

CLARKE®

Start··charge



BATTERY/BOOSTER CHARGER

Model No: BC100N

Part No: 6210101

OPERATING & MAINTENANCE INSTRUCTIONS



Specifications

Max Charge	15Amps
Duty Cycle	100% 10A Arith.
Max Boost	100Amps
Boost/Charge	12Volts (D.C.)
Thermal Overload Protection	YES
Dimensions (Lxwxh) mm	175x130x239
Weight	4Kg

PARTS & SERVICE CONTACTS

For Spare Parts and Service, please contact your nearest dealer,
or CLARKE International, on one of the following numbers.

PARTS & SERVICE TEL: 020 8988 7400

PARTS & SERVICE FAX: 020 8558 3622

or e-mail as follows:

PARTS: Parts@clarkeinternational.com

SERVICE: Service@clarkeinternational.com

ENVIRONMENTAL RECYCLING POLICY



Through purchase of this product, the customer is taking on the obligation to deal with the WEEE in accordance with the WEEE regulations in relation to the treatment, recycling & recovery and environmentally sound disposal of the WEEE.

In effect, this means that this product must not be disposed of with general household waste. It must be disposed of according to the laws governing Waste Electrical and Electronic Equipment (WEEE) at a recognised disposal facility.



Thank you for purchasing this CLARKE Battery Charger.

This units is designed for charging 12 Volt, lead acid battery and for providing a boost start in the event of a flat battery

Before attempting to operate the charger, please read this instruction manual thoroughly, and follow all directions carefully. By doing so you will ensure the safety of yourself, and others around you, and at the same time, you should look forward to the unit giving long and trouble free service.

GUARANTEE

This product is guaranteed against faults in manufacture for 12 months from date of purchase. Please keep your receipt as proof of purchase.

This guarantee is invalid if the product has been found to have been abused in any way, or not used for the purpose for which it was intended, or to have been tampered with in any way. The reason for return must be clearly stated.

This guarantee does not affect your statutory rights.

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IMPORTANT: SAFETY PRECAUTIONS

PLEASE READ BEFORE USING THIS UNIT

1. **WARNING:** Some electronic equipment can be damaged by boost charging or use of start facility. Check your vehicle handbook before using your Start 'N' Charge. If in doubt consult the vehicle manufacturer.
Nevertheless, you should not operate this equipment unless you are fully conversant with vehicle electrical systems, and battery charging techniques.
2. **WARNING:** Because highly inflammable hydrogen gas is released in the process of battery charging, please remember to switch OFF the charger first, and so avoid sparking which will occur when CONNECTING OR DISCONNECTING LIVE LEADS.
3. Black negative (-ve) lead must always be clipped to the negative, and Red positive (+ve) lead must always be clipped to the positive.
When charging with battery installed in vehicle, or boosting, **FIRST** connect the appropriate lead to the **UNEARTHED** battery terminal (on most modern cars this is the positive (+ve) terminal), then connect the other lead to the chassis (or a suitable engine bolt) away from the battery and fuel line. It is advisable to disconnect the unearthed terminal from the battery, when charging in situ.
When disconnecting, remove the chassis lead **FIRST**, then the battery lead.
4. To prevent battery overheating and consequent damage, use the BOOST facility sparingly and do not exceed our recommendations.
5. Battery acid is highly corrosive. If spillage occurs, wipe off immediately and wash copiously with water. Particularly avoid contact with the eyes, but if this occurs, you must seek medical advice.
6. When charging is completed, ensure that the vehicle battery leads are secured to the proper terminals which should be clean and lightly smeared with petroleum jelly to prevent corrosion. Finally, re-check the electrolyte level.
7. Do not expose this unit to rain.
8. Never touch together the negative and positive leads on this unit whilst the unit is switched on.
9. Never attempt any electrical or mechanical repair. If you have a problem with your machine contact your local stockist for service information.
10. **WARNING:** Certain types of sealed or maintenance-free batteries need extra care when charging. Please consult battery manufacturers instructions before using this unit.
11. **WARNING:** Since toxic fumes may be released during battery charging, **ONLY USE THIS UNIT IN A WELL VENTILATED AREA.**
12. Before charging ensure the battery terminals are clean and that the cells are filled with electrolyte to the correct level by adding distilled water where necessary.

