

CLARKE®



POWER

DIGITAL BATTERY TESTER

MODEL NO: CDBT1

PART NO: 6260115

OPERATING INSTRUCTIONS



GC0614

INTRODUCTION

Thank you for purchasing this CLARKE product.

Before attempting to use this product, please read this manual thoroughly and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to your purchase giving you long and satisfactory service.

GUARANTEE

This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required 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.

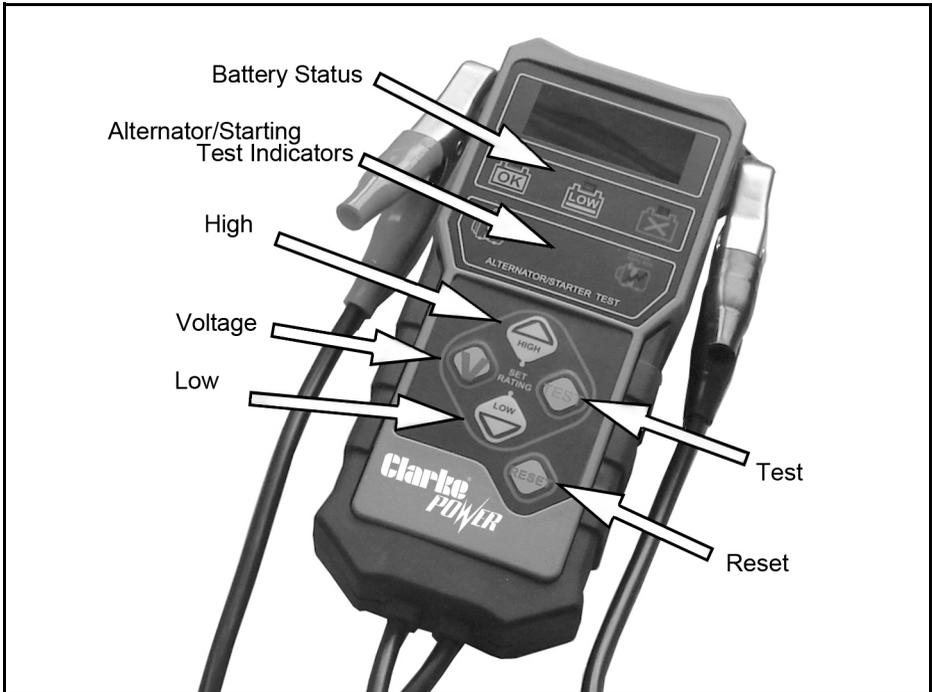
ENVIRONMENTAL RECYCLING POLICY



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.

FEATURES



The CDBT1 incorporates green & red LEDs to show immediate information and includes the following functional features:

- Shows CCA (Cold Cranking Amps) at the end of each test.
- Displays an expanded measurement range from 100-1400CCA.
- Tests discharged batteries.
- Identifies defective battery cells.
- Incorporates 'Voltmeter mode' for testing both the starter and charging systems.
- Incorporates High/Low voltage capture for improved starter/charging system testing.

SAFETY PRECAUTIONS

1. Always avoid creating sparks in a battery charging environment, as this could cause a fire, or even an explosion.
Similarly, it is vital to avoid creating sparks when testing a battery in a motor vehicle in situ, as spikes in the system could cause serious damage to the vehicle electronic circuitry.
Ensure that the RED or POSITIVE clamp does not touch any other part of the vehicle, and be particularly careful where you place the tester within the engine compartment.
2. Avoid dropping the tester, as this could cause damage, which may not prevent the device from working, but could nevertheless cause the readings to be inaccurate.

BEFORE USE

1. Check the battery for cracks or leakage. If damage is found, do not test, replace the battery.
2. If possible, check electrolyte levels and top up with distilled water if necessary.
3. Clean the battery terminals with a wire brush if not already clean & bright.
4. Turn off the vehicle including all accessory loads.
 - Testing with the ignition switch on or electrical loads present such as boot light, interior light etc will cause inaccurate readings.

BATTERY TEST

NOTE: If testing in-situ, ensure all lights and accessories are switched off and the key is removed.

NOTE: Make a note of the battery rating system (e.g SAE) and rating (e.g 300) as shown on the battery.

1. Connect the RED clamp to the POSITIVE (+) terminal and the BLACK clamp to the NEGATIVE (-) terminal.
 - The rating system that was last selected will be shown briefly on the display (e.g SAE) for 1 second followed by the default rating.
 - If the rating system is incorrect see CHANGING THE RATING SYSTEM on page 6.
2. Use the HIGH/LOW arrow buttons to scroll to the battery rating e.g 300Ah.
3. Press the TEST button to start the test.
 - One or more 'Battery Status' LEDs will light up, (see results chart below).
 - The display will alternate between the voltage and CCA by pressing the TEST button.

