

High Rate
MULTIPLE Battery Charger
OPERATING INSTRUCTION

HRC-15010



DENGEN CO, LTD. Osaka Japan

NOTE:

Please read this manual carefully before starting to use this DENGEN battery charger. If in doubt please do not continued to use and seek professional advice.

Battery Electrolyte contained diluted sulfuric acid and is highly corrosive. Wash with plenty of water if come into contact with skin or any surface.

Always use goggle and rubber glove with plastic apron when handling battery and charging.

Always ensure that battery is / are charge in a well ventilated place and there must be no flame or spark around.

For prolong charging without supervision or monitoring, it is good to connect the charger to a timer control.

FEATURES

1. Chargeable from 6V to 96V (Normal and Fast charging)
2. Easy to charge and simplified operation.
3. Meter with built-in illumination for use during night charging or where the area is not well illuminated.
4. There will be no electric shock and leakage due to the system is double insulated type.
5. When reverse connection or wrong connection the in-built over current circuit breaker & fuse will activate in second and trip the system.

SPECIFICATIONS

Model	: HRC15010			
Applicable Battery	: 6VDC 2ah - 12Vdc 100ah (10 hrs)			
Input AC.	: 110Vac	: 117Vac	: 125Vac	: 200Vac
	: 210Vac	: 220Vac	: 230Vac	: 140Vac
	: 250Vac Single Phase 50-60Hz			
Power / P. FAC'R	: 1.4KVA/97%			
Output D.C	: 6Vdc -96Vdc Battery 10A			
Attach Cord	: Electric Cord 2.1meters Battery Cord 1.2meters (c/w crocodile clip (Red+/Black-))			
Spare fuse	: Glass Tube 3 pieces			

DIFFERENCE BETWEEN 6Vdc & 12Vdc

Apart from the size of battery, if there are 3 entrances of distilled water it is 6Vdc. If its 6 entrances it is 12Vdc.

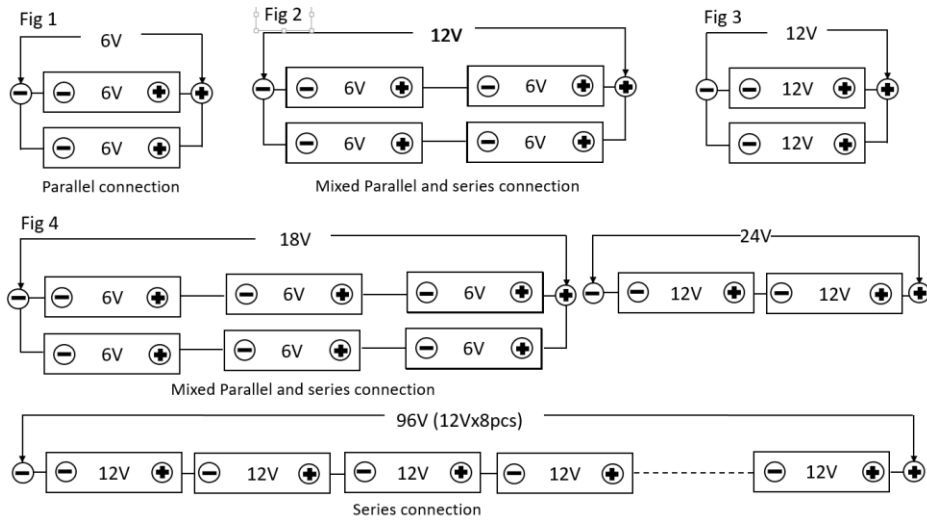
HOW TO CHARGE

1. Connect the electric cord on the back of the charger into the main electric source base one the charger specification (input voltage).
2. Connect the **RED** clip to the Positive battery terminal (+) and **BLACK** clip to the Negative battery terminal (-)
3. Ensure the battery voltage to be charge is correct. Set the function switch to the VOLT position, 6V. 12V. 18V. 24V. 36V. 48V. 60V. 72V. 84V. 96V.
4. Check the battery fluid (Water / electrolyte) and top up if necessary (do not over top up).
5. Turn the current adjustment knob and set the regular charging current.
6. Do not run over 10A for the meter indication 6V-96V
7. Turn ON the Charging.

HOW TO CHARGE 2 PIECES OR MORE BATTERIES

Charge at the parallel connection for the different size battery. In case similar size battery charge at the series connection.

Warning: Before starting to charge the battery, ensure all the positive and negative terminal is 100% connected correctly. Any reverse connection will cause the charger and battery to be damage. NEVER REVERSE CHARGE.



FIRST CHARGING

1. There are two kinds of batteries having no fluid (battery water / electrolyte).
Pre-charge (Existing or have been charge once before) and Non pre-charge battery (Totally new).
2. Instil electrolyte (diluted sulphuric acid of 1.26 specific gravity)
3. Keep it for 2 hours at least after instillation (**Do not fill up into the battery first**)
4. Start to charge at normal charging (set the charging to the lowest capacity of normal charging)
5. Charging Time set (CT) : Charge Battery about 6 hrs
Non-charge battery about 60 hrs.
6. Specific Gravity (SG) : Before charging is 1.26SG After charging is 1.28-1.29SG.

CAUTION (WARNING)

1. Keep distance between charger and battery (1 meter apart) during charging.
2. Drop current when temperature of battery during charging rises to about 40 degrees centigrade.
3. Reduce current adjustment when pointer of the Ampere meter indicate 10A over area (RED zone)
4. Prevent over filling the electrolyte in the battery as it may over flow.
5. Before end of normal charging small bubbles may appear from each terminal that is normal.
6. Additional charging is needed if the battery sulfuric acid specific gravity is under 1.25SG.
7. Charge once every 2 months if there is no trouble for engine starting.
8. V is Voltmeter and A is Ampere meter.
9. Voltmeter indicates charging voltage. Charge 12V battery to be about 15V in normal charging.

PROHIBITION

1. Use spare fuse when the installed fuse is blown. **Never use wire or other non-standard rated fuse.**
2. Do not charge with battery cap ON (CLOSE)
3. Do not touch the charging clip + & - together.
4. Do not invert the Positive and Negative charging on the battery terminal. **(Doing so will activate the circuit breaker and may damage the battery).**
5. If the connection is set conversely, D.C breaker on the back of the charger will automatically cut off.
6. Do not take off (Disconnect) the clip +/- or operate the switches during charging.
7. Do not allow fire or sparks to come near the battery as it can catch fired and explosion occurred due to emission of hydrogen when the battery is in charging.

THINGS TO CHECK IF METER DO NOT SWING OR LAMP IS NOT LIGHTED

1. Completely discharged battery cannot be charge instantly (see No. 3).
2. Check whether capacity for the fluid (Electrolyte) of each terminal of the battery is full or not.
3. If Ampere meter do not swing (move), this indicate the Specific Gravity (SG) of the battery electrolyte is dropping due to the battery is totally discharged. (In this case set current Ampere meter to No. 2 for 6V and to No. 7 for 12V than charge the battery for about 15 hrs)
4. If after charging for 3hrs at the above and the Ampere meter swing (move), than charge at normal charging continuously.
5. If lamp does not light up, check the fuse in the back of the charger.
6. When meter does not swing in spite of lamp is ON or Battery is normal, check again the connection of the clips and terminals.

This manual contain 4 pages.

Page 4 is the last page.