ELECTRICAL CONNECTIONS



WARNING! THIS APPLIANCE IS DOUBLE INSULATED



Connect the mains lead to a 230 volt (50Hz) domestic electrical supply via a standard 13 amp BS 1363 plug fitted with a 13 amp fuse, or a suitably fused isolator switch.

IMPORTANT: The wires in the mains lead are coloured in accordance with the following code:

Blue - Neutral
Brown - Live

As the colours of the flexible cord of this appliance may not correspond with the coloured markings identifying terminals in your plug, proceed as follows:

- Connect BROWN coloured cord to plug terminal marked 'L' or coloured RED.
- Connect BLUE coloured cord to plug terminal marked 'N' or coloured BLACK.

We strongly recommend that this unit is connected to the mains supply via a Residual Current Device (RCD).

IMPORTANT!

If this appliance is fitted with a plug which is moulded onto the electric cable (i.e. non-rewireable) please note:

1. The plug must be thrown away if it is cut from the electric cable. There is a danger of electric shock if it is subsequently inserted into a socket outlet.
2. Never use the plug without the fuse cover fitted.
3. Should you wish to replace a detachable fuse carrier, ensure that the correct replacement is used (as indicated by marking or colour code).
4. Replacement fuse covers can be obtained from your local dealer or most electrical stockists.

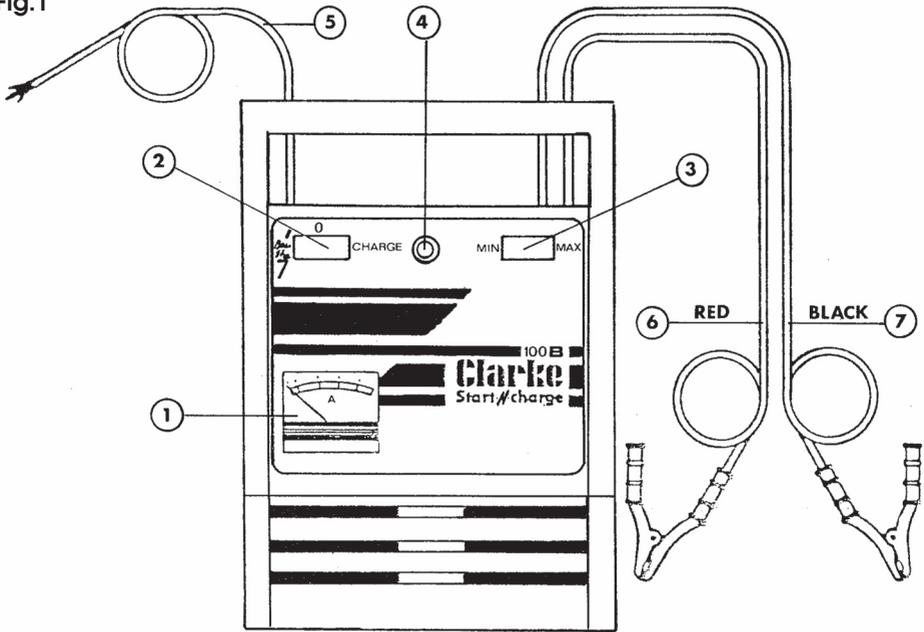
Fuse Rating

The fuse in the plug must be replaced with one of the same rating (**13 amps**) and this replacement must be ASTA approved to BS1362.

Extension Cable

If an extension cable is fitted, ensure the minimum cross section of the conductor is 1.5mm² for up to 15 metres in length, and 2.5mm² for up to 25 metres.

Fig.1



Procedure For Engine Starting.

1. Check that the CHARGE/BOOST START switch (2) is in the OFF (O) position.
2. Connect the appropriate output conductor to the unearthed battery terminal.
3. Connect the other output conductor to the chassis, or engine bolt, away from the battery and fuel line
4. Switch on the mains supply.
5. With the keys ready in the car's ignition, get an assistant to switch the CHARGE/BOOST START switch (2) to the BOOST START position and IMMEDIATELY turn the key to start the engine

IMPORTANT:

You must switch the charge/boost start switch (2) back to the OFF (O) position after a maximum of 3 seconds on boost start - wait 30 seconds before repeating. Failure to do this may damage your battery and the Start and Charge unit and may invalidate your guarantee.

