



INSTRUCTIONS FOR

STARTER/CHARGER 300AMP,400AMP,500AMP 12/24V

MODEL NO: **SUPERSTART300.V5/SUPERSTART
400.V2/SUPERSTART500.**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to
Instruction
Manual



Warning:
Explosive
Material



Wear eye
Protection



Warning:
Corrosive
substance



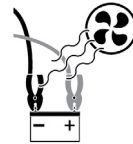
Wear
Protective
Gloves



Warning:
Electricity



Protect
From
Rain



Use in
Well
Ventilated
Areas



Keep away
from sources
of ignition:
Battery could
explode

1. SAFETY

1.1. Electrical Safety

- **WARNING!** It is the user's responsibility to check the following:
Check all electrical equipment and appliances to ensure that they are safe before using. Inspect power supply leads, plugs and all electrical connections for wear and damage. Sealey recommend that an RCD (Residual Current Device) is used with all electrical products. You may obtain an RCD by contacting your local Sealey stockist.
If the charger is used in the course of business duties, it must be maintained in a safe condition and routinely PAT (Portable Appliance Test) tested.

Electrical safety information, it is important that the following information is read and understood.

- 1.1.1. Ensure that the insulation on all cables and on the appliance is safe before connecting it to the power supply.

- 1.1.2. Regularly inspect power supply cables and plugs for wear or damage and check all connections to ensure that they are secure. **Important:** Ensure that the voltage rating on the appliance suits the power supply to be used and the correct type of plug fitted.

- × **DO NOT** pull or carry the appliance by the power cable.
- × **DO NOT** pull the plug from the socket by the cable. Remove the plug from the socket by maintaining a firm grip on the plug.
- × **DO NOT** use worn or damaged cables, plugs or connectors. Ensure that any faulty item is repaired or replaced immediately by a qualified electrician.

- 1.1.3. If the cable or plug is damaged during use, switch the off electricity supply and remove from use.

- 1.1.4. This product requires an electrical supply in excess of 13 amps, and NO plug is fitted.
You must therefore contact a qualified electrician to ensure that a 16 amp supply is available.
We recommend that you discuss the installation of a industrial round pin plug and socket with your electrician.
Ensure that the unit is correctly earthed via a three-pin plug, as shown.

- a) Connect the green/yellow earth wire to the earth terminal
- b) Connect the brown live wire to live terminal 'L'.
- c) Connect the blue neutral wire to the neutral terminal, 'N' or unmarked.
- d) After wiring, check that there are no bare wires, that all wires have been correctly connected, that the external insulation extends beyond the cable restraint and that the restraint is tight.

Sealey recommend that repairs are carried out by a qualified electrician.

Modern vehicles contain extensive electronic systems. You are required to check with the vehicle Manufacturer, for any specific instructions regarding the use of this type of equipment on each vehicle.

No liability will be accepted for damage / injury, where this product is not used in accordance with all instructions.

- ▲ **DANGER! BE AWARE, LEAD-ACID BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION. FOR THIS REASON, IT VERY IMPORTANT TO READ AND FOLLOW THESE INSTRUCTIONS CAREFULLY, EACH TIME YOU USE THE CHARGING EQUIPMENT.**

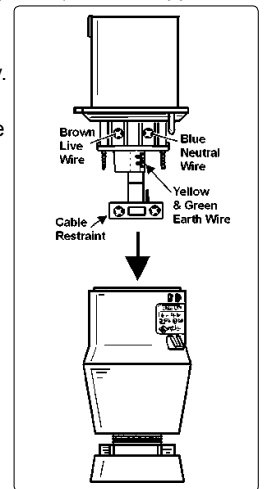
- 1.1.5. Follow these instructions and those published by the battery and vehicle manufacturers, and the maker of any equipment you intend to use in the vicinity of the battery. Remember to review warning marks on all products and on engines.

- **WARNING!** Modern vehicles contain extensive electronic systems.
You are required to check with the vehicle Manufacturer, for any specific instructions regarding the use of this type of equipment on each vehicle.

