



Model: BT-250
Digital Battery Tester
For 12 Volt Batteries



OWNER'S MANUAL

**READ ENTIRE MANUAL BEFORE
USING THIS PRODUCT**

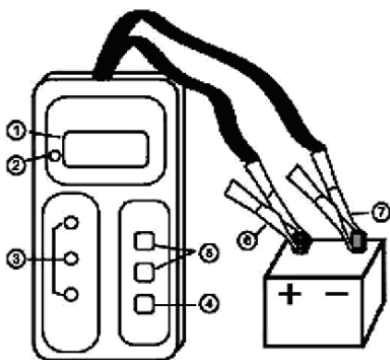
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1. FEATURES

IMPORTANT:

1. For testing 12 volt batteries Only
2. Suggested operational range 32°F (0°C) to 122°F (50°C) ambient air temperature.



1. LED Display
2. Error LED
3. Test Result LEDs
4. ENTER Button: function selection / confirm choice
5. UP/DOWN Buttons
6. Positive Clamp (RED, +)
7. Negative Clamp (BLACK, -)

2. IMPORTANT SAFETY INSTRUCTIONS

- 2.1 WARNING:** Pursuant to California Proposition 65, this product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
- 2.2** Working in the vicinity of a lead acid battery is dangerous. Batteries generate explosive gases during normal battery operation. For this reason, it is of utmost importance that before using your tester, you read these instructions very carefully each time.
- 2.3** To reduce the risk of battery explosion, follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use in the vicinity of the battery. Observe precautionary markings on these items.
- 2.4** Do not expose the tester to rain, snow or other forms of moisture.

3. PERSONAL SAFETY PRECAUTIONS

1. Someone should be within range of your voice or close enough to come to your aid when you work near a lead acid battery.
2. Have plenty of fresh water and soap nearby in case battery acid contacts your skin, clothing or eyes.
3. Wear safety glasses and protective clothing.
4. If battery acid contacts your skin or clothing, wash immediately with soap and water. If acid enters your eye, immediately flood the eye with cool running water for at least ten minutes, then get medical attention immediately.
5. NEVER smoke or allow a spark or flame in the vicinity of the battery or the engine.
6. Be extra cautious to reduce the risk of dropping a metal tool onto the battery. It could spark or short-circuit the battery or other electrical parts and could cause an explosion.

7. Remove personal metal items such as rings, bracelets, necklaces and watches when working with a lead acid battery. A lead acid battery can produce a short circuit current high enough to weld a ring or similar item to metal causing a severe burn.

4. OPERATING INSTRUCTIONS

PREPARING TO TEST:

1. Be sure the area around the battery being tested is well ventilated before performing any test.
2. Clean the battery terminals. Be careful to keep airborne corrosion from coming into contact with your eyes.
3. Inspect the battery for a cracked or broken case or cover. If the battery is damaged, do not use the tester.
4. If the battery is not sealed (i.e. Maintenance Free), add distilled water to each cell until the battery fluid reaches the level specified by the battery manufacturer. This helps purge excessive gas from the cells. Do not overfill.
5. If it is necessary to remove the battery from the vehicle to test it, always remove the grounding cable from the battery first. Make sure all accessories in the vehicle are off to ensure this will not cause any arcing.
6. Make sure the 9 volt battery in the tester is good. If the 9 volt battery runs out of power, the screen will show "lbt!" (internal battery low). Replace the 9 volt battery before beginning the test. **Note:** Nothing will be seen on the display screen until the tester is properly connected to a battery.

To Install/Replace the Internal 9 Volt Battery:

1. Open the battery compartment cover on the back of the BT-250 tester.
2. Remove the old battery (if necessary).
3. Observing the proper polarity, install a new, fully charged 9 volt battery.
4. Close the battery compartment cover.

CONNECTING THE TESTER

1. Before you test a battery in a vehicle, turn off the ignition, all accessories and any loads. Close all of the vehicle doors, including the trunk.
2. Make sure the battery terminals are clean. Wire brush them if necessary. **NOTE:** This tester works best if the battery connectors have been removed and the battery posts have been cleaned. Any corrosion between the tester clips and the battery connectors, or between the battery connectors and the battery posts, will degrade the tester's efficiency.
3. Clip the red test lead to the vehicle's positive (POS, P, +) battery terminal.
4. Clip the black test lead to the vehicle's negative (NEG, N, -) battery terminal.
5. If a fully charged 9 volt battery is installed and the battery clips are connected to the correct battery terminals, the display will show the battery voltage.
6. Press the ENTER button to begin the test mode.