With the Start and Charge unit connected to your car, never leave the unit switched to boost start for more than 3 seconds.

Procedure For Normal Charging (refer to Fig.1).

1. Before charging or boosting ensure the battery terminals are clean and that the cells are filled with electrolyte to the correct level by adding distilled water where necessary.
2. Where appropriate we recommend that the positive (+ve) lead, connected to the battery, is disconnected prior to charging.
3. Check that the CHARGE/BOOST START switch (2) is in the OFF (0) position.
4. Connect the appropriate output conductor to the unearthed battery terminal.
5. Connect the other output conductor to the chassis, or engine bolt, away from the battery and fuel line
6. Remove the battery filler caps during charging in order to prevent the build up of dangerous gases within the battery.
7. Set the MIN (minimum charge) MAX (maximum charge) switch (3) to the MIN position. This is suitable for charging most normal car batteries (having an ampere hour rating of approximately 40 A.H.).
8. Switch on the mains supply.
9. Switch the CHARGE/BOOST START switch (2) to the charge position.
10. Keep the battery on charge until the Ammeter gauge (1) shows zero (or 0-2 amps) or has stopped moving down. Then switch off at the machine, disconnect from mains supply, and remove leads from battery.
11. To stop charging/boosting, disconnect the mains electrical supply, the chassis conductor, followed by the battery conductor, IN THAT ORDER.

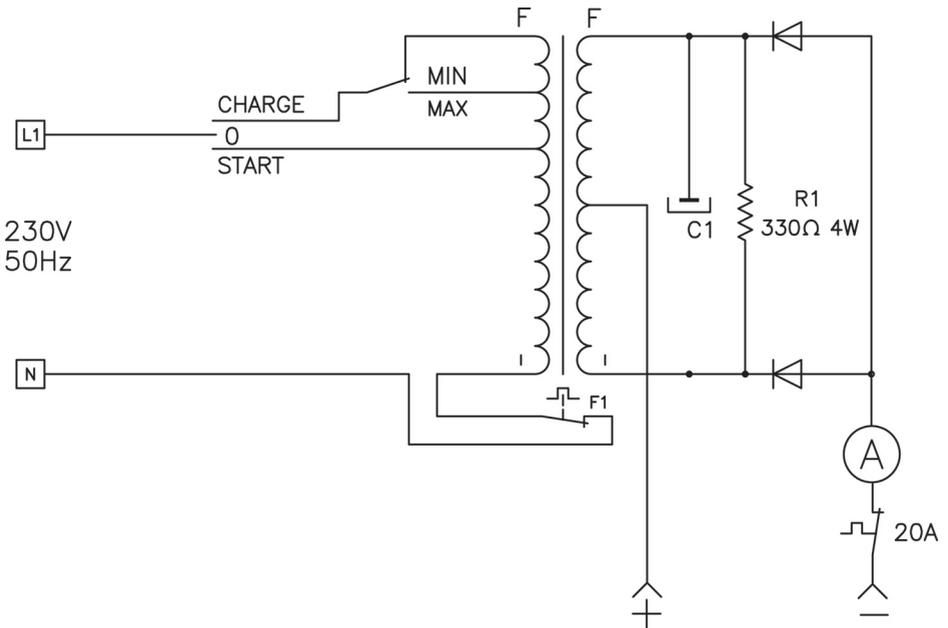
Notes on charging procedure.

- * A complete charge is best done slowly in order to protect your battery, so we recommend the MIN setting as described above. A complete charge may take up to 10 hours.
- ** If a low amperage reading (2 amps or less) is registered on the gauge at either the MIN or MAX setting, this may indicate that the battery is either (a) already fully charged or (b) at the end of its useful life and in need of replacement.

