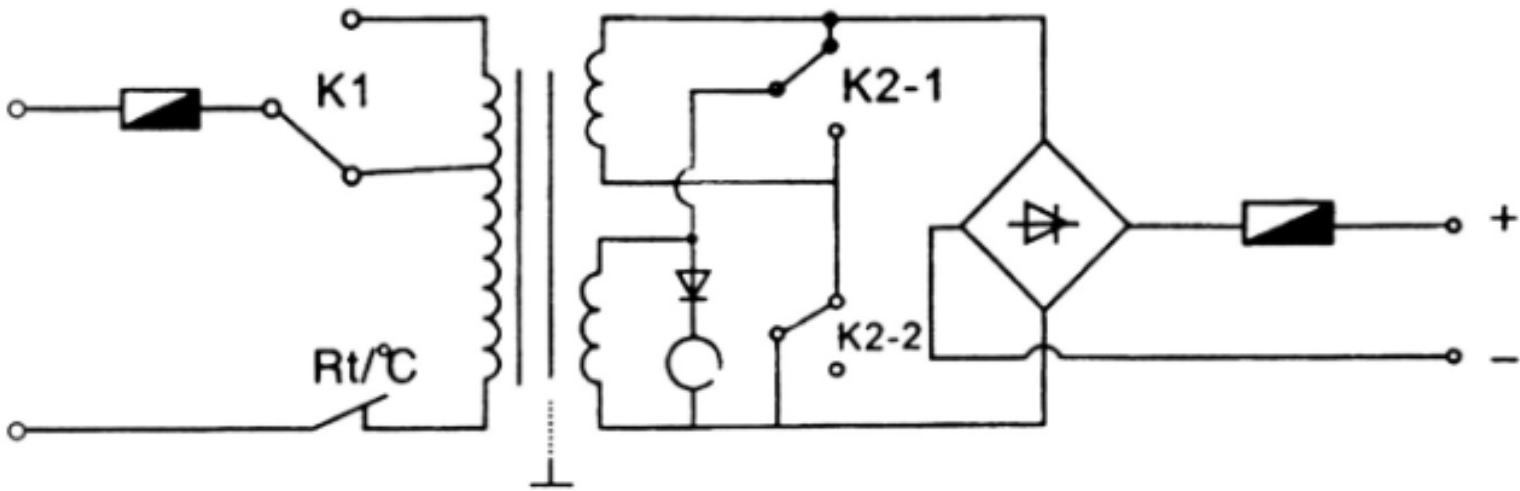
# PANEL DIAGRAM



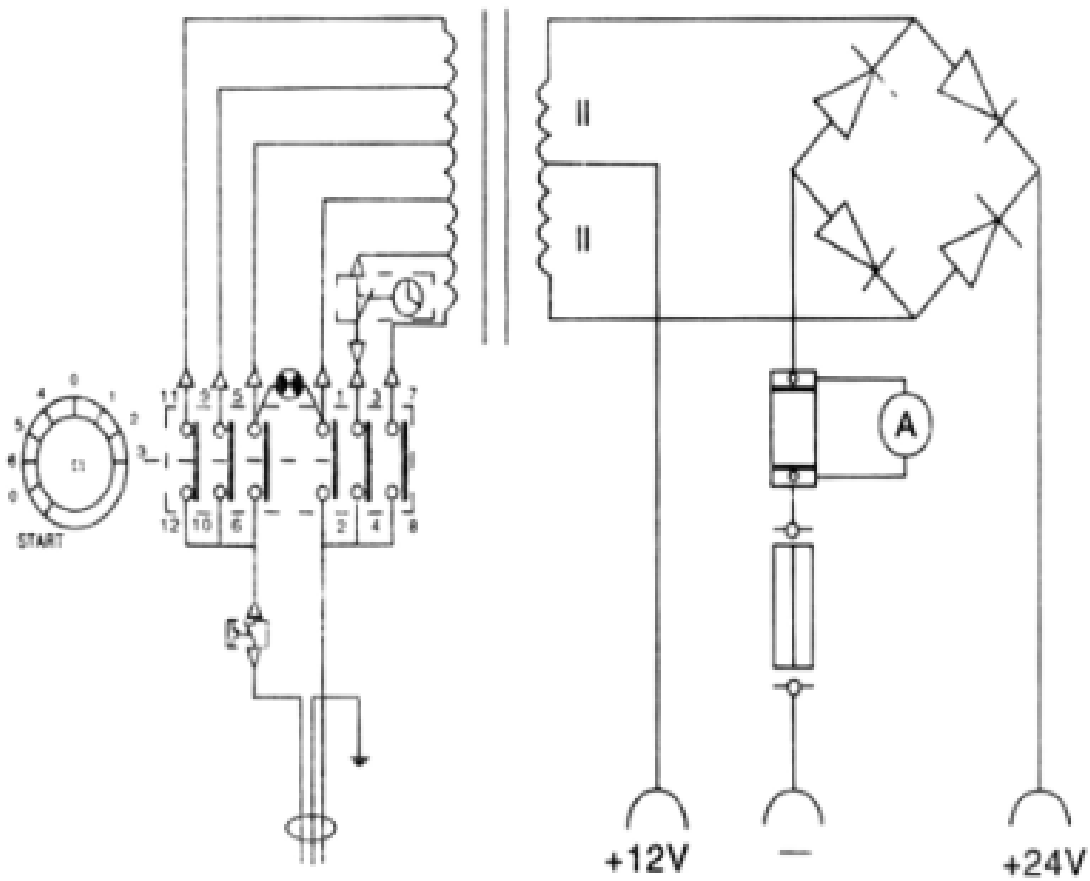
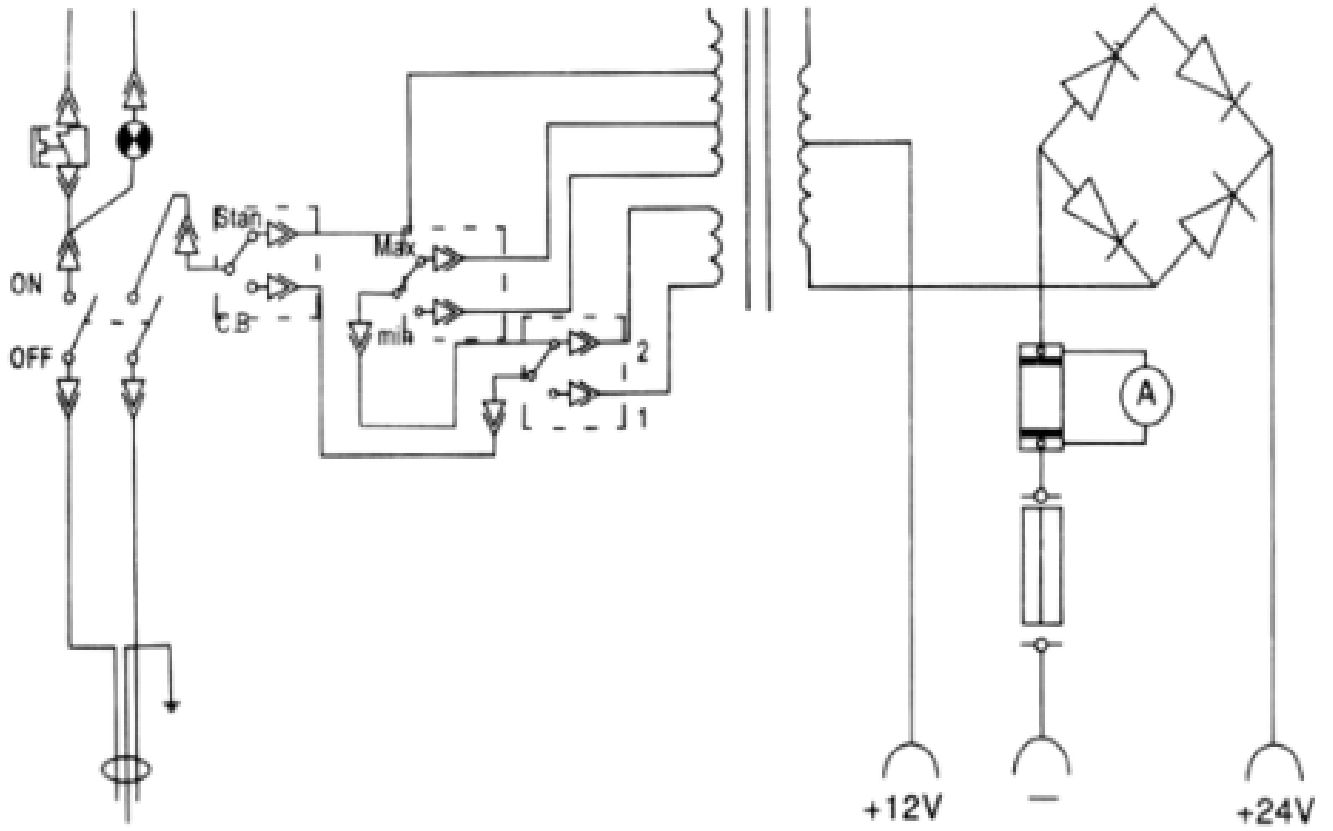
- 1.Handle    2.Output current meter    3.Over-current.protection  
4.Big/Small switchover    5.12V/24V switch    6.Power fuse  
7.Electricize clamp    8.Input cable    9.Shell

