Clarke®

Start·N·charge

INTELLIGENT BATTERY CHARGER-ENGINE STARTER

MODEL NO: WIBC750

PART NO: 6261527

OPERATION & MAINTENANCE INSTRUCTIONS

UK CA | CE

ORIGINAL INSTRUCTIONS

DL0625

INTRODUCTION

Thank you for purchasing this CLARKE Intelligent Battery Charger-Engine Starter.

Please read this manual thoroughly before attempting to operate and carefully follow all instructions given.

It is vitally important that ALL precautions are taken, as specified, which will not only provide protection for yourself and that of others around you, but will also ensure that the Battery Charger will give you long and satisfactory service.

GUARANTEE

This CLARKE product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

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.

If disposing of this product or any damaged components, do not dispose of with general waste. This product contains valuable raw materials. Metal products should be taken to your local civic amenity site for recycling of metal products.

SPECIFICATIONS

Model Number	**WIBC750**
Suitable Battery Voltage	6V, 12V & 24V
Suitable Battery Type	WET, MF, EFB, STD, GEL, AGM & 12V Lithium Ion (4-Cell LiFePO4)
Min./Max. Charging & Starting Modes	15-550Ah @ 6V 15-750Ah @ 12V 15-525Ah @ 24V
Max. Input Power	18kW - Starting, 2500W Charging
Max. Input Current	10.8A
Output Amps	Output: 5/10/45A @ 6V Output: 10/45/70A @ 12 & 24V Output Starting: 750A @ 12 & 24V
Operating Voltage/Frequency/Phase	230VAC / 50Hz / Single
Starting Voltage	>1V
Protection Class	Class I
Charging Steps	10
Remote Control	Starter Button with 5m Cable
Fuse Rating (see page 24)	400A (2 x 200A)
Charging Cables Length	1.8m
Power Cable Length	1.65m
Plug Type	Type P32342 - 32A Blue
Operating Temp. Range	0°C to 40°C
IP Rating	IP20
Dimensions (L x W x H)	490mm x 450mm x 860mm
Weight	42kg

SAFETY INSTRUCTIONS

WARNING: WEAR EYE PROTECTION, HAND AND CLOTHING PROTECTION. AVOID TOUCHING EYES WHILE WORKING WITH A BATTERY. SEE YOUR LOCAL CLARKE DEALER FOR ALL YOUR PPE REQUIREMENTS.

PRECAUTIONS FOR WORKING IN THE VICINITY OF A BATTERY

1. Batteries generate explosive gases during normal operation. Use in a well-ventilated area.
2. Consider having someone close enough or within the range of your voice to come to your aid when you work near a battery.
3. **DO NOT** smoke, strike a match or cause a spark in vicinity of a battery or engine. Avoid explosive gas, flames and sparks.
4. Remove all rings, bracelets, necklaces and watches while working with a vehicle battery. These items may produce a short-circuit that could cause severe burns.
5. Be extra cautious to reduce the risk of dropping a metal tool onto the battery. It might spark or short-circuit the battery or other electrical hardware which may cause an explosion or fire.
6. Wear complete eye, hand and clothing protection. Avoid touching eyes while working near a battery.
7. Study all battery manufacturer's specific precautions such as removing or not removing cell caps while charging and recommended rates of charge.
8. Clean the battery terminals before they are connected to the charger. Be careful to keep corrosion from coming into contact with your eyes.
9. When it is necessary to remove a battery from a vehicle to charge it, always remove the grounded terminal from the battery first. Make sure all accessories in the vehicle are off in order to prevent an arc.
10. It is **NOT** intended to supply power to an extra-low-voltage electrical system or to charge dry-cell batteries. Charging dry-cell batteries may burst and cause injury to persons and property.
11. **NEVER** charge a frozen, damaged, leaking or non-rechargeable battery.
12. If battery electrolyte contacts skin or clothing, wash immediately with soap and water. If electrolyte enters your eye, immediately flood the eye with running clean cold water for at least 15 minutes and get medical attention immediately.

SAFETY PRECAUTIONS FOR USING THE CHARGER

WARNING: ALWAYS SWITCH OFF THE CHARGER WHEN CONNECTING OR DISCONNECTING LEADS.

1. **DO NOT** cover the charger while charging.
2. **DO NOT** expose to rain or wet conditions.
3. **ALWAYS** make sure you insert the positive quick plug crocodile clip cable into the correct voltage socket on the rear of the charger to match the voltage of the battery you are charging.
4. **NEVER** let the two crocodile clips touch or arc.
5. Use of an attachment not recommended or sold by the manufacturer may result in a risk of fire, electric shock or injury to persons.
6. **DO NOT** overcharge batteries by selecting the wrong charge mode.
7. To reduce the risk of damage to the electric plug and lead, pull by the plug rather than the lead when disconnecting the charger.
8. Operate with caution if the charger has received a impact/blow or been dropped. Have it checked and repaired if damaged.
9. Any repair must be carried out by the manufacturer or an authorized CLARKE repair agent in order to avoid danger.

CHARGER LOCATION

1. **NEVER** place the charger in the engine compartment or near moving parts or near the battery; place as far away from them as the clamp leads allow.
2. **DO NOT** position the charger above the battery during the charging procedure. Gases from the battery will corrode and damage the charger.
3. **DO NOT** let battery acid drip on the charger when reading a hydrometer for specific gravity or when you fill the battery.
4. **DO NOT** use the charger in an enclosed space with reduced airflow.

