

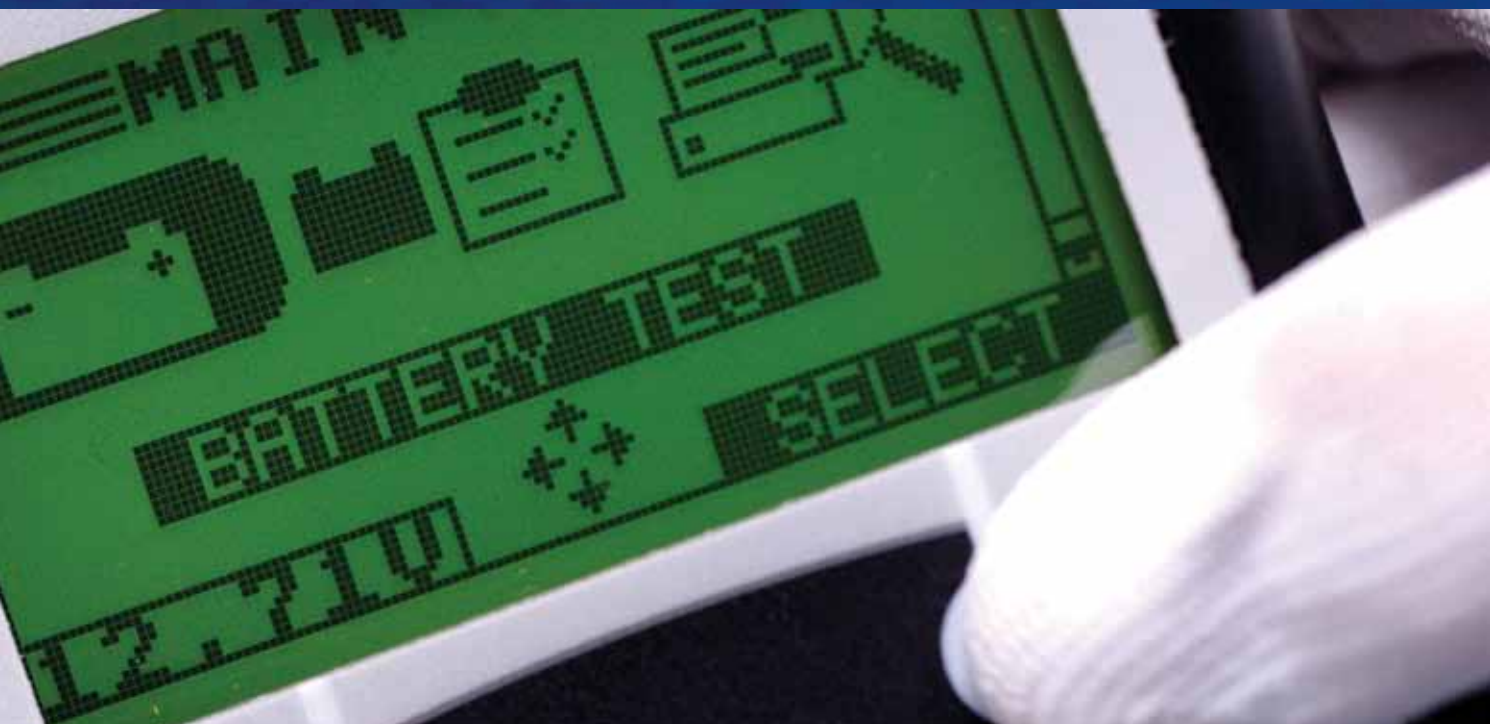


**MIDTRONICS**

**Advancing  
Battery Management**

**Battery & Electrical Diagnostics Catalog**





### **Advancing Battery Management**

The Midtronics tradition of industry-leading innovation continues, building on more than 25 years of experience in transportation battery management. Our battery and electrical diagnostic and charging equipment is most reliable and powerful in the industry, but we are not easily satisfied. Working closely with leading vehicle OEMs, dealers and aftermarket parts and service providers, we are always creating new ways to reduce costs, improve efficiency and provide better service.



