

# Uniformity & Modularity



Advancing  
Battery Management

## GRX-3000

Battery Diagnostic Station



The GRX Battery Diagnostic Station, Midtronics' latest diagnostic charging platform, combines switch-mode charging with our industry-standard battery diagnostics to ensure that any battery can be quickly and safely charged.

### **One complete battery management package – one ultimate answer to developing demands**

With the GRX Battery Diagnostic Station you can choose for the standalone version with integrated keypad and display or you can use it in combination with an EXP-1000. This combination gives maximum flexibility and at the same time uniformity in the workshop. By using the combination of tester and charger you can share information that later on can be exchanged with any of the wireless communication modules.

### **One size fits all**

The GRX combines its switch-mode charging capability with our patented conductance technology and additional load testing to perform a complete battery diagnostic routine in the shortest possible time. The combination of conductance testing technology with charge acceptance allows our diagnostic chargers to know the difference between a battery that can recover in a given timeframe and one that will not. In addition, defective batteries with open welds and shorts will be detected quickly so that no time is spent charging defective batteries.

## FUNCTIONS

### Diagnostic routines

With the combination of charge acceptance, conductance and load the GRX becomes a powerful tool that can diagnose the battery before and while it is charging. During the Diagnostic Charge mode you find several automated functions such as Hard to Charge, Extended mode and Top-Off mode are active all developed to bring the battery back to a good state of charge and health in the fastest possible way.

### Power Supply function

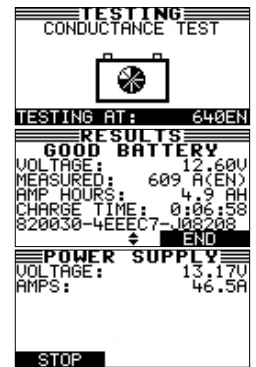
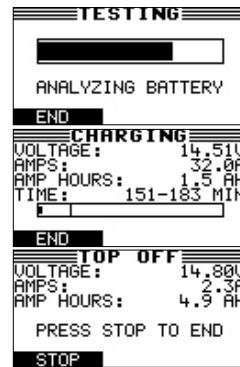
The power supply applications are safe and easy to use for showroom demonstrations and regular vehicle service. While performing service, battery voltage should remain constant and the battery fully charged. Using the power supply mode ensures a full charge during maintenance routines. On-board diagnostic work, such as reprogramming ECU vehicle electronic systems, can drain the battery. A low voltage level during programming can result in an aborted programming cycle that can result in a damaged control unit and high cost.

### Flexibility through Modularity

It is easy to expand the GRX with modules that you need in your environment. As workshops differ, you are able to add several communication modules to connect wirelessly to a network (e.g. WiFi, Bluetooth, ZigBee, etc) or select the RS232 serial connection module to add a barcode reader. Combining the platform with an Amp clamp module and additional electrical system testing software allows you to perform electrical tests on the vehicle as well.

### Multi-tasking with the Docking Station

When you already have an Midtronics EXP-1000, you can use it to control the GRX. Instead of the integrated keypad and display you simply use the tester's keypad and display after docking it in the cradle. EXP control enables multi-tasking: you start the diagnostic charging process with the EXP connected. While the GRX is charging you can simply remove the EXP for diagnosing other cars and batteries.



Screen shots of several functions of the GRX-3000



Modules: Bluetooth, DMM, ZigBee, USB, Wifi, RS232, Ethernet

The GRX Battery Diagnostic Station is designed to offer an often required level of service around the world, using switch-mode and a more scalable platform to help customize the GRX to fit any OEM or aftermarket battery management program.

## APPLICATIONS

Intelligent charge acceptance detection with automatic charge refusal of faulty batteries, saves time, energy, money and manpower.

Due to the modular design, the GRX Battery Diagnostic Station can be used for different applications. From the diagnostic area to the service area to the charge area, the GRX can be used everywhere.

- While diagnosing or programming a vehicle the battery voltage should remain in the fully charged window. A low voltage level during programming can result in an aborted programming cycle which can result in a damaged control unit in the vehicle.
- During regular service maintenance a vehicle should be hooked up to a charger/charge condition to ensure that the battery remains fully charged. Often a vehicle comes into the workshop with a partially discharged battery and you do not want the customer to leave with an even more discharged battery.
- Combine the GRX with an existing Midtronics product and you are able to easily exchange and collect data from and to the GRX. Test the vehicles in the compound on parking lot and charge them inside. Simply dock the tester in the GRX and exchange the test information so the GRX knows what to do without having to enter information.

### KEY FEATURES

- Various diagnostic routines
- No sparks
- Reverse polarity indication
- Dedicated charge curves for all battery technologies
- Power supply for programming
- Charge acceptance detection
- Expansion capability with various modules
- Field exchangeable cables of 1.90 m
- Temperature sensors in both clamps
- SD card for data storage and future updates
- USB connection for future updates



FAST and accurate diagnostic charge and power supply

# GRX-3000

## Battery Diagnostic Station

### SPECIFICATIONS

#### GRX-3000 KIT EU

- Battery Diagnostic Station, power supply and manual charge mode. Including 1.90 meter charging cable with volt sensing and temperature sensor in both clamps.
- IEC power cord
- Cart
- USB and SD card slot
- 4 x status LED
- 6 line display with alphanumeric keypad (128 x 64 pixel graphics, backlit display)
- Manual CD with manual and QRC

#### GRX-3000 EXP KIT EU

- Battery Diagnostic Station, power supply and manual charge mode. Including 1.90 meter charging cable with volt sensing and temperature sensor in both clamps.
- IEC power cord
- Cart
- USB and SD card slot
- 4 x status LED
- External keypad and display from tester (tester not included)
- Manual CD with manual and QRC
- SD card with software to convert standard EXP to GRX controller. Software contains Battery testing, Starting and Charging test

#### Available optional modules

- RS-232 Serial module
- USB module
- DMM module
- WIFI module
- ZIGBEE module
- Bluetooth module
- Ethernet module
- Printer module

#### Available communication options

Thermal printer

#### Applications

12 volts Lead Acid/Ca-Ca (Flooded), AGM/Spiral and GEL batteries for automotive, agricultural and marine.

#### Charge curves

Lead-Acid/Ca-Ca (Flooded)  
AGM/Spiral  
GEL  
Program / In-Service mode

#### Power output

50A / 600W

#### Power requirements

220 - 240 Volt AC - 50 Hz / 16A

#### Temperature range

-20 °C – 45 °C / -4 ° F – 113° F

#### Software

Flash programmable

#### Packing dimensions

Cart: 63 x 94 x 40 cm  
25 x 15 x 16 in  
Charger: 60 x 53 x 31 cm  
24 x 21 x 12 in

#### Weight

Cart: 19 kg / 41 lbs  
Charger: 18 kg / 40 lbs

#### Warranty

Midtronics standard two (2) years

#### Rating System Range

CCA	100 – 1700
JIS by part number	
DIN	100 – 1000
SAE	100 – 1700
IEC	100 – 1000
EN	100 – 1700

#### AH input

Enter battery Ah value for more accurate time-to-charge calculation

#### Temperature compensation

Built-in temperature sensor in both the clamps

#### Languages

24 Languages



#### EMEA Headquarters

Serving Europe, the Middle East and Africa

P +31 30 68 68 150  
F +31 30 68 68 158

info-europe@midtronics.com  
www.midtronics.com

#### European Sales Locations

Midtronics b.v.  
Houten, The Netherlands

#### Corporate Headquarters

Willowbrook, IL USA

#### Asia Offices

Shenzhen, China

Navi Mumbai, India