SYMBOLS

	Read this manual before use		Wear Protective Gloves
	Wear Eye Protection		Wear Protective Clothing
	Indoor Use Only		Class 1 Appliance
	Warning: Battery Charging		Warning: Risk of Electrical Shock
	Explosive Gases: Prevent flames & sparks and provide ventilation during charging		WEEE Directive

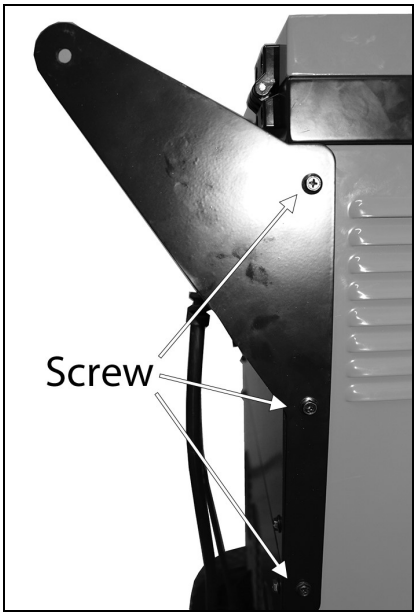
UNPACKING AND ASSEMBLY

Unpack your charger and check the following items are present. Should there be any missing or damaged during transit contact your CLARKE dealer.

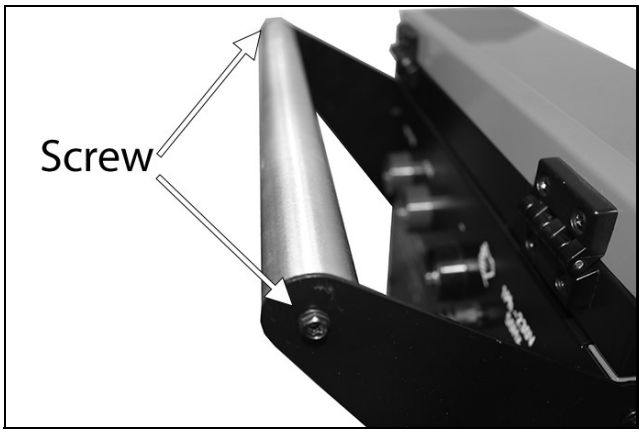
NO	DESCRIPTION	NO	DESCRIPTION
1	2 x Main Handle Brackets	7	2 x Cable Holder Brackets
2	2 x Main Wheels	8	8 x Castor Wheel Bolts & Washers
3	2 x Quick Plug Crocodile Clip Cables	9	8 x Rubber Spacers
4	2 x Lockable Castor Wheels	10	4 x Cable Holder Long Bolts
5	1 x Axle Rod	11	8 x Main Handle Black Screws
6	1 x Main Handle	12	2 x Main Wheel Hub Caps

ASSEMBLING THE MAIN HANDLE

1. Attach the two handle brackets to the sides of the main body using 3 black screws per bracket.



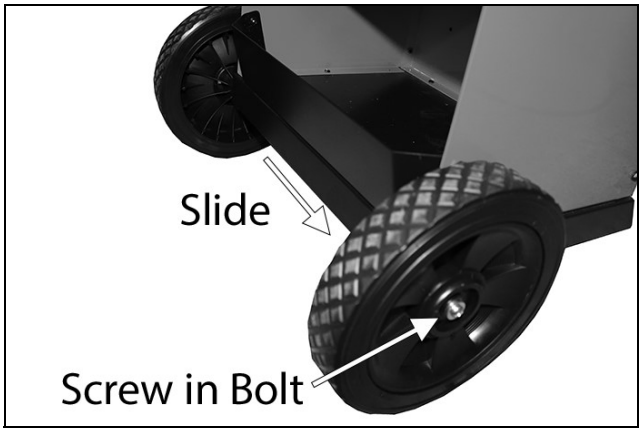
2. Place the main handle between the brackets and attach it using the two remaining black screws.



ASSEMBLING THE WHEELS

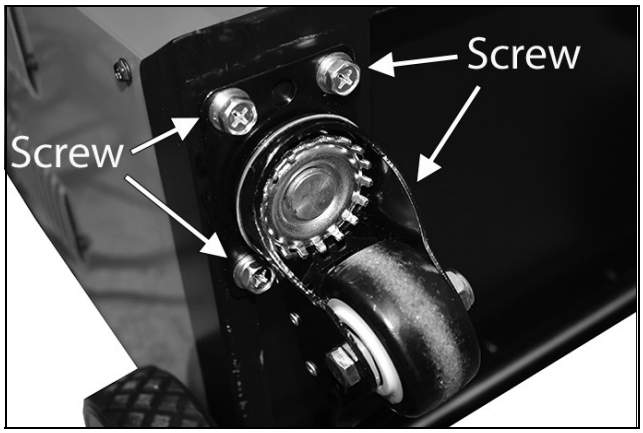
Due to the weight of the charger, it may be easier and safer if this procedure is carried out by two people.

1. Put a protective cover on the floor and lay the charger face down on the floor.
2. Unscrew the bolt and washer from one end of the axle rod.
3. Thread the rod through one of the wheels and pass it all the way through until it hits the C clip at the other end.
4. Leaning the charger forward, slide the axle rod through the axle hole on the bottom rear of the charger, so it appears on the other side.



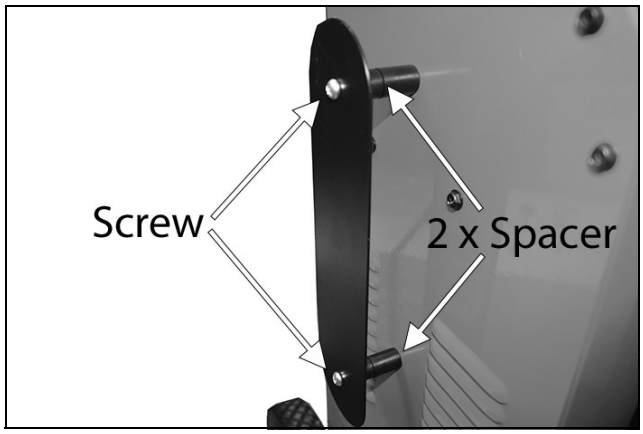
5. Place the other wheel on the axle rod and screw in and tighten the bolt and washer.
6. Press the wheel hub caps onto the wheels.

