

and safely accept a charge. If the battery has a fault the charger will give a warning sound and the battery error warning LED will illuminate, along with an audible beeper. The charger will cut output and not continue to charge until it is either switched off, or the battery is removed. Desulphation uses pulse reconditioning to gently remove any sulphation build up on the battery plates and prevents oxidization. Stabilizes electrolyte consistency and minimises the battery temperature rising while charging, recovers battery capacity and can help extend battery life.

#### 2. Soft Start

The soft start function improves the batteries charging capability, reduces gas and heat build-up and can improve electrolyte consistency which can become uneven in the battery cells from day to day use. A steadily increasing current is applied over a set time so as not to initially overload the battery. This stage prepares the battery for the more intense charging stages to follow.

### 3. Bulk charge

Maximum charge current is delivered to the battery to minimize charge

#### 4. Absorption

Reduces the current supplied to the battery and ensures that the battery has been completely charged without the risk of being overcharged.

### 5. Analysis – Testing the battery while charging

The charger shuts off power and measures voltage drop over a set time. If unacceptable readings are measured this may indicate an internal short or other issue inside the battery.

If the battery has a fault the charger will give a warning sound and the battery error warning LED will illuminate, along with an audible beeper. The charger will cut output and not continue to charge until it is either switched off, or the battery is removed.

#### 6. Boost / Equalisation charge

Once the battery is fully charged, the charger will equalize all of the battery cells by providing a steady set voltage over a programmed period of time, at low current.

#### 7. Maintenance charge

After the boost/ equalisation charge the voltage will maintain at a constant level, with a small pulse frequency. Current is dropped to a very low level.

### **Battery Protection Systems**

#### 1. Over-charging protection

The battery charger contains an advanced microchip monitoring and controlling system to ensure that the battery does not become overcharged which can result in the loss of electrolyte or in internal short circuit which can cause damage to the battery.

### 2. Overload protection

Overload protection will activate when the current exceeds 120% of the maximum working current, and when the voltage is greater than 16.5V.

#### 3. High temperature protection

High temperature protection will activate when the internal temperature of the charger rises above 50°C. If this occurs, the charger output is automatically reduced. Once the temperature is below approximately 40°C, the charger output will return to normal. This feature is designed to protect the battery and the battery charger

#### 4. Even charging function

By slowly raising the voltage, the batteries cells with a lower voltage are not charged too quickly which can overheat individual battery cells, compared to battery cells with a higher voltage.

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# ii. Battery connected in vehicle

- Ensure the correct Personal Protective Equipment is being worn I.e. Gloves
- (If applicable) ensure the batteries vent caps are loosened or removed - Ensure vehicle ignition is switched off before making ANY connection to
- Plug the battery charger into the 240v AC Power Source ensuring that the
- Connect the RED lead (Battery Clip) to the Positive Terminal (+/positive) on the battery, or the positive lug in the engine bay if the battery is located
- elsewhere (check vehicle owners manual) Connect the BLACK lead (Battery Clip) to the Negative Terminal (-/negative)
- on the battery, or to a grounded non-moving metal part of the body or chassis.
- Turn the 240V AC Power Source ON to turn the battery charger on - The battery charger is automatic, once the battery is fully charged turn the
- 240V AC Power Source OFF - Disconnect the BLACK lead (Battery Clip) from the Negative Terminal
- Disconnect the RED lead (Battery Clip) from the Positive Terminal (+/positive)
- If required, replace the vent caps on the battery



## iii. Hard wire connection

- Ensure the battery is in a safe location on a stable surface with adequate
- Ensure the correct Personal Protective Equipment is being worn I.e. Gloves
- (If applicable) ensure the batteries vent caps are loosened or removed
- Plug the battery charger into the 240V AC Power Source ensuring that the - Secure the RED Battery Cable ring terminal to the Positive Terminal
- (+/positive) on the battery
- Connect the BLACK Battery Cable ring terminal to the Negative Terminal (-/negative) on the battery
- Now plug battery charger into the one way connector on the ring terminals. - Turn the 240V AC Power Source ON to turn the battery charger on
- The battery charger is automatic, once the battery is fully charged turn the 240V AC Power Source OFF
- Ensure that the battery has been secured correctly
- Disconnect the charger one way connector from the ring terminals, and

ensure any loose leads in the engine bay are secure.

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# WARRANTY

This product is guaranteed against defects for a period of 12 months from date of purchase. This warranty is provided by SRGS PTY LTD, ABN 23 113 230 050 of 751 Gympie Rd Lawton QLD 4501 Ph (07) 3482 7500. Supercheap Auto will offer a repair, replacement product or store credit if the product is assessed as being defective during the warranty period.