- 1.1.6. No liability will be accepted for damage / injury, where this product is not used in accordance with all instructions.

1.2. Personal Precautions

- ✓ Ensure there is another person within hearing range of your voice and close enough to come to your aid, should a problem arise when working near a lead-acid battery.
- ✓ Wear safety eye protection and protective clothing. Avoid touching eyes while working near battery.
- ✓ Have fresh water and soap nearby in case battery acid contacts skin, clothing or eyes.



It is recommended that the supply to this product is fitted with a 16AMP Fuse or Breaker

- ✓ Wash immediately with soap and water if battery acid contacts skin or clothing. If acid enters eye, flush eye immediately with cool, clean running water for at least 15 minutes and seek immediate medical attention.
- ✓ Remove personal metallic items such as rings, bracelets, necklaces and watches. A lead-acid battery can produce a short-circuit current which is high enough to weld a ring or the like to metal, which would cause severe burns.
- ✓ Ensure hands, clothing (especially belts) are clear of fan blades and other moving or hot parts of engine, remove ties and contain long hair. **DO NOT** smoke or allow a spark or flame in the vicinity of battery or engine.

1.3. General Safety Instructions

- ✓ Familiarise yourself with the application and limitations of the charger as well as the potential hazards. Also refer to the vehicle manufacturer's hand book. **IF IN ANY DOUBT CONSULT A QUALIFIED ELECTRICIAN.**
- ✓ Ensure the charger is in good order and condition before use. If in any doubt do not use the unit, contact your Sealey stockist.
- ✓ Use the charger in the upright position only and ensure it is placed on a stable surface which will adequately support its weight.
- ✓ Ensure the charger is disconnected from the mains supply before attaching/detaching the power clamps to/from the battery.
- ✓ Keep tools and other items away from the engine and ensure you can see the battery and working parts of engine clearly.
- ✓ Ensure the output of the charger is the same voltage as the battery.
- ✓ Ensure that during charging, the charger is placed in a location where there is sufficient ventilation to prevent the build up of explosive gases from a lead acid battery, and **DO NOT** cover or obstruct the charger ventilation louvres.
- ✓ If battery has caps to access the battery fluid, remove the caps and check the fluid level before connecting the power clamps. If necessary top-up the battery with distilled water by referring to the battery manufacturer's instructions (Apply the personal safety precautions described in part 1.2).
- ✓ If the charger receives a sharp knock or blow the unit must be checked by a qualified service agent before using.
- ✓ If the battery terminals are corroded or dirty clean them before attaching the power clamps.
- ✓ Keep children and unauthorised persons away from the working area.
- ✗ **DO NOT** dis-assemble the charger for any reason. The charger must only be checked by qualified service personnel.
- ✗ **DO NOT** try to charge a non-rechargeable battery.
- ✗ **DO NOT** try to charge battery if battery fluid is frozen.
- ☐ **WARNING!** To prevent the risk of sparking, short circuit and possible explosion **DO NOT** drop metal tools in the battery area, or allow them to touch the battery terminals.
- ✗ **DO NOT** allow power clamps to touch each other or to make contact with any metallic part of the vehicle.
- ✗ **DO NOT** cross connect power leads from charger to battery. Ensure positive (+/RED) is to positive and negative (-/BLACK) is to negative.
- ✗ **DO NOT** pull the cables or clamps from the battery terminals.
- ✗ **DO NOT** use the charger outdoors, or in damp, or wet locations and **DO NOT** operate within the vicinity of flammable liquids or gases.
- ✗ **DO NOT** use charger inside vehicle or inside engine compartment.
- ✓ Ensure there is effective ventilation to prevent a build-up of explosive gases, and do not cover or obstruct charger ventilation louvres.
- ✗ **DO NOT** use the charger for a task for which it is not designed.
- ☐ **WARNING! DO NOT** simultaneously charge batteries of different capacities or discharge levels.
- ☐ **WARNING!** If a fuse blows, ensure it is replaced with an identical fuse type and rating. Use only Sealey genuine parts.
- ✓ When not in use, store the charger carefully in a safe, dry, childproof location.