7. Using the 4 x silver coloured bolts and washers per castor, attach the castor wheels to the front underside of the charger as shown.

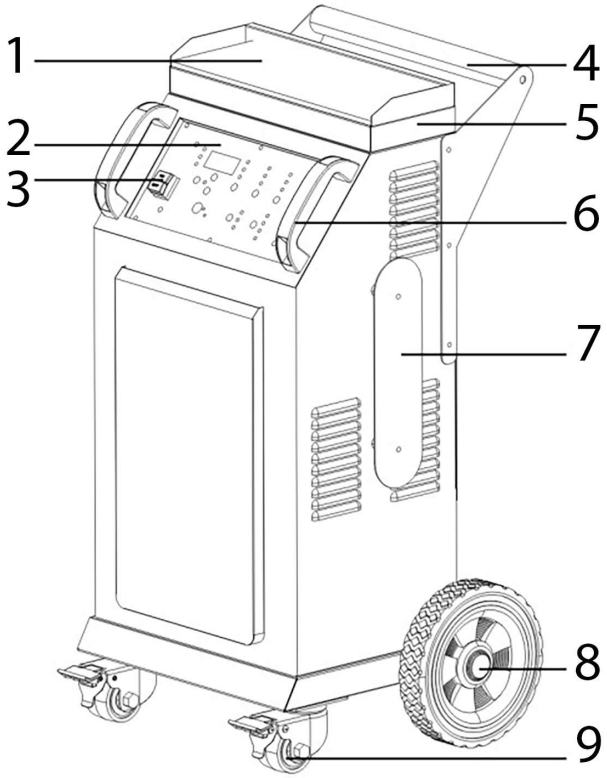


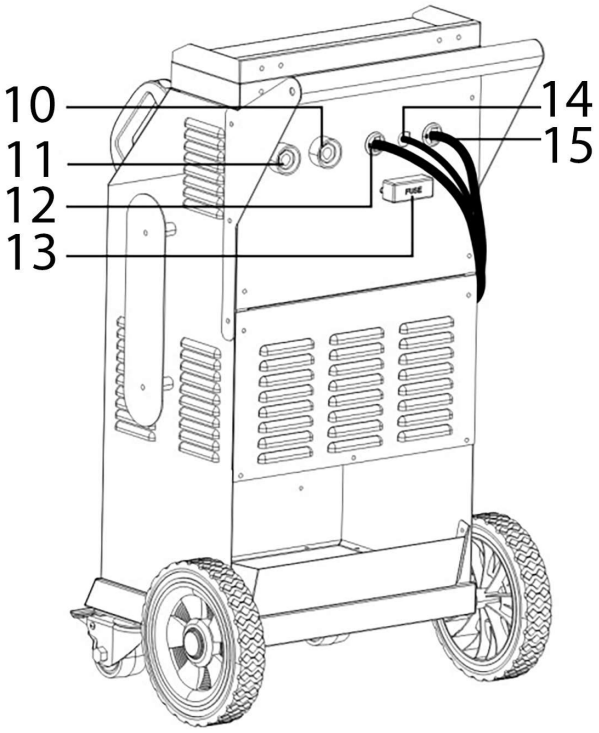
ASSEMBLING THE CABLE HOLDERS

1. Thread the long bolts through the bolt holes in the cable brackets and two rubber spacers per bolt.
2. Attach the brackets to the side of the main body of the charger, 1 per side.