### **Proven History, Poised for the Future**

Since pioneering a new standard in battery testers with conductance technology, Midtronics has remained singularly focused on battery management innovation. What began with our original conductance technology has evolved into productivity-enhancing electrical diagnostic tools, diagnostic charging systems and information management.

In the fast-growing hybrid and electric vehicle (EV) markets, Midtronics is leading the way by working closely with manufacturers to develop solutions that match the complexity of these new battery and electrical systems. Our new technologies provide the foundation for industry-leading battery testing and electrical system analysis and diagnostic tools, the exclusive choice of many leading vehicle manufacturers and service providers.

### **Contact Midtronics today to advance your battery management program**

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<b>Website</b>	<a href="http://www.midtronics.com">www.midtronics.com</a>

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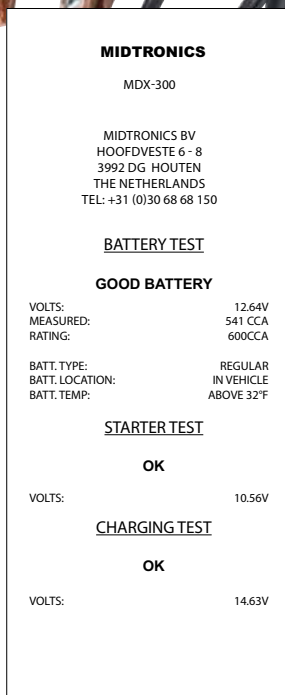
# MDX-300 Series Battery & Electrical System Analyzer

## Battery Conductance and Electrical System Analyzer with Integrated Printer

Complete with an integrated printer, the Midtronics MDX-300 series makes it easy and more affordable to determine and present the current state of a battery and electrical system.

The MDX-300 series perform a quick, simple, and accurate battery or system test in seconds without heat, sparks, or user interpretation. The results can then be printed and reviewed immediately with customers to add impact to preventative maintenance routines and customer service.

- Integrated printer provides immediate results to review with the customer
- User-defined headers on printout
- Tests 12-Volt batteries and electrical systems for cars and light trucks
- Tests starting and charging system voltage and displays results
- Tests batteries from 100 to 900 CCA
- Bad cell detection
- Reverse polarity protection
- Tests discharged batteries down to one Volt
- Multiple rating system compatible (CCA, SAE, DIN, EN, IEC)
- Tests multiple battery chemistries, including standard (flooded), AGM, and Gel
- 19 languages



**Perform a quick, simple and accurate battery test in seconds and review the printout with your customers**



Add battery testing to your preventative maintenance routine and identify bad batteries before your customers get stranded. You will increase battery sales and have satisfied customers.

**Part No. :** Includes:

**MDX-300** MDX-300 Battery & Electrical System Analyzer with Integrated Printer

# MDX-600 Series Battery & Electrical System Analyzer

## Battery Conductance and Electrical System Analyzer

The MDX-600 series combines industry standard conductance technology for battery testing with more than 25 years of experience and innovation gained from selling essential tools to nearly every car and truck OEM in the world. MDX Series advanced features include:

- Multiple vehicle applications, battery types, and rating systems
- Large back-lit screen and improved user interface
- Integrated printer option
- Improved Replaceable Cable Design

### Applications:

- Automotive
- Motorcycle
- Truck
- 6 & 12 Volt batteries
- 12 & 24 Volt charging systems

### Battery Type:

- Regular flooded
- AGM flat plate
- AGM spiral
- Gel

### Test Range:

- JIS, SAE, EN, DIN, IEC
- 6 and 12 Volt batteries

### Advanced Starter/Alternator Testing:

(655 / 655P Only)

- Quick starter analysis without disabling the ignition
- Advanced menu-driven interface for a complete charging system analysis in seconds