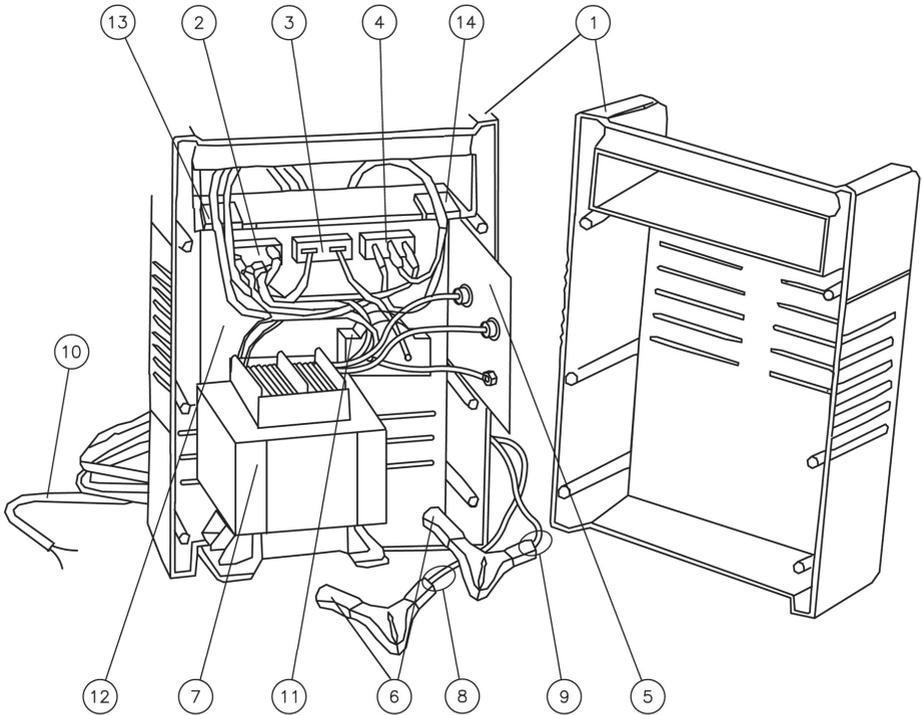
NOTE: Should the Charger/Starter overheat for any reason, a thermal overload will intervene shutting off the unit. In this event, switch OFF and disconnect the charger, then allow at least five minutes before reconnecting and pressing the reset button (4), switching ON and reusing.

Should the condition persist check to ensure you are not trying to boost start at too great a current (dead battery?) or pressing the starter for too long a period.

Wiring Diagram



Parts Diagram



No.	Description	Qty	Part No:
01	Black Housing For Battery Chargers	1	EM21690085
02	Welding Current Switch 16A 250V	1	EM22200038
03	Thermic Switch 20A	1	EM22210018
04	Switch 16A 250V	1	EM22200041
05	Rectifier 2 Diodes	1	EM22400044
06	Clamp 60a	2	EM22110003
07	Transformer Starter 230V	1	EM44105024
08	Black Cable 4 Sqmm 1.6M W/Clamp	1	EM43200031
09	Red Cable 4 Sqmm 1.6M W/Camp	1	EM43200032
10	Input Cable 2x0,75 M2 W/UK Plug+13A Fuse	1	EM20220119
11	Ammeter 20A	1	EM22600026
12	Front Plate For C.B. Black "Two Holes"	1	EM21690485
13	Cable Clamp For B.C.	1	EM21690093
14	Cable Clamp	1	EM21690092

CLARKE Battery/Booster Chargers

Other Battery Booster/Chargers in the comprehensive Clarke range include

Model No:	Max Charge Amps	Max Boost Amps	Boost Charge Volts	Thermal Overload	Dimensions LxWxH - mm	Weight kg	Part No:
BC140	15	140	12	yes	260x260x250	10.0	6210150
BC160	20	160	12	yes	260x260x250	12.5	6210000
BC180	20	180	12/24	yes	260x300x770	16.0	6210180
BC200	30	200	12/24	yes	260x300x770	21.0	6220000
BC250	30	250	12/24	yes	320x490x730	28.0	6225050
BC300B	35	300	12/24	yes	320x490x730	31.0	6230050
BC400B	50	400	12/24	yes	320x490x730	37.0	6240050
BC600B	80	600	12/24	yes	580x340x800	69.0	6260000
BC120E	20	120	12	yes	230x275x325	9.0	6210120
BC310E	35	310	12/24	yes	280x340x590	19.0	6230100

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PARTS & SERVICE: 020 8988 7400

E-mail: Parts@clarkeinternational.com or Service@clarkeinternational.com

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