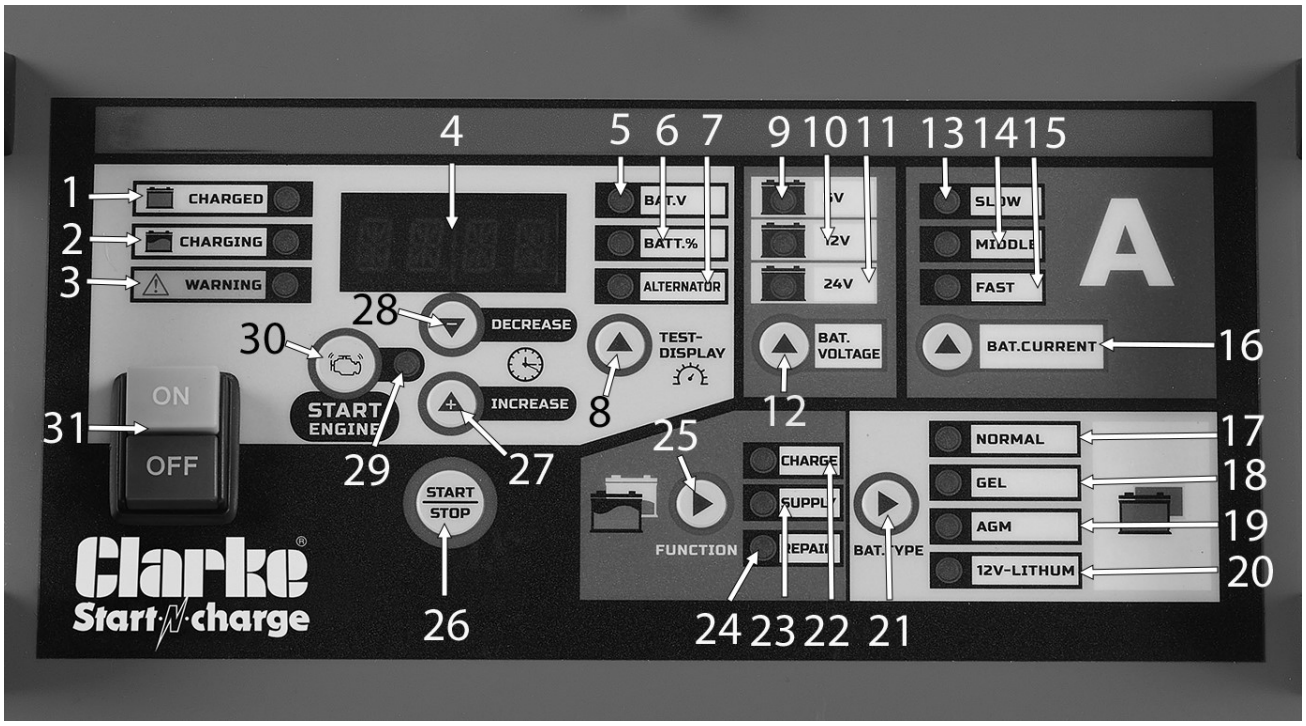
OVERVIEW





1	Tool Tray	9	Lockable Castor Wheels
2	Control Panel	10	Positive 24V Quick Plug Socket
3	ON/OFF Buttons	11	Positive 6V/12V Quick Plug Socket
4	Main Handle	12	Negative Cable
5	Storage Box	13	Fuse
6	Front Handles	14	Hand Held Starter Button Cable
7	Cable Holder	15	Power Cable
8	Main Wheels		

CONTROL PANEL



1	Charged LED Indicator	17	Normal LED Indicator
2	Charging LED Indicator	18	GEL LED Indicator
3	Warning LED Indicator	19	AGM LED Indicator
4	Digital Display	20	12V Lithium LED Indicator
5	Voltage LED Indicator	21	Battery Type Button
6	Battery% LED Indicator	22	Charge LED Indicator
7	Alternator% LED Indicator	23	Supply LED Indicator
8	Test Button	24	Repair LED Indicator
9	6V LED Indicator	25	Function Button
10	12V LED Indicator	26	Start/Stop Button
11	24V LED Indicator	27	Increase Button
12	Battery Voltage Button	28	Decrease Button
13	Slow LED Indicator	29	Engine Start LED Indicator
14	Middle LED Indicator	30	Engine Start Button
15	Fast LED Indicator	31	ON/OFF Buttons
16	Battery Current Button		

ELECTRICAL CONNECTIONS

WARNING: READ THE ELECTRICAL SAFETY INSTRUCTIONS THOROUGHLY.

WARNING: A 13 AMP (BS1363) PLUG IS NOT SUITABLE.

WARNING: THIS APPLIANCE MUST BE EARTHED.

Connect the three core mains cable to a suitable industrial supply isolator, or the heavy duty P32342 32A commando type plug supplied, meeting the requirements of BS EN 60309. This charger must be connected to a supply having a rated capacity of greater than 32A.

A normal 13 Amp (BS1363) plug must **NOT** be used.

NOTE: The maximum input current for this unit is 32 amps.

WARNING: THIS APPLIANCE MUST BE EARTHED.

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

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

- Connect GREEN AND YELLOW coloured cord to terminal marked letter "E" or Earth Symbol ⏚ or coloured Green and Yellow.
- Connect BROWN cord to terminal marked letter 'L' or coloured Red.
- Connect BLUE cord to terminal marked letter "N' or coloured Black.

USING AN EXTENSION CABLE

The use of an extension cable is **NOT** recommended. If you must use an extension cable, follow these guidelines:

1. Pins sockets on the extension cable plug must be the same number, size and shape as those on the charger plug.
2. Ensure that the extension cable is properly wired and in good electrical condition.
3. Wire size must be large enough for the AC ampere rating of the charger, as specified below:

Length of Cable (ft)	25	50	100	150
AWG Size of Cable	18	16	14	14

DISPLAY MESSAGES

Start Up - After the display screen and all LED's illuminate for 0.5 seconds, the battery voltage will show.

TEST DISPLAY BUTTON

TEST - DISPLAY BUTTON		
Digital Display	LED Indicator	Description
BAT.V	Voltage LED Lit 	When the charger is NOT working in ENGINE START mode, the display will show the battery VOLTAGE.
BATT.%	Battery% LED Lit 	When the charger is NOT working in ENGINE START mode, the digital display shows percentage of the battery connected to the chargers battery clamps.
ALTERNATOR	Alternator% LED Lit 	The digital display shows an estimated output percentage of the vehicles charging system connected to the chargers battery clamps, compared to a properly functioning system. The alternator percent range is from 0% to 100%. Readings below 0% (13.4 volts/26.8 volts) will read LO and readings above 100% (14.4 volts/28.8 volts) will read HI. If you get a HI or LO reading, have the electrical system checked by a qualified technician.

BATTERY TYPE BUTTON

BAT. TYPE		
Digital Display	LED Indicator	Description
6V/12V/24V	NORMAL LED Lit 	(STANDARD) - Charged Voltage is 7.2V/14.4V/ 28.8V. When charging, pressing this button does **NOT** work
	GEL LED Lit 	(GEL) - Charged Voltage is 7.5V/14.5V/29V. When charging, pressing this button does **NOT** work
	AGM LED Lit 	(AGM) - Charged Voltage is 7.8V/14.8V/29.6V. When charging, pressing this button does **NOT** work
	LITHIUM LED Lit 	Charging 12V lithium-ion batteries only, including 4-Cell LiFePO4. When charging, pressing this button does **NOT** work

FUNCTION SELECTION BUTTON

FUNCTION	
Mode	Explanation
CHARGE 	The operating mode of the charger is charging mode.
SUPPLY 	Provide a stable output to help the equipment work normally and check and repair.
REPAIR 	Provide a positive pulse voltage to charge the battery that has been idle for a long time or a dead battery.