### Supported Languages:

- 24 languages

<b>MIDTRONICS MDX-655P</b>	
MIDTRONICS BV HOOFDVEST 6-8 3992 DG HOUTEN THE NETHERLANDS TEL: +31 (0)30 68 68 150	
29-05-2008 15:52	
BATTERY TEST	
<b>GOOD, RECHARGE</b>	
VOLTS MEASURED	12,43V
RATING	451 SRE(A) 525 SRE(A)
BATTERY TYPE	REGULAR FLOODED
BAT. LOCATION	IN VEHICLE
APPLICATION	AUTOMOTIVE
BAT. TEMPERATURE	ABOVE 0°C
STARTER TEST	
CRANKING NORMAL	
CRANKING TIME	10,58U 0,78S
CHARGING TEST	
NO PROBLEMS	
NO LOAD	LOADED
14,53V	14,47V



MDX-645 /  
MDX-655



MDX-645P /  
MDX-655P

MDX-645



MDX-655



Use your smart phone QR scanner app to read this code and view a product demo video.

### Part No. : Includes:

<b>MDX-645</b>	MDX-645 Battery Conductance Analyzer including 120 cm cable (6 and 12 Volt batteries)
<b>MDX-645P</b>	All of the MDX-645 features, including 120 cm cable plus an Integrated Printer
<b>MDX-655</b>	Battery and Electrical System Analyzer combines the full MDX-645 capabilities for battery testing with in-vehicle capabilities for analyzing the starting and charging systems including 300 cm cable (6 and 12 Volt batteries and 12 and 24 Volt charging systems)
<b>MDX-655P</b>	All of the MDX-655 features, including 300 cm cable plus an Integrated Printer

# EXP-1000 Expandable Electrical Diagnostic Platform

## An expanded vision of the electrical system brings an expanded horizon to your business

The EXP-1000, Expandable Electrical Diagnostic Platform, marks the next generation of handheld analyzers. So revolutionary, it makes other electrical system diagnostic tools seem ordinary. The EXP allows you to diagnose every part of the electrical system, from the battery to the starter and alternator, more accurately and decisively than ever before. The platform combines the full functions of an advanced analyzer, digital multimeter, and data management tool- all in the palm of your hand. And the expanded capabilities don't stop there. A memory card system allows for upgrades, quick storage, and transfer of test data- sustaining the value of the EXP for years to come.



### Dynamic Conductance Battery Testing Technology

- Combines direct temperature measurement with deep scan technology to improve accuracy and decisiveness

### Advanced electrical system diagnostics featuring Digital Signal Processing

- Digital Signal Processing - (DSP) creates a digitized picture of the measured alternator out put voltage to analyze the amplitude level and frequency ripple pattern
- Delivers improved accuracy and the ability to identify open or shorted diodes or open phase conditions (multiple diode failure or winding problems)

### Enhanced starter testing

- Fully diagnoses all parts of the starting system including current draw, starting time and circuit resistance

### Temperature measurement compensation for improved decision making

### Complete multimeter functionality with scope mode

### Tests 6 and 12 Volt batteries, 12 Volt charging systems

- AC/DC Volts
- Temperature
- AC/DC Amps
- Ohm meter
- Diode test
- Scope mode
- Volts/Amps mode

### Patented Conductance Cable Drop Test

- Interactive routines using dual cable sets for more effective analysis of voltage drop across ground circuit, starter system, alternator system, and generic system testing

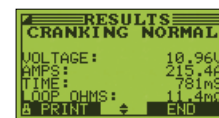
### Enhanced Communications Capabilities

- IR printer option
- Data card reader/writer for future upgrades

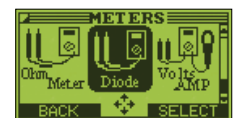
### Superior User Interface

- Large backlit graphical screen and icon-based user interface make diagnostics simple for both novice and experienced electrical technicians
- Alphanumeric keypad, arrow key scrolling and hot keys make the EXP-1000 as easy to use as a remote control or cell phone

**Improve customer service through more accurate and decisive results.**



Enhanced starter diagnostics results



Menu icons to access DMM functions

Part No. :	Includes:
<b>EXP-1000 KIT EU</b>	Expandable Electrical Diagnostic Platform, including 300 cm cable and hard case.
<b>EXP-1000 KIT EU EST</b>	Expandable Electrical Diagnostic Platform, including 300 cm cable, A0126 Multimeter leads, A028 Voltage Drop Leads. Includes Extended software for full Electrical System Diagnostics. Including hard case.