To claim under this warranty, take this product to the Front Service Desk of your nearest Supercheap Auto store. For store locations, visit www.supercheapauto.com.au (AUS) or www.supercheapauto.co.nz (NZ). You will need your receipt or proof of purchase. Additional information may be requested of you to process your claim. Should you be not able to provide proof of purchase with a receipt or a bank statement, identification showing your name, address and signature may be required to process your

This product may need to be sent to the manufacturer to assess the defect before determining any claim. Faults or defects caused by product modification, misuse and abuse, normal wear and tear or failure to follow user instructions are not covered under this warranty.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount

to a major failure. Any expenses incurred relating to the return of this product to store will

normally have to be paid by you. For more information contact your nearest Supercheap Auto store.

The benefits to the consumer given by this warranty are in addition to other rights and remedies of the Australian Consumer Law in relation to the goods and services to which this warranty relates.

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• Before using the SCA fully automatic battery chargers ensure the instructions have been read and understood.

1. SAFETY/WARNING

- The battery charger is not intended for use by young children or infirm persons. Please keep away from pets.
- SCA fully automatic battery chargers are designed to charge most 12 volt battery types including: Lead Acid, Deep Cycle, Calcium, Gel and Absorbed Glass Matt (AGM) batteries and flooded and maintenance free configurations.
- Always wear the appropriate Personal Protective Equipment (PPE) when working near batteries. This includes gloves and eye protection.
- Always ensure that there is no damage to the power source (240v power outlet). This includes cracks or exposed wires.

watches and rings. Use insulated tools to ensure prevention of a battery

- When working with Lead Acid batteries remove all jewellery including
- short should the metal tool make contact with the battery terminals. • Ensure battery is charged in a well ventilated area. Explosive gases may
- escape from the battery during charging. Never charge a battery in a closed off space or in an area without ventilation.
- Never smoke, use an open flame or create sparks near a battery or charger whilst charging as gases may cause an explosion. Please keep burning cigarettes, flames or other ignition sources away from the charging battery at all times.
- SCA Fully automatic battery chargers are designed for indoor use only, and are not water resistant or waterproof. Do not expose the battery charger to water or liquids.
- Do not attempt to use the battery charger if the cables or plugs are damaged. These units do not contain serviceable parts. To avoid a hazard ensure that any damage to the unit, cable or plugs are replaced by the manufacturer or service agent / qualified technician.
- Do not disassemble the battery charger. The warranty will be void if this instruction is ignored.
- Ensure the battery charger is off before connecting and disconnecting
- from the battery. Once connected power can be turned on.
- Ensure vehicles ignition is switched off before charging the battery.

cell battery.

balanced in the engine bay.

- 2. FIRST AID • For advice, contact the Poisons Information Centre in Australia (PH: 13 11
- 26) or the National Poisons Centre in New Zealand (PH: 0800 764 766) • If battery acid makes contact with the skin or clothing, wash immediately

• Do not place the battery charger where it is not able to get adequate

ventilation. Do not place on fabric/leather/vinyl seats, on the battery or

• Not capable for charging a frozen battery, non-rechargeable, lithium or dry

- with soap and water. • If battery acid makes contact with the eyes, hold eyelids apart and flush the eye continuously with fresh running water for at least 15 minutes or until
- the Poisons information centre advises you to stop.
- If battery acid is swallowed, do not induce vomiting. Drink a glass of water and seek medical assistance.

## 3. FEATURES

• Fully automatic 7 stage charging system

completely deep discharged battery

- Button-less automatic battery chemistry selection, suitable for Gel, Lead
- Acid, AGM, and Maintenance Free Calcium types of automotive batteries. This charger is NOT suitable for Lithium type batteries. Do not attempt to recharge dry cell batteries.
- Large easy to read LED display, shows charging status, integrated battery
- test function, notifies of battery fault or reverse polarity connections. • Zero Volt start up (Disconnected), enabling recovery and charging of a
- Internal protection systems • Supplied with alligator clamps and ring terminals for fixed connection

## **Charge Cycles**

## 1. Analysis / Desulphation

A small voltage pulse is applied to the battery to ensure it can effectively

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## 5. Reverse polarity protection

Audible alarm when battery clamps are incorrectly connected to the battery in the reverse polarity. Reverse Warning LED indicator will also be flashing. This protection will protect both the charger and the battery from damage. If you have accidentally made a reverse polarity connection, please switch battery charger off from AC power, and correct the battery clamp connections to the correct polarities.

### 6. Short circuit protection

No output when clamps are connected together, power output only occurs when connected to a battery. This prevents charger malfunction if clamps accidentally come in contact with each other.

