

PATENTS

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LIMITED WARRANTY

This Midtronics battery analyzer is warranted to be free of defects in materials and workmanship for a period of 1 year from date of receipt. Midtronics will, at our option, repair the unit or replace the unit with a remanufactured analyzer. This limited warranty applies only to the Midtronics battery analyzer and does not cover any other equipment, static damage, water damage, overvoltage, dropping the unit or damage resulting from extraneous causes including owner misuse. Midtronics is not liable for any incidental or consequential damages for breach of this warranty. The warranty is void if owner attempts to disassemble the unit, or to modify the cable assembly.

SERVICE

To obtain service, purchaser should contact Midtronics for a Return Authorization number, and return the unit to Midtronics freight prepaid, Attention: RA# _____. Midtronics will service the analyzer and reship the next scheduled business day following receipt, using the same type carrier and service as received. If Midtronics determines that the failure was caused by misuse, alteration, accident, or abnormal condition of operation or handling, purchaser will be billed for the repaired product and it will be returned freight prepaid with freight charges added to the invoice. Battery analyzers beyond the warranty period are subject to the repair charges in effect at that time. Optional remanufacturing service is available to return the analyzer to like-new condition. Out-of-warranty repairs will carry a 3-month warranty. Remanufactured units purchased from Midtronics are covered by a 6-month warranty.

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MIDTRONICS



PowerSensor[®] MICRO400 Digital Battery Analyzer

*For testing 6 and 12-volt auto-
motive/commercial batteries
rated from 100 to 1400 CCA*

INSTRUCTION MANUAL



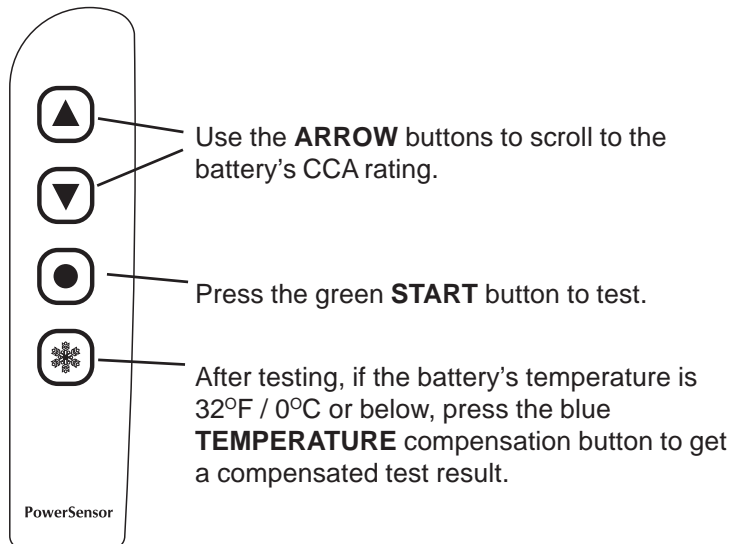
CAUTION: Because of the possibility of personal injury, always use extreme caution when working with batteries. Follow all BCI (Battery Council International) safety recommendations.

BEFORE THE TEST

- Clean battery posts or side terminals with a wire brush.
- For group 31 or side-post batteries, install and tighten lead terminal stud adapters (included). **Failure to properly install stud adapters, or using stud adapters that are dirty or worn may result in false test results.**
- If testing in the vehicle, make sure all vehicle accessory loads are off and the ignition is in the off position. Read the “Testing In The Vehicle” section before testing.

CONNECTING THE ANALYZER

- Connect red clamp to positive terminal.
- Connect black clamp to negative terminal.
- To ensure a proper connection, rock the clamps back and forth. Both sides of the clamp must be firmly connected before testing and a CHECK CONNECTION message will appear. If this occurs, clean the terminals and reconnect.



BATTERY TEST RESULTS

The Micro400 will display one of the following results with the measured voltage and available power.

GOOD BATTERY: Return to service.

GOOD-RECHARGE: Fully charge the battery and return to service.

CHARGE & RESET: Fully charge the battery and retest. **Failure to fully charge the battery before retesting may cause false readings.**

REPLACE BATTERY: Replace battery.

BAD CELL-REPLACE: Replace battery.

TESTING IN-VEHICLE

- Turn on the highbeam headlights for one minute to remove the battery's surface charge, then wait at least one minute to allow the voltage to recover before starting the test.
- A REPLACE reading may be the result of a poor connection or corrosion between the vehicle's battery cables and the battery. Before replacing, retest the battery after disconnecting the cables.
- If the tester displays “SYSTEM NOISE”, make sure all vehicle accessory loads are off and the ignition switch is in the off position. Retest.

If the SYSTEM NOISE message reappears after several retest attempts, disconnect the battery cables and retest.

TROUBLESHOOTING

If the display does not illuminate:

- Check the connection to the battery.
- The battery may be too low to power the tester (below 5.5 volts). Fully charge the battery and retest.

If the tester displays SYSTEM NOISE message when the battery is not connected to the vehicle:

- You may be testing too close to a source of noise, i.e., a charger or other high-current device. If so, move away and retest.
- If no source of noise is identified, fully charge the battery and retest. If the message appears after the battery is charged, replace the battery.