# EXP-1000 HD Heavy-Duty Expandable Electrical Diagnostic Platform

## Advanced battery and electrical system diagnostic platform for commercial/fleet vehicles

The EXP-1000 HD is the electrical system pro's best friend. This advanced battery and electrical system analyzer provides proven Conductance Technology with enhanced testing algorithms for unparalleled accuracy and decision making. With the latest advances in battery testing technology and improved electrical system testing, the EXP-1000 HD features:

### Specially Designed for HD/ Commercial Fleet Market

- Truck vs. automotive selection sets application-specific test parameters for system and cable drop testing

### Dynamic Conductance Battery Testing Technology

- Combines direct temperature measurement with deep scan technology to improve accuracy and decisiveness

### Advanced electrical system diagnostics featuring Digital Signal Processing

- Digital Signal Processing(DSP) creates a digitized picture of the measured alternator output voltage to analyze the amplitude level and frequency ripple pattern
- Delivers improved accuracy and the ability to identify open or shorted diodes or open phase conditions (multiple diode failure or winding problems)

### DMM Function for Advanced Diagnostics

- AC/DC Volts
- AC/DC Amps
- Diode test
- Volts/Amps mode
- Temperature
- Ohm meter
- Scope mode

### Patented Conductance Cable Drop Test

- Interactive routines using dual cable sets for more effective analysis of voltage drop across chassis ground, starter system, alternator system, and generic system testing

### Enhanced Communications Capabilities

- IR printer option
- Data card reader/writer for future upgrades

### Advanced User Interface

- Large graphical screen for icons and improved explanations
- Scroll bar capability means fewer overall screens
- Icon-based menus and hot keys improve logic and flow

### Program Management Tools

- User ID system to help drive and manage product use
- Enhanced counters report testing data, including lifetime use, results dispersion, and number of tests by user

### Supported Languages:

- 24 languages



Cable drop test results



Use your smart phone QR scanner app to read this code and view a product demo video.

Part No. :	Includes:
EXP-1000 HD KIT EU	Expandable Electrical Diagnostic Platform for Trucks and Passenger cars, including 425 cm cable and hard case.
EXP-1000 HD KIT EU EST	Expandable Electrical Diagnostic Platform, including 425 cm cable, A0126 Multimeter leads, A028 Voltage Drop Leads. Includes Extended software for full Electrical system Diagnostics. Including hard case.

# ChargeXpress PRO series Vehicle Battery Specialty Charger & Power Supply

## Vehicle battery specialty charger & power supply

Midtronics' ChargeXpress PRO series is best described as a multi-tasking specialty charger and power supply unit. It is specifically designed to maintain battery state-of-charge and state-of-health during vehicle service, complex maintenance routines and for powering demonstrations.

Midtronics ChargeXpress PRO series differentiate themselves from ordinary chargers by combining a battery charge mode with charge acceptance and battery conditioning in the power supply mode. It provides a clean, reliable power supply for charging and maintaining battery state-of-charge, which draws significant power from the vehicle battery. The portable and easy to place CX PRO is safe, fast and simple.



- Perform a wide range of vehicle battery charging & power supply related tasks with a single investment
- Maintain battery state-of-charge to avoid potential damage resulting from battery drain during vehicle service
- Return battery in optimum condition to ensure customer mobility and increase customer satisfaction

**Perform preventive maintenance testing  
in less than five minutes to reduce  
operating costs while increasing  
reliability and ensuring fleet mobility**

### Product Specifications

- **Model:** ChargeXpress PRO 25
- **Applications:** 12 Volts Lead Acid/CA-CA (Flooded), AGM/Spiral and GEL batteries for automotive, agricultural and marine.
- **Display:** 1 Status LED, 4 Function LED's
- **Cable length:** 500 cm, replaceable
- **Power requirements:** 230 Volt AC - 50 Hz / 16A
- **Charge curves:** Lead-Acid/Ca-Ca (Flooded) AGM(Spiral), GEL, Program / In-Service mode
- **Charging Amps:** 25A
- **Power output:** 300W
- **Dimensions:** 205 mm L x 165 mm W x 100 mm H
- **Weight:** 2.5 kg
- **Protection index:** IP 23
- **Temperature range:** -20 °C to 45 °C (-4 °F to 113 °F)
- **Hardware:** Flash programmable
- **Volt sensing:** In software
- **Content:** Base unit, 1 replaceable charge cable of 500 cm mains lead and user manual