BATTERY TEST RESULTS

Battery Status LEDs		Decision
Green		The battery is good. Return to use.
Green and Yellow		Fully charge the battery and return it to use
Yellow		Fully charge the battery and retest. If you get the same result after charging, replace the battery.
Red		The battery has failed or is weak and may soon fail. Replace the battery.

CHANGING THE RATING SYSTEM

1. Disconnect the clamps and connect the positive clamp (red) to the positive terminal.
2. Press the hold the TEST button.
3. Connect the negative clamp (black) to the negative (-) terminal.
4. After the display shows the letters of the rating system with dots (for example, C.C.A), release the TEST button.
5. Use the HIGH arrow / LOW arrow buttons to scroll to the correct rating system.
6. Press the TEST button to select the rating system. The default rating will appear.
7. Continue with step 2 in "BATTERY TEST".

RATING SYSTEM CHART

Rating System*	Increment	Default rating	Range
CCA	20	500	100-1400
SAE	20	600	100-1400
EN	20	600	100-1400
IEC	10	280	100-800
DIN	10	280	100-800

STARTING SYSTEM TEST

NOTE: The battery must be good and fully charged for this test.

1. Connect the tester clamps to the battery: RED clamp to the POSITIVE (+) terminal and the BLACK clamp to the NEGATIVE (-) terminal. Check each clamp is making a good connection.
2. Press the VOLTAGE button to read the live voltage.
3. Start the vehicle.
4. Press and hold the LOW arrow button to read the cranking voltage.

STARTING SYSTEM TEST RESULTS

Starting Test Indicator LEDs		Decision
Green	<p>OK</p> 	The cranking voltage is greater than 9.6V The starting system is OK.
Red	<p>REPAIR/ REPLACE</p> 	The cranking voltage is less than 9.6V which indicates a starting system problem. Check the connections, wiring and starter.

CHARGING SYSTEM TEST

NOTE: The battery must be fully charged for this test.

1. When the vehicle engine is running, connect the RED clamp to the POSITIVE (+) terminal and the BLACK clamp to the NEGATIVE (-) terminal.
2. Press the VOLTAGE button to read the live voltage.
3. Rev the engine to 2000 rpm for 15 seconds.
4. Press and hold the HIGH arrow button to read the highest average charging voltage.

CHARGING SYSTEM TEST RESULTS

Starting Test Indicator LEDs		Decision
Green	<p>OK</p> 	The highest average charging voltage is between 13.3V and 15.5V. The charging system is OK.
Red	<p>REPAIR/ REPLACE</p> 	The highest average charging voltage is less than 13.3V or greater than 15.5V which indicates a charging system problem. If less than 13.3V, check the connections, wiring and alternator. If greater than 15.5V, check the charging regulator.

TROUBLESHOOTING

CONDITION OBSERVED	RECOMMENDED ACTION
Display flashes or shows one flashing letter	Battery is too low (<8 Volts) to test. Fully charge the battery and retest.
Message showing that alternates between "BAD" and "CELL"	One or more battery cells are defective. Replace the battery.
Message "CON" displayed.	This shows a bad connection. Disconnect the clamps and re-connect. Ensure that a good connection is achieved.
Top panel red LED lights up when testing in-vehicle	Possible poor connection between battery cables. Re-test at the battery posts before replacing the battery.
Excessive electromagnetic interference causing the tester to re-set during testing.	Before re-testing, reconnect the clamps and ensure the ignition is off and all electrical loads are removed. Move away from the noise source (such as a charger or other high-current device). If unable to find the noise source, fully charge the battery and re-test at the battery terminals. If the top-panel red LED lights up again, replace the battery.

MAINTENANCE

As the metal clamps are liable to come into contact with battery electrolyte, it is advisable to wipe them clean and dry after use, and apply a thin film of silicon grease to prevent the possibility of corrosion.

SPECIFICATION

Model Number	CDBT1
Product Dimensions: (L x W x H)	210 x 115 x 50 mm
Weight	0.37 kg
Housing Material	Acid/impact resistant ABS
Display	Seven segment LED display
Voltage range	7.6 - 17 Volt DC
Operating Temperature	0-120° F (-18 - 50°C)
Rating System	CCA = 100-1400 SAE = 100 - 1400 EN = 100 - 1400 IEC = 100 - 800 DIN = 100 - 800

DECLARATION OF CONFORMITY



Clarke[®]
INTERNATIONAL

Hemnoll 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 directive(s):

2004/108/EC *Electromagnetic Compatibility Directive.*

2011/65/EU *Restriction of Hazardous substances.*

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

EN 61000-6-1:2007, EN 61000-6-3:2007 +A1:2011

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

The CE mark was first applied in: 2014

Product Description: Digital Battery Tester

Model number(s): CDBT1

Serial / batch Number: N/A

Date of Issue: 25/04/2014

Signed:

J.A. Clarke
Director

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