CURRENT SELECTION BUTTON

BAT. CURRENT	
Charging Rate	Explanation
SLOW 	Low current charging rate.
MIDDLE 	Medium current charging rate.
FAST 	Fast current charging rate.

BATTERY VOLTAGE SELECTION BUTTON

BAT. VOLTAGE	
Charging Rate	Explanation
6V 	6V Battery Type.
12V 	12V Battery Type.
24V 	24V Battery Type.

ENGINE START BUTTON

START ENGINE	
Engine starter time selection	Explanation
Timer + 	The time can be increased from 5 seconds to 15 seconds.
Timer - 	The time can be decreased from 15 seconds to 5 seconds.

- ENGINE START (press ENGINE START BUTTON to enter) - Provides additional amps for cranking an engine with a weak or rundown battery.

WARNING: ALWAYS USE IN COMBINATION WITH A BATTERY. DO NOT TOUCH OR DISCONNECT CLAMPS WHEN IN ENGINE START MODE, OTHERWISE THERE MAY BE SERIOUS INJURIES TO PEOPLE OR PROPERTY.

GENERAL PREPARATION

CHARGER LOCATION

1. Place the charger as far away from the car battery as possible.
2. **DO NOT** let battery acid drip on anything when reading specific gravity or when topping up the battery.
3. **DO NOT** operate the charger in an enclosed space, such as inside the vehicle. **NEVER** cover the battery charger when in use.
4. **DO NOT** stand the battery on top of the charger.
5. **ALWAYS** stand the battery charger on a firm, level floor.
6. During charging, make sure that the area around the battery has good ventilation.

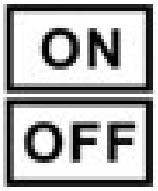
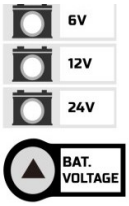
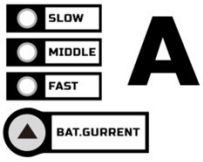
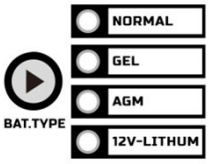
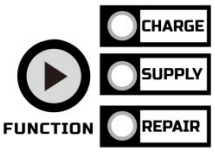
OPERATING INSTRUCTIONS

Before charging, make sure the capacity of the battery to be charged is not lower than 4Ah. On the rear of the charger you will find separate connectors for 6V/12V and 24V batteries making sure the correct cable is connected to the appropriate battery.

CONNECTING TO A BATTERY

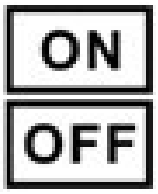
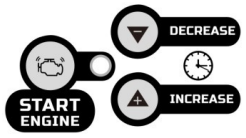
1. Identify the polarity of the battery posts. The positive battery terminal is typically red and marked by these letters or symbols (POS, P, +). The negative battery terminal is typically black and marked by these letters or symbols (NEG, N, -).
2. **DO NOT** make any connections to the carburetor, fuel lines or thin metal parts.
3. Identify if you have a negative or positive grounded vehicle. This can be done by identifying which battery post (NEG or POS) is connected to the chassis.
4. For a negative grounded vehicle (most common), connect the RED POSITIVE clamp first to the positive battery terminal, then connect the BLACK NEGATIVE clamp to the negative battery terminal or vehicle chassis.
5. For a positive grounded vehicle (very uncommon), connect the BLACK NEGATIVE clamp first to the negative battery terminal, then connect the RED POSITIVE clamp to the positive battery terminal or vehicle chassis.
6. When disconnecting, disconnect in the reverse sequence, removing the negative first (or positive first for positive ground systems).
7. A marine (boat) battery must be removed and charged on shore. To charge it on-board requires equipment specially designed for marine use.

OPERATING STEPS

Step No.	Step Function	Step Select Key
Step 1	Ensure Battery Connection	Connect 6V/12V battery to the 6V/12V terminals, and 24V battery to the 24V terminals. Digital display: Connected Battery Voltage
Step 2	Start Machine	Press the ON button 
Step 3	Ensure Battery Voltage Type	Choose correct battery voltage 
Step 4	Ensure Charge Current	Choose correct charge speed 
Step 5	Ensure Battery Type	Choose correct battery type 
Step 6	Ensure Function Mode	Choose correct function mode 
Step 7	Start Operation	Use the Hand Held Starter Button or the Start/ Stop Button 

ENGINE START FUNCTION

Your battery charger can be used to jump start your car if the battery is low. Follow all the safety instructions and precautions for charging your battery. Wear complete eye protection and protective clothing. The procedures are as follows:

Step No.	Step Function	Step Select Key
Step 1	Ensure Battery Connection	Digital display: Connected Battery Voltage
Step 2	Start Machine	Press the ON button 
Step 3	Select the ENGINE START button and set the start time.	Choose the correct start time 
Step 4	Start Operation	Use the Hand Held Starter Button or the Start/ Stop Button 

WARNING: USING THE ENGINE START FEATURE WITHOUT A BATTERY INSTALLED IN THE VEHICLE WILL DAMAGE THE VEHICLES ELECTRICAL SYSTEM.

1. With the charger unplugged from the AC outlet, connect the charger to the battery following the instructions given in the section 'Connecting to a Battery' on pages 17.
2. Plug the charger AC power cable into the AC outlet. With the charger plugged in and connected to the battery and chassis, press the 'START/STOP' or the Hand Held Start Button button until the ENGINE START LED is lit.

NOTE: During extremely cold weather, or if the battery is under 2 volts, charge the battery for 5 minutes before cranking the engine.