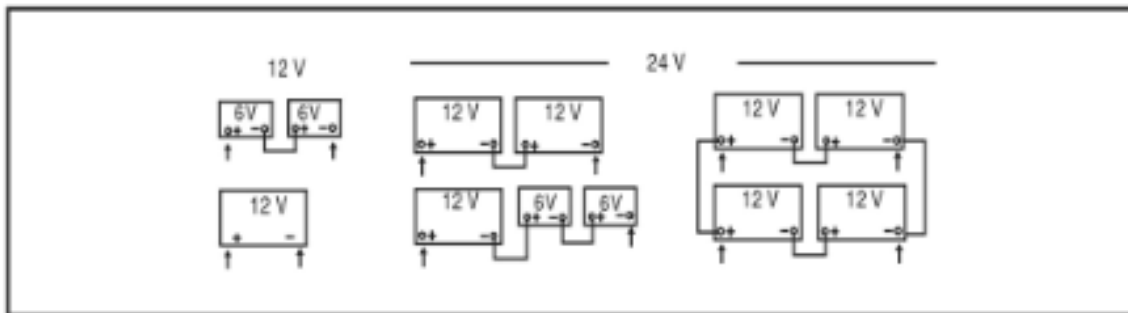


# ELECTRICAL DIAGRAM



# ELECTRICAL DIAGRAM





When refresh the storage batteries for vehicals,the charging collets should be removed. When starting vehicals please note:

Firstly, when starting high-power engine, it is better to make a quick charge of about 15 minutes before starting;

Secondly, when starting diesel motor , forewarm up the spark plug before starting. When connecting the collets,The red collet goes to the positive terminal,while the black one goes to the negative tenmianl.

### 3. OPERATION:

FOR CLASS BOOSTER-230,-330,-430;