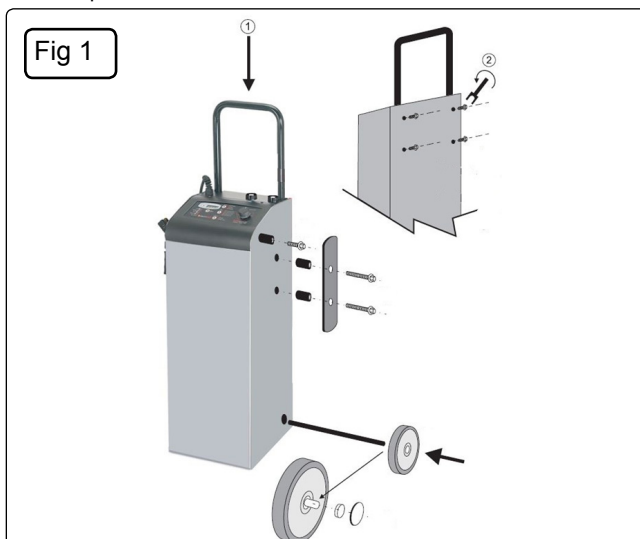
2. INTRODUCTION

Heavy-duty professional starter/chargers for the medium and large garage, workshop and body shop operation. The SuperStart range caters for all requirements from cars right up to passenger service and commercial vehicles.

Model No:	SUPERSTART300.V5	SUPERSTART400.V2	SUPERSTART500
Output:	12-24V	12/24V	12/24V
Output Charge Peak (EN):	45A(30A)	60A(40A)	75A(50A)
Output Start Peak(EN):	300A(200A)	400A(300A)	500A(350A)
Battery Range:	30-350Ah	30-450Ah	30-550Ah
Input Charge:	1.5KW	1.5KW	1.5KW
Input Start:	5KW	6KW	10KW
Charging Rates:	4	4	4
Supply:	230V	230V	230V
Polarity Protection:	Fuse(1x80A)	Fuse(2x80A)	Fuse(2x80A)

3. ASSEMBLY

- 3.1. Assemble the handle to the main casing using the fittings provided as indicated in fig.1.
- 3.2. Slide the axle through the casing at the bottom back corner. Attach the wheels using the fittings provided as indicated in fig.1.
- 3.3. The clamp with the red handle is attached to the movable cable, see fig1A.
- 3.4. The clamp with the black handle is attached to the fixed cable which comes directly out of the top of the battery charger, see fig1A.