3. Crank the engine until it starts or 3 seconds pass. If the engine does not start, wait 3 minutes before cranking again. This allows the charger and battery to cool down.

4. If the engine fails to start, use the BOOST rate to charge for 5 minutes before attempting to crank the engine again.
5. After the engine starts, unplug the AC power cable before disconnecting the battery clamps from the vehicle.

NOTE: If the engine does turn over but never starts, there is not a problem with the starting system; there is a problem somewhere else with the vehicle. STOP cranking the engine until the other problem has been diagnosed and corrected.

During the starting sequence listed above, the charger is set to one of 3 states:

1. **Wait for cranking** – While waiting for cranking, the digital display shows **START-READY**. The charger waits until the engine is actually being cranked before delivering the amps for engine start. Press the remote button before crank the engine immediately. If the remote is not used, the charger will automatically detect whether engine is trying to crank.
2. **Cranking** – When cranking is detected, the charger will automatically deliver up to its maximum output as required by the starting system for up to 5 (15)seconds.
3. **Cool Down** – After cranking, the charger enters a mandatory 240 seconds cool down state (The remote or any button does NOT work). The digital display indicates the remaining cool down time in seconds. It starts at 240 and counts down to 0. After 4 minutes, the digital display will change from displaying the countdown to displaying **START-READY**.If using the engine starter again, please continue to press the remote button.

VOLTAGE TESTER AND CHARGER

When first turned on, the unit operates only as a tester, not as a charger.

If the 'TEST' function is used, stop the 'FUNCTION' and the corresponding working mode is turned off. Then select the 'TEST' button to detect and view the connected battery voltage and charge level.

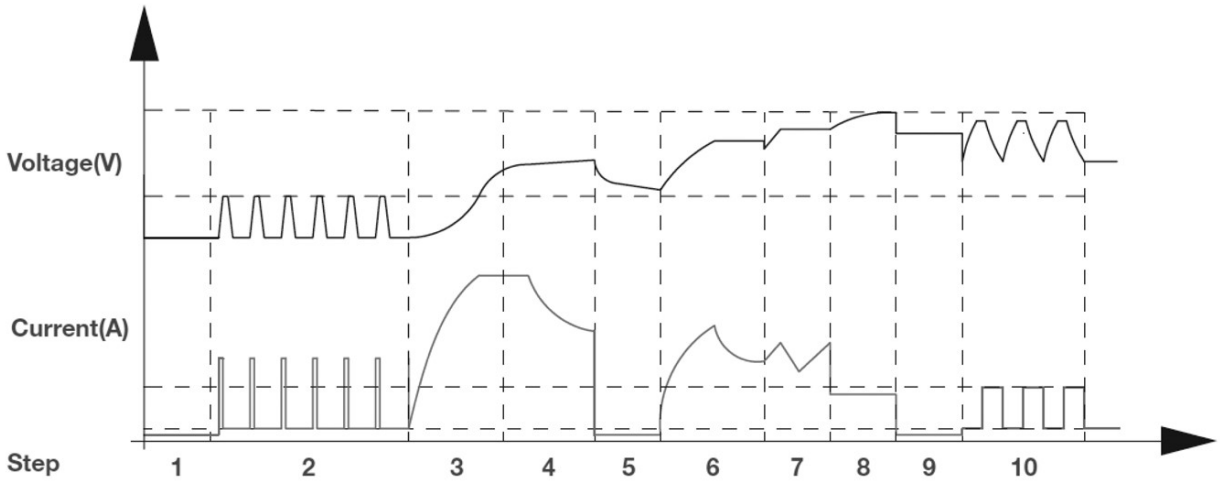
ALTERNATOR CHECK

1. With the charger unplugged from the AC outlet, connect the charger to the battery, following the instructions given in previous sections.
2. Plug the charger AC power cable into the AC outlet.
3. Start the vehicle and turn on the vehicle's headlights. Read the state on the digital display. If you get a reading "0-100%", the alternator is working properly. If the reading is 'LO' or 'HI', have the charging system checked by a qualified technician.

NOTE: When first turned on, the unit operates only as a tester, not as a charger (The charger must stop charging).

CHARGING STEPS

No.	Step	Digital Display	LED Indicator	Charging Status
1	Analysing 1	ANALYSING-1 BATT-6/12/24	CHARGING LED Lit	Checks if battery has connected wit the charger
2	Desulphation 1	CHARGING BATT-6/12/24	CHARGING LED Lit	Pulsing charging to remove sulphates
3	Desulphation 2	CHARGING BATT-6/12/24	CHARGING LED Lit	Charges with gradually increasing charging current
4	Controlled Current Charge	CHARGING BATT-6/12/24	CHARGING LED Lit	Adjusts the charging current intelligently
5	Analysing 2	ANALYSING-2 BATT-6/12/24	CHARGING LED Lit	Tests if the battery can absorb charge
6	Constant Output Charge	CHARGING BATT-6/12/24	CHARGING LED Lit	Charges with constant voltage and compensates
7	Recovery Cycle Charge	CHARGING BATT-6/12/24	CHARGING LED Lit	Absorbs more charge and compensates side effect of reduced charging current
8	Absorption	CHARGING BATT-6/12/24	CHARGING LED Lit	Charges with constant trickle current for maximum battery voltage
9	Analysing 3	ANALYSING-3 BATT-6/12/24	CHARGING LED Lit	Tests if the battery can hold charge
10	Maintenance	MAINTENANCE BATT-6/12/24	CHARGED LED Lit	Continuously monitors the battery, and charges with trickle current once the voltage is lower than the threshold



CHARGING TIME DURATION

Different battery capacity, residual voltage and charging current will all affect charging time. The following table is for guidance in the case of a fully discharged battery.

