

The Total Battery Service Process:

STEP 1: Initial Battery Analysis:

At the beginning of the process, the GR-1 analyzes the condition of the battery, making a replace or charge decision - FAST!

STEP 2: Diagnostic Charging:

If the battery is not found to be defective and requires charging, GR-1 starts the diagnostic charging process, designed to stress the battery and expose hidden defects in batteries by combining testing and charging measurements. Within the next five minutes, GR-1 will determine if the battery needs additional charging or should be replaced, so your customer gets an accurate diagnosis - FAST!

STEP 3: Conductance Controlled Charging:

At this point, the GR-1 can concentrate on charging the battery. GR-1 controls the process, while providing the user with continuous updates of charging conditions. At the end of the process, GR-1 sounds a loud and long tone to signal the end of the process so the customer is on their way - FAST!

STEP 4: Final Conditioning and Decision:

GR-1 removes surface charge and performs one last test, to ensure an accurate decision every time.

Product Specifications:

Model Number

GR1-120
GR1-120 KIT (includes printer)

Functions

- Automatic Fast Charge
- Manual Charge
- Jump Start Vehicle

Battery Types/Algorithms

- 12 V Lead Acid Battery (standard starting batteries)
- 12 V AGM/Spiral Battery
- 12 V Group 31 – Truck Battery

Rating Systems/Test Range

100-1500 CCA
100-1500 CA
100-1500 MCA – Marine Cranking Amps
JIS-Japanese OEM Batteries

European Standards

100-850 A DIN
100-1500 A SAE
100-1000 A IEC
100-1500 A EN

Charging Voltage

0.7 volts to 17 volts, .1 resolution

Charging Current

- 0 – 70 amps, 1 amp resolution
- 80 Peak amps

CUL Listed

Manual Charging

60/30/10 amps

Jump Start Vehicle

250 amps

Outputs:

- Amp hours put into the battery
- Time remaining to charge in minutes
- Voltage
- CCA's
- Charge Code

Charge Cycles

- Diagnostic/one-hour fast charge, including unlimited trickle charge
- Manual-timed (max. 120 minutes)
- Manual-continuous



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Total Battery Service - FAST™

Midtronics is recognized as the world leader in battery management technology. Using

patented Conductance Technology, we create innovative battery testing, monitoring, and diagnostic charging solutions for a wide range of battery applications, including vehicle starting batteries, standby power, and motive power.

Midtronics' Conductance testers and diagnostic chargers are the required standard for battery warranty decisions at over 50,000 automotive dealers and battery retailers worldwide.

Conductance Technology

Conductance describes the ability of a battery to conduct current. It is a measurement of the plate surface available in a battery for chemical reaction, which determines how much power the battery can supply. Years of laboratory and field test data have proven that conductance provides a reliable indication of battery state of health and a direct correlation to battery capacity.

As a battery ages, the plate surface can sulfate or shed active material, which adversely affects its ability to perform. Conductance can be used to detect cell defects, shorts, and open circuits which can cause the battery to fail. Using Conductance, Midtronics testers and diagnostic chargers are able to determine the battery's true state of health and provide an indication of the battery's remaining life.



Introducing the GR-1™ Diagnostic Conductance Charger

Total Battery Service - FAST!™

Diagnostic Conductance Charging means solving battery problems in less than an hour, and in many cases, around 30 minutes!

Diagnostics

The GR-1 tests the battery at the beginning, during and after charging, making it the most accurate battery analyzer available.

Conductance

Midtronics patented Conductance Technology has emerged as the industry standard for battery testing. Combined with charging capabilities, GR-1 uses Conductance Controlled Charging (C3) Technology to make battery service safe, fast, and simple.

Charging

Using advanced diagnostic capabilities and Conductance Technology, the GR-1 effectively controls the charging process using the optimal charging voltage and current to quickly charge even discharged batteries.

Total Battery Service

Specially designed for use in a professional service garage, the GR-1 is the ONLY tool that provides total battery service. Just connect to the battery, enter the rating, and press enter. GR-1 does the rest, giving a replace decision for defective or weak batteries, OR charging good but discharged batteries.



Perfect for the parking lot!



Great for the warehouse!



GR-1 Advantages

Conductance Controlled Charging Technology

Midtronics' advanced technology combines battery diagnostics with controlled charging to ensure the battery is always accurately diagnosed and charged. C3 technology makes battery charging:

Safe

Only good batteries are charged to minimize charging hazards

Fast

Charges most batteries in less than an hour

Simple

Advanced user interface makes testing and charging simple for anyone to perform the right way, every time

Multiple Algorithms

Provides accurate and efficient testing and charging of standard automotive batteries, Absorbed Glass Mat, (AGM/ Spiral) batteries, and Group 31 heavy duty batteries

In-Vehicle Charging Test Routine

Includes special in-vehicle diagnostics and charging, and a jumper post routine for charging remote or hidden batteries

Software Updates

The GR-1 is fully field programmable for future algorithm and charging updates based on new battery types and chemistries.



Jump Start Vehicle

A must for any service bay, the GR-1 combines the traditional boost charge and cranking assist into one feature – to apply the right amount of boost charge and an available 250 amps for starting stalled vehicles in seconds

Trickle Charge Mode

The default mode at the end of the charge cycle allows the GR-1 to continue to fill the battery until the technician is ready for installation.

View Last Test

Allows the technician to review results with the customer at the end of the charge cycle

Graphical Printout

The GR1-120 Kit, with high-speed IR printer, allows for the printing of charging system parameters providing an accurate analysis the customer can easily understand.

Multiple Languages

English, Spanish, and French are standard

GR-1 Benefits

- Improves the battery service process to save time and money
- Reduces customer wait time, to improve customer service
- Improves Service Productivity
- Save money on tool purchases
- GR-1=Total Battery Service FAST!™

MIDTRONICS

Battery Management Innovation

Warranty Management Programs:

Effective warranty management requires the right technology, products, process and controls to be effective. GR-1 is designed as the ultimate service bay/charging platform for warranty management programs.

Customization/Software Updates:

GR-1 can be customized to fit specific needs, including specialized algorithms and service programs, as well as matching the charge code with existing Midtronics tester codes to create a closed loop management system.

In addition, the ability to reprogram the GR-1 in the field means it is ready to adapt to any future service need.

Charge Code

Provides encrypted information regarding the last battery charge cycle that can be decoded for warranty analysis, and is a required feature for every warranty management program. Includes the ability to store the last 100 codes for download or review.

Use Counter

Counts up to 65,000+ tests to help verify use.