#### 4. BATTERY CHARGER DIAGRAM



## 5. CHARGING INSTRUCTIONS

### Step 1. Electrolyte Level Check

For sealed maintenance free batteries check the state of charge indicator. Please Note: Refer to the vehicles manufacturers' owner manual.

### Step 2. Connect battery charger to battery

Please Note: Refer to the vehicles manufacturers' owner manual.

There are three (3) options for connecting the battery charger to a battery i. Connect battery charger to a battery out of the vehicle (Zero volts) ii. Connect battery charger to a battery fitted inside vehicles engine bay

iii. Hard wire connection battery charger to a battery

#### i. Battery out of a vehicle (Zero Volts)

- Ensure the battery is in a safe location on a stable surface with adequate

- (If applicable) ensure the battery vent caps are loosened or removed. - Ensure the correct Personal Protective Equipment is being worn I.e. Gloves

- Plug the battery charger into the 240V AC Power Source ensuring that the

- Connect the RED lead (Battery Clip) to the Positive Terminal (+/positive) on

- Connect the BLACK lead (Battery Clip) to the Negative Terminal (-/negative) on the battery.

- Turn the 240V AC Power Source ON to turn the battery charger on. - The battery charger is completely automatic without the need for any further user input, once the battery is fully charged turn the 240V AC Power
- Source OFF. - Disconnect the BLACK lead (Battery Clip) from the Negative Terminal
- Disconnect the RED lead (Battery Clip) from the Positive Terminal
- If required, replace or tighten the vent caps on the battery.
- Refit battery into vehicle and correctly reconnect using the vehicle manufacturer's recommendations.

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## Step 3. Charging

- Once connected the LED Battery Charge display will illuminate to
- indicate what state of charge the battery is completing. • If there is a fault with the battery or one of the batteries cells, the battery charger will automatically switch off, no charge will be sent to the battery and the Fault indicator led light will illuminate together with an
- audible beep. • If the battery leads are placed on the reverse polarity terminals of the battery, an audible alarm will sound together with the Reverse Warning indicator flashing to indicate that the battery charger has been incorrectly connected to the battery. Immediately disconnect the battery charger from the battery terminals and correctly fit the battery

# **6. FREQUENTLY ASKED QUESTIONS**

cables to the correct battery terminals.

- Q. Is the battery charger waterproof or water resistant?
- A. No. Please ensure that the battery charger is kept out of the weather or wet conditions
- Q. Is this battery charger suitable for lithium batteries? A. No. Please see the website for lithium battery chargers.

Q. Is this battery charger suitable for 6 or 24 Volt batteries?

to the vehicle or battery manufacturers' owner manual.

Q. Can the battery charger be left on the battery permanently? A. Yes, but it is recommended that any equipment powered through 240v AC Power is checked regularly. Leaving a battery on charge permanently may cause damage to your battery if a fault occurs. Lead Acid batteries require frequent checking of electrolyte levels, AGM Batteries may not be recommended to be left on float charge permanently. Please Note: Refer

No. This 7 stage battery charger is only suitable for 12 Volt batteries.

## **TROUBLESHOOTING**

Problem	indication	Possible Causes	
Battery charger does not work?  Battery charger has no DC Output?	No indicator lights are illuminating  Reverse Warning LED indicator light is	No 240v AC Power  Output is short circuited - Reverse	Check AC connections and make sure the AC Power Point is switched ON. Try a different AC Power Point which you know is working. Check DC connection between charger and
	illuminated or audible beeping is heard	polarity protection Loose / bad connection to the battery	battery and make sure they are not short circuited. (Touching each other) Check that the battery leads have not fallen off or come loose. Check that the battery leads/ ring terminals are connected to the correct polarity.  Note: The charger will only output power when connected to a battery.
No charging current when battery is checked?	Battery Error LED indicator light is illuminated while audible beeping is heard	Battery could be severely sulphated Battery has a damaged cell or internal short Overheat protection mode (no indicator or beeping will occur)	Check the battery condition, age etc. Battery may need replacing. Move battery & charger to a cooler environment and wait for it to cool.
The battery charger isn't showing <b>FULL</b> on the LED screen?	Fault LED indicator light is illuminated Battery charging status isn't illuminated	Battery Ah capacity too large for the battery charger Battery is defective Battery is severely sulphated Overheat protection mode	Check the charger specifications match the battery capacity. Eg. Ensure battery capacity is not too big for the charger. Battery may need replacing. Battery charger may be in thermal cut-off disconnect and allow to cool.
The battery is swollen	Battery sides are rounded	Battery has failed	Immediately turn the
after it has been charged	and swollen	Battery is severely	Battery Charger off

and remove from the battery. Replace Battery.

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