Battery Size - Ah	Approx. Time to Charge					
	6V			12V/24V		
	5A	10A	45A	10A	45A	70A
15	3h	1h 30m	20m	1h 30m	20m	13m
20	4h	2h	27m	2h	27m	17m
40	8h	4h	53m	4h	53m	34m
80	16h	8h	1h 47m	8h	1h 47m	1h 9m
160	32h	16h	3h 33m	16h	3h 33m	2h 17m
320	64h	32h	7h 7m	32h	7h 7m	4h 34m
550	110h	55h	12h 13m	55h	12h 13m	7h 51m
750	150h	75h	16h 40m	75h	16h 40m	10h 43m

MAINTANENCE

This charger requires minimal maintenance. As with any appliance or tool, a few common sense rules will prolong the life of the battery charger.

WARNING: ALWAYS BE SURE THE CHARGER IS ISOLATED FROM ITS POWER SUPPLY AND ANY BATTERY BEFORE PERFORMING ANY MAINTENANCE OR CLEANING.

1. Clean the case and leads with a moist cloth.
2. Clean corrosion from the clamps with a solution of water and baking soda.
3. Examine the leads at regular intervals for damage and have them replaced if necessary

WARNING: ALL OTHER SERVICING/REPAIRS SHOULD BE DONE BY QUALIFIED SERVICE PERSONNEL ONLY.

STORAGE

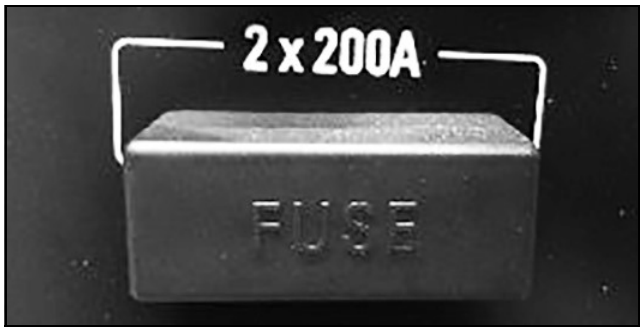
1. When the charger is not in use, **ALWAYS** make sure the 'OFF' button has been pressed.
2. Wind up the power cable, hand held starter button and the positive and negative connecting leads onto the cable holders when not in use.
3. **ALWAYS** store the charger with the castor wheels locked.
4. Store in a clean, dry area.

FUSES

1. The starter/charger is equipped with a safety fuse which will protect the unit under the following circumstances:
   - Overload - too high a current to the battery.
   - Short Circuit - clamps touch or cross connection to battery.
   - Prolonged starting attempts.

REPLACING THE FUSE

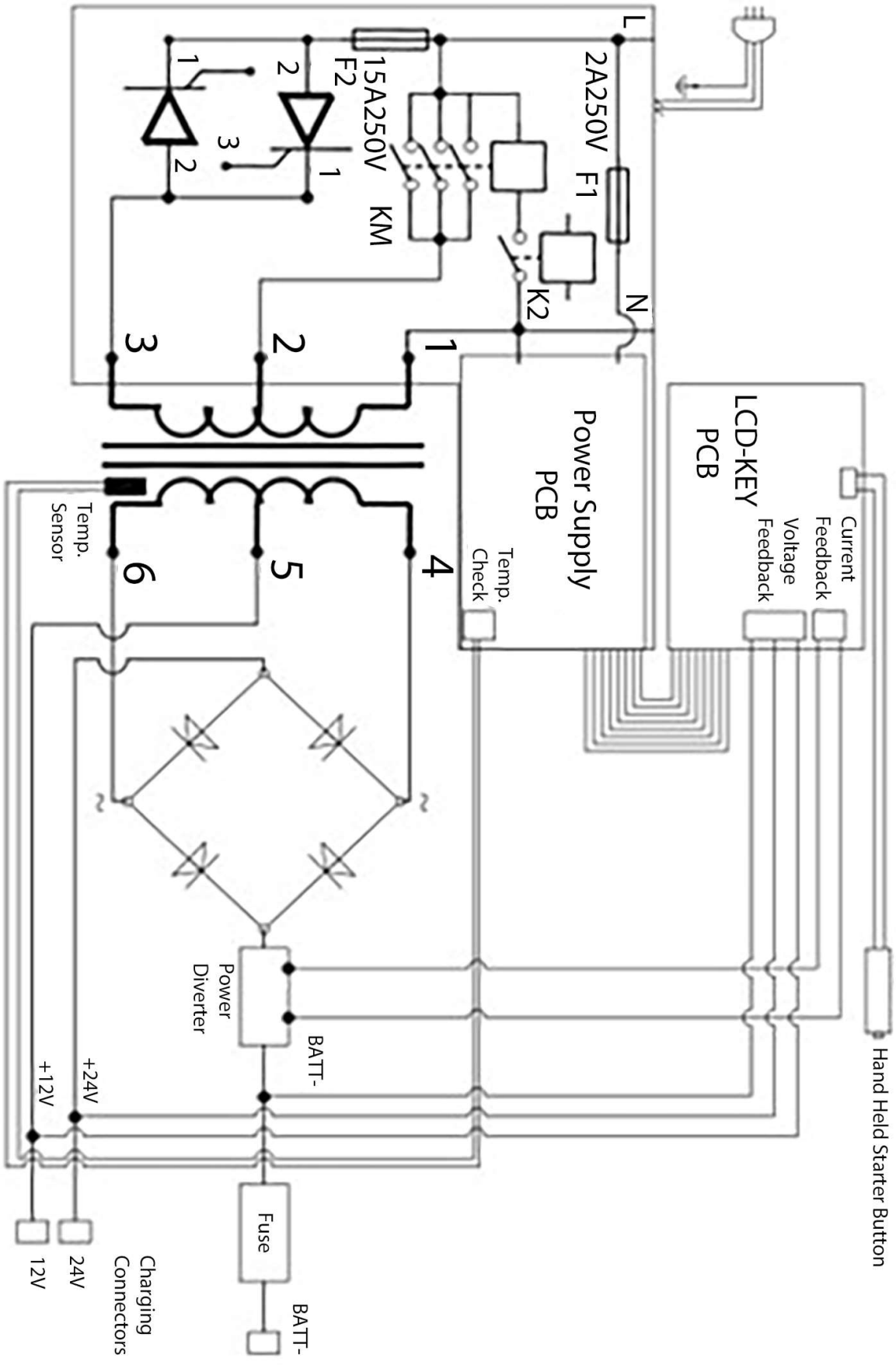
The fuse fitted is rated at 2 x 200A strip fuses and are fitted behind the clip-on cover on the rear of the charger for easy replacement.