NOTE:

- If the display reads HI, the tested battery is over 15.00 volts. Check to make sure the battery being tested is a 12 volt battery.
- If the display reading is blank, either the battery clips are connected wrong or the voltage of the battery being tested is less than 1.5 volts, which is too low for the tester to read. Check the battery clips, or recharge and retest the battery. If the reading is the same, replace the battery.
- If the display reads ----, the voltage of the battery being tested is unstable. If the battery was recently charged, wait 15 to 30 minutes to let the battery voltage stabilize and then retest the battery. If there are any accessories left on, turn them off, recharge and then retest the battery. If the reading is the same, replace the battery.

BATTERY TEST: BT-250 (12 Volt Batteries Only)

1. Select the type of battery. Press the UP or DOWN arrow button to select between SLI (Starting/Lighting/Ignition – Standard Flooded Batteries) or SEAL (VRLA, GEL, AGM, etc. Sealed/MF Batteries) type of battery. Press ENTER when the correct battery type is displayed.
2. Select the rating type you want. Press the UP or DOWN arrow button to select between DIN (Deutsches Institut für Normung Standard), IEC (International Electrotechnical Commission Standard), EN (a European Standard), CA (MCA) (Cranking Amps (Marine Cranking Amps)) or SAE (Society of Automotive Engineers Standard) rating types. Press ENTER when the correct rating type is displayed.
3. Select the CCA (Cold Cranking Amps) of the battery. Press the UP or DOWN arrow button to change the rating displayed.

Test Ranges:

SAE = 200 to 1200 CCA

DIN = 110 to 670 CCA

IEC = 130 to 790 CCA

EN = 185 to 1125 CCA

CA (MCA) = 240 to 1440 CA (MCA)

Press ENTER when the correct CCA rating is displayed.

4. The tester will perform a battery test and display one of the following results:
 - **OK** (Green LED Lit) Display reads = Measured CCA (i.e. 875) > Rating Type (i.e. SAE)
 - The battery is good and capable of holding a charge.
 - **OK and RECHARGE** (Green and Yellow LEDs Lit) Display reads = Measured CCA (i.e. 875) > Rating Type (i.e. SAE)
 - The battery is good but needs to be charged.
 - **RECHARGE** (Yellow LED Lit) Display Reads = Measured Voltage (i.e. 8.46)
 - The battery voltage is too low. The battery condition cannot be accurately determined until it is fully charged. Recharge and retest the battery.

- **RECHARGE and RETEST** (Yellow and Red LEDs Lit) Display Reads = Measured CCA (i.e. 875) > Rating Type (i.e. SAE)
 - The battery is discharged. The battery condition cannot be accurately determined until it is fully charged. Recharge and retest the battery.
- **BAD CELL** (Red LED Lit) Display reads = Measured CCA (i.e. 875) > Battery Type (i.e. SLI)
 - The battery will not hold a charge and should be replaced immediately.

NOTE: With any of the results, except OK and RECHARGE, the tester will ask you if the battery is charged CHG-. Press ENTER and then the UP or DOWN arrow button to display YES or NO, and then press ENTER again to continue the test.

5. Press ENTER to return to the beginning of the test, or remove the battery clips from the battery posts to end the test.

5. LIMITED WARRANTY

SCHUMACHER ELECTRIC CORPORATION, 801 BUSINESS CENTER DRIVE, MOUNT PROSPECT, IL 60056-2179, MAKES THIS LIMITED WARRANTY TO THE ORIGINAL RETAIL PURCHASER OF THIS PRODUCT. THIS LIMITED WARRANTY IS NOT TRANSFERABLE OR ASSIGNABLE.

Schumacher Electric Corporation (the "Manufacturer") warrants this battery tester for one year from the date of purchase at retail against defective material or workmanship that may occur under normal use and care. If your unit is not free from defective material or workmanship, Manufacturer's obligation under this warranty is solely to repair or replace your product with a new or reconditioned unit at the option of the Manufacturer. It is the obligation of the purchaser to forward the unit along with mailing charges prepaid to the Manufacturer or its authorized representatives in order for repair or replacement to occur.

Manufacturer does not provide any warranty for any accessories used with this product that are not manufactured by Schumacher Electric Corporation and approved for use with this product. This Limited Warranty is void if the product is misused, subjected to careless handling, repaired or modified by anyone other than Manufacturer or if this unit is resold through an unauthorized retailer.

Manufacturer makes no other warranties, including, but not limited to, express, implied or statutory warranties, including without limitation, any implied warranty of merchantability or implied warranty of fitness for a particular purpose. Further, Manufacturer shall not be liable for any incidental, special or consequential damage claims incurred by purchasers, users or others associated with this product, including, but not limited to, lost profits, revenues, anticipated sales, business opportunities, goodwill, business interruption and any other injury or damage. Any and all such warranties, other than the limited warranty included herein, are hereby expressly disclaimed and excluded. Some states do not allow the exclusion or limitation of incidental or consequential damages or length of implied warranty, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and it is possible you may have other rights which vary from this warranty.

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