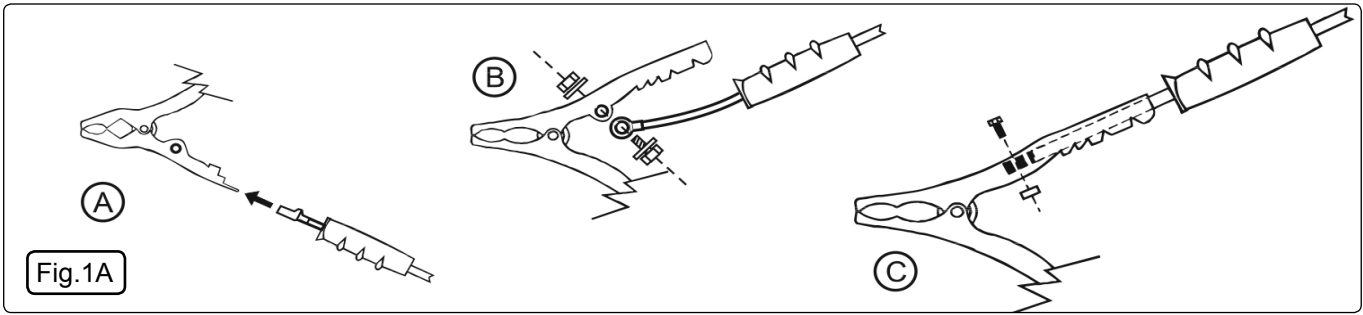


Fig.1A

4. PREPARATION

- 4.1. The battery charger will only charge free-electrolyte lead batteries having the following number of elements: 6 for 12-volt batteries, 12 for 24-volt batteries.
- 4.2. **Before charging, check the state of the battery.**
 - 4.2.1. Remove the caps or the special fasteners of the battery.
 - 4.2.2. Make sure the electrolyte level covers the battery plates; otherwise add distilled water until they are covered by 5/10 mm.
 - 4.2.3. The exact state of the battery can only be determined with a hydrometer which measures the specific density of the electrolyte. Battery charge conditions can be checked according to the following solute density values (Kg/l at 20°C):
1.28 battery charged - 1.21 battery half-charged - 1.15 battery flat.
- 4.3. **Proceed with charging, by carrying out the following steps and in the same order:**
 - 4.3.1. Before charging, make sure the power supply lead is not plugged into the mains supply.
 - 4.3.2. Set the charger voltage 12V or 24V according to the nominal voltage of the battery being charged, by moving the red cable to the appropriate terminal. * Note: To charge several batteries at the same time see the series/parallel diagram in fig. 2.
 - 4.3.3. Connect the output wire with red clamp to the positive terminal (+) of the battery.
 - 4.3.4. Connect the other output wire with black clamp to the negative terminal (-) of the battery, or in case of direct charge, connect it directly to the vehicle's chassis at a good distance from the battery or from the fuel pipe.

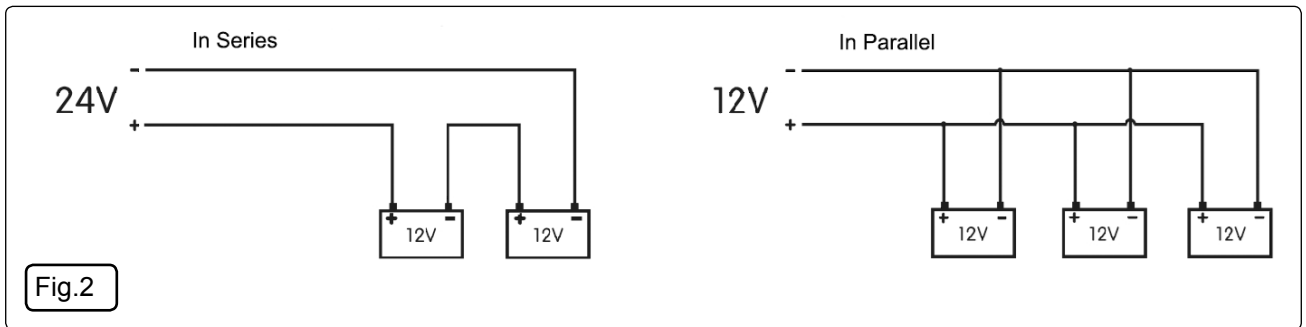


Fig.2

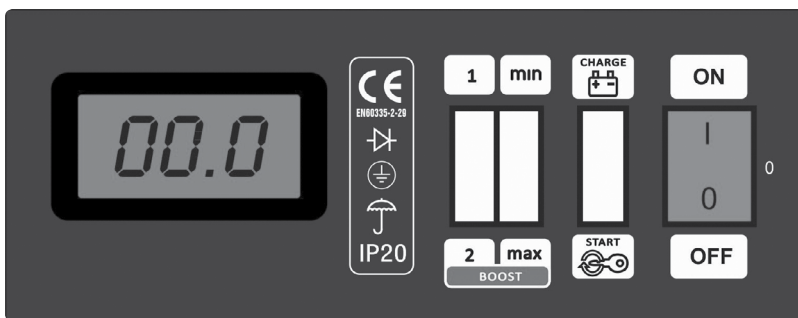


Fig.3

- 4.4. **Charging the Battery**
 - 4.4.1. Position the current adjustment diverters according to the capacity of battery to charge:

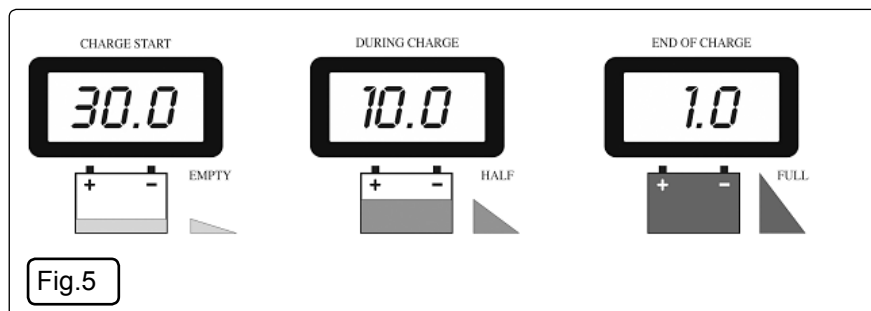
Charge/start adjustment	CHARGE					START
	1	2	3	4	5	
Battery charger-starter with 4 charging positions + start (3 diverters)						
Level AMP	min					max

Fig.4

Note: It is always a good rule to carry out charging by adjusting the current to one tenth the battery's nominal capacity for approximately 10/15 hours. For small capacity batteries adjust the current to minimum and let charge for no more than 4/5 hours.

- 4.5. Connect the power supply lead to the mains, making sure the voltage matches the nominal voltage of the battery charger.
- 4.5.1. Turn the switch to "ON" (if present). If everything is correctly connected the ammeter (present on the battery charger) will indicate the initial charging current.

Note: If the battery charger is adjusted to a minimum current level and is connected to an almost fully-charged battery, the ammeter shows very low current, fig.5.



- 4.5.2. When the battery is fully charged the ammeter reading should be close to "0" and the electrolyte in the battery should begin to gas. Stop charging to protect the battery plates from oxidation and damage.
- 4.5.3. Turn the switch (if present) to "OFF", and/or disconnect the power supply lead from the mains.
- 4.5.4. Disconnect the output leads in this order: the black clamp from the vehicle's chassis or negative pole (-), the red clamp from the positive pole (+) of the battery.
- 4.5.5. Close the battery cells with the caps or the special fasteners.
- 4.5.6. When not in use, store the charger carefully in a safe, dry, childproof location.
- 4.6. **Start Function**
- 4.6.1. In battery chargers with the START function, help in starting the vehicle is possible whenever the battery does not have enough power to turn the starter motor. It is advisable to carry out a fast battery charge before switching to the start the engine.
 - WARNING!** If the vehicle will not start, **DO NOT** continue as vehicle battery and electrical circuits may be damaged, and the fuse in the charger will blow. Disconnect the charger and investigate for vehicle faults.
- 4.6.2. When the vehicle is running successfully, switch the starter/charger off, unplug from the mains power and disconnect the power terminals from the battery.

5. FUSE

- 5.1. The starter/charger is equipped with a safety fuse, or fuses, which will cut the power to the unit in the following circumstances:
 - 5.1.1. Overload - too high a current to the battery.
 - 5.1.2. Short circuit - clamps touch, or cross-connection to battery.
 - 5.1.3. Prolonged starting attempts.
- 5.2. Should the fuse blow take the following action:
 - 5.2.1. Turn the unit off and disconnect from the mains power supply.
 - 5.2.2. Allow the unit to cool down, establish the reason for failure and correct.
 - 5.2.3. Replace the fuse. Use only Sealey replacement fuses. **DO NOT** use a fuse with copper bridges or similar as these will damage your equipment. We recommend you hold 2 or 3 spare fuses with the starter/charger.
 - 5.2.4. Battery chargers are equipped with thermostatic overcharge protection, wait a few minutes for automatic resetting after its intervention.

6. MAINTENANCE

- 6.1. When the battery charger is not being used, it must be stored in a dry place to protect it against humidity. Disconnect the battery charger and use a soft cloth to clean its outer casing. Sealey recommend that repairs are carried out by a qualified electrician.



ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.



WEEE REGULATIONS

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

Note: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

Important: No Liability is accepted for incorrect use of this product.

Warranty: Guarantee is 12 months from purchase date, proof of which is required for any claim.

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