1. Isolate the mains power to the charger.
2. Allow the unit to cool down and establish the reason for the failure and correct.
3. Pull off the fuse cover before unscrewing the nuts to remove the fuses. Replace only with identical fuses and with the same rating, as fitted with your charger.
4. Replace the fuse cover.

WARNING: NEVER USE OR TURN ON THE CHARGER WITH THE FUSE COVER MISSING OR NOT CORRECTLY IN PLACE.

CIRCUIT DIAGRAM



ERROR MESSAGES

Digital Display	Warning LED Indicator	Meaning	Solution
E01	Warning LED Lit	The connections are reversed.	Change red and black clamps or ring terminals to correct battery posts.
E02	Warning LED Lit	Output current reduces to 0 when temperature in charger is too high	Remove the AC plug immediately. After cooling down, the battery charger will work again.
E03	Warning LED Lit	Charging in 12V mode for 24V battery. Or charging in 6V mode for 12V/ 24V battery.	Replace the battery or connect the positive output line to the correct connector.
E04	Warning LED Lit	The battery cannot store electric charge (dead battery). Or battery cannot be recovered through recover process.	Try the REPAIR mode or replace the battery with a new one.
E05	Warning LED Lit	Overload in SUPPLY mode (will automatically shut down for 30 seconds as protection).	Disconnect the external device.
0.0V	Warning LED Lit	No battery connected/ battery voltage is lower than 1 volt /red and black clamps are connected together.	1) Connect the red and black clamps or ring terminals to the battery posts. 2) Clean the battery posts. 3) Replace the battery with a new one immediately. 4) Disconnect red and black output terminals.

TROUBLESHOOTING

Problem	Cause	Solution
Battery does not charge	Lack of AC input power.	Make sure that the electrical circuit the charger is on has power.
	Faulty connections to battery terminals.	Check the battery connections; ensure that there is a good connection at the battery terminal/post and/or vehicle chassis.
	Wrong charge voltage selection.	Check that the correct charge voltage was selected for the battery being charged.
	Battery voltage too low.	Ensure enough charging time was allowed to charge battery.
	Charging a very cold battery.	If the battery being charged is extremely cold (below freezing), it will not accept a high rate of charge, so the initial charge rate will be slow. The rate of charge will increase as the battery warms. **NEVER** attempt to charge a frozen battery.

DECLARATION OF CONFORMITY

UK CA

Clarke® INTERNATIONAL

Hemnall Street, Epping, Essex, CM16 4LG

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following legislation:

The Electromagnetic Compatibility Regulations 2016

The Electrical Equipment (Safety) Regulations 2016

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

The following standards have been applied to the product(s):

EN IEC 60335-2-29:2021+A1:2021, EN IEC 55014-1:2021, IEC 62321-7-1:2015, IEC 62321-1:2013, EN IEC 61000-3-2:2019+A1:2021, EN IEC 55014-2:2021, IEC 62321-7-2:2017, IEC 62321-2:2013, IEC 62321-4:2013+AMD1:2017 CSV, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-3-1:2013, EN 62233:2008+AC:2008, IEC 62321-8:2017, ISO 17075:2017, EN 60335-1:2012+AC:2014+A11:2014+A13:2017+A1:2019+A14:2019+A2:2019+A15:2021+A16:2023, EN 61000-3-3:2013+A2:2021

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned legislation has been compiled and is available for inspection by the relevant enforcement authorities.

The UKCA mark was first applied in: 2024

Product Description: Battery Charger

Model Number(s): WIBC750

Serial/Batch Number: Refer to product/packaging label

Date of Issue: 21/11/2024

Signed:

J.A Clarke

Director

CE

Clarke® INTERNATIONAL

Fitzwilliam Hall, Fitzwilliam Place, Dublin 2

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following legislation:

2014/30/EU	*Electromagnetic Compatibility Directive*
2014/35/EU	*Low Voltage Directive*
2011/65/EU	*Restriction of Hazardous Substances (RoHS) Directive*

The following standards have been applied to the product(s):

EN IEC 60335-2-29:2021+A1:2021, EN IEC 55014-1:2021, IEC 62321-7-1:2015, IEC 62321-1:2013, EN IEC 61000-3-2:2019+A1:2021, EN IEC 55014-2:2021, IEC 62321-7-2:2017, IEC 62321-2:2013, IEC 62321-4:2013+AMD1:2017 CSV, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-3-1:2013, EN 62233:2008+AC:2008, IEC 62321-8:2017, ISO 17075:2017, EN 60335-1:2012+AC:2014+A11:2014+A13:2017+A1:2019+A14:2019+A2:2019+A15:2021+A16:2023, EN 61000-3-3:2013+A2:2021

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned legislation has been compiled and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2024

Product Description: Battery Charger

Model Number(s): WIBC750

Serial/Batch Number: Refer to product/packaging label

Date of Issue: 21/11/2024

Signed:

J.A Clarke

Director