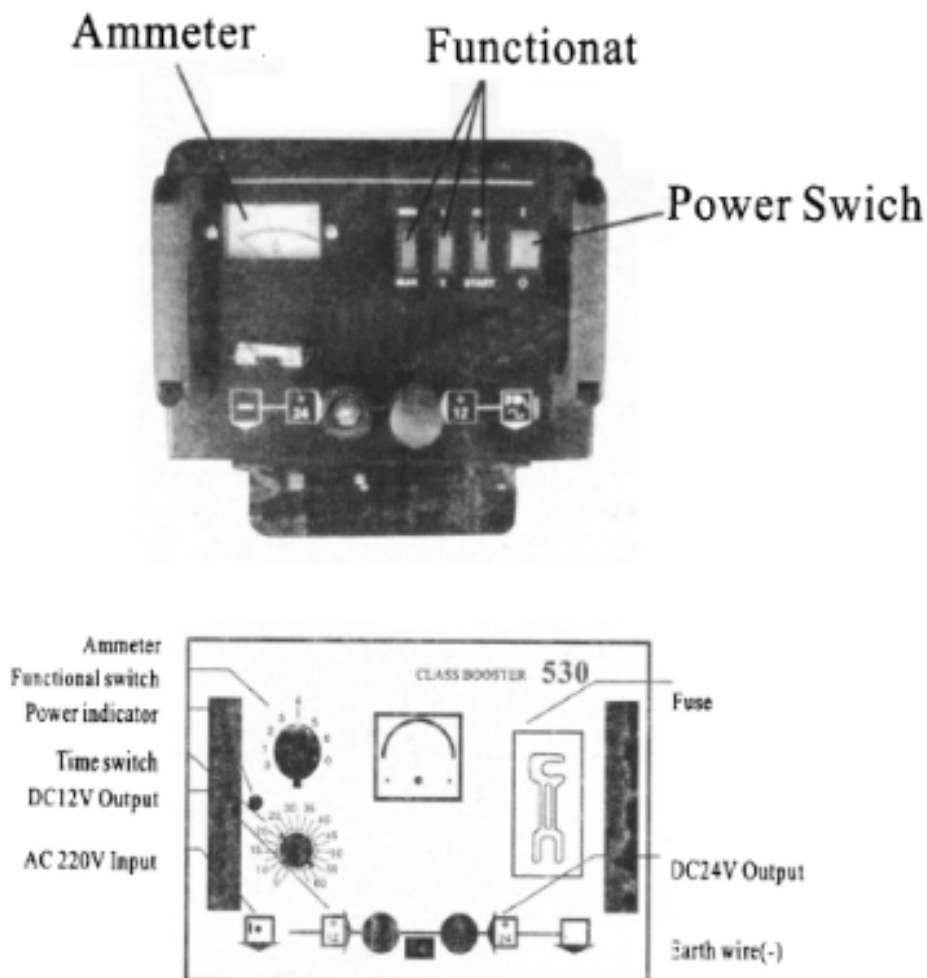
- 1) Choose appropriate voltage(12v or 24v),and connect the charging collets well;
- 2) Turn on switch 2 to CB , and switch 4 to MINMAX, and switch 3 to (alow-charge) or to 2 (quick charge);
- 3) Turn on switch 1 to I, and begin to charge ;
- 4) When starting engine of vehical, first turn on switch 2 to "start",then turn on switch 1 to I, wait for 2 minutes, at last start the engine for 4 to 5 seconds . If The engine will not start for 3 or 4 times ,please wait for 10 minutes and repeat the operation mentioned above.

FOR CLASS BOOSTER -530, -630:

- 1) Choose appropriate voltage (12v or 24v), and connect the charging Collets well,
- 2) Turning on switch 1 to 1, 2 or 3 is slow charge, while to 4, 5 or 6 is Quick Charge. Quick charging time usually is 1 hour, controlled by timer
- 3) When starting engine of vehical, first turn on switch 1 to "start",wait for 2 minutes ,and start the engine for 4 to 5 seconds. If The engine willnot start For 3 or 4 times,please wait for 10 minutes and repeat the operation Mentioned above.

#### 4. APPENDIX:

Drawing for equipment installation and instrument panel.





Before operation, users should read this specification carefully.

## 1. NOTE:

- Turn off the power before taking off the charging collet of the battery;
- When charging up, it may generate inflammable gas, so fire and spark are strictly prohibited, and avoid erosion of rainwater, snow and dampness;
- The red collet goes to the positive terminal, while the black one goes to the negative terminal. Don't reverse the collets when charging;
- Don't use damaged wires and /or collets. The battery charger should avoid shake and crash when charging. And don't refresh frozen storage batteries;
- Must Use standard fuse;
- Before charging, clear the storage battery carefully and check its initial voltage,

## 2. PRINCIPLE

When charging, the charging current lies on the type of storage battery, generally is about 10% of the max. current of the battery.

Time: Upon to the type of storage battery. The formula is: Charging Time = battery current / charging current

Additionally, with the charging time goes by, the charging current will drop, so the actual charging time should 1/4 times longer than theoretical time.

This machine can refresh one or more batteries simultaneously as show below. Certainly, the charging time will expand.

# DISCLAIMER

## PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

**Record Product's Serial Number Here:** \_\_\_\_\_

**Note:** If product has no serial number, record month and year of purchase instead.

**Note:** Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.



**SAVE THESE INSTRUCTIONS.**

## Questions, problems, missing parts?



Before returning to your retailer, our exceptional customer service is here to help.

Call Us: 909.628.4900

Email Us: [info@starktoolsusa.com](mailto:info@starktoolsusa.com)

Hours of Operation: 9am - 4pm (Monday - Friday)

**PRODUCT MADE IN CHINA**