### Product Specifications

- **Model:** ChargeXpress PRO 50-2
- **Applications:** 12 Volts Lead Acid/Ca-Ca (Flooded), AGM, Spiral and GEL batteries for automotive, heavy duty, agricultural and marine. 24 Volts heavy duty battery sets (2 x 12 Volt)
- **Display:** 2 x 1 Status LED, 2 x 4 Function LED's
- **Cable length:** 2 x 500 cm, replaceable
- **Power requirements:** 230 Volt AC - 50 Hz / 16A
- **Charge curves:** Lead-Acid/Ca-Ca (Flooded) AGM(Spiral), GEL, Program / In-Service mode
- **Charging Amps:** 50A single channel  
2 x 25A dual channel
- **Power output:** 600W
- **Dimensions:** 300 mm L x 165 mm W x 100 mm H
- **Weight:** 4 kg
- **Protection index:** IP 23
- **Temperature range:** -20 °C to 45 °C (-4°F to 113°F)
- **Hardware:** Flash programmable
- **Volt sensing:** Full automatic
- **Content:** Base unit, 2 replaceable charge cable of 500 cm mains lead and user manual



# GRX-3000 Battery Diagnostic Station

## **Easy-to-use scalable solution designed to support full battery management programs**

Fast, accurate and reliable, the GRX can determine- often in less than five minutes- the difference between a recoverable battery and one that is not. Diagnostic charging is uniquely designed to continuously monitor the charging progression. Each session is customized and highly controlled- charging stops as soon as a battery can be returned to the customer or is determined to require replacement. Defective batteries with open welds and shorts are identified rapidly and recoverable batteries are quickly and safely charged, putting your customers back on the road faster. The GRX diagnostic station delivers better efficiency in the shop, clearer test results and more accurate preventative maintenance decisions by helping to eliminate guesswork and wasted time charging defective batteries.

### **Product Specifications**

- **Model:** GRX-3000, includes 300 cm replaceable cables
- **Applications:** 12 Volts Lead Acid/CA-CA (Flooded), AGM/Spiral and GEL batteries for automotive, agricultural and marine.
- **Dimensions:** 45.7 cm L x 43.2 cm W x 24.6 cm H
- **Weight:**  
Cart: 19 kg  
Charger: 18 kg
- **Temperature range:** -20°C to 45°C (-4°F to 113°F)
- **Display:** LCD graphics display
- **Rating Systems:**  
CCA 100 - 1700 IEC 100 - 1000  
DIN 100 - 1000 EN 100 - 1700  
SAE 100 - 1700 JIS by part number
- **Power supply:** 50A
- **Optional power supply:** 70A
- **Power requirements:**  
220 - 240 Volt AC - 50 Hz / 16A
- **Supported Languages:**  
24 languages
- **Housing Material:** Acid-resistant ABS plastic
- **Integrated Data Card Slot and USB Port**
- **Optional Communications Modules:**
  - Ethernet port
  - Wireless ports (WiFi, Bluetooth, Zigbee)
  - RS-232 Serial module
  - USB module
  - DMM module
- **Optional Integrated Printer**



Use your smart phone QR scanner app to read this code and view a product demo video.

Part No. :	Includes:
GRX-3000	GRX-3000 Battery Diagnostic Station + Cart
GRX-3000 KIT	Everything included with GRX-3000, plus Integrated Printer

# GRX-5100 Hybrid/EV Battery Service Tool

## *The industry's first high-voltage hybrid/EV battery service tool*

The Midtronics GRX-5100 Hybrid/EV Battery service tool performs full battery pack service for various hybrid and electric vehicles, including:

- Pack de-powering
- Balancing
- Charging
- Jump start

Simple menu prompts guide verification that the battery and communication systems are properly connected and balancing or de-powering operations can safely begin.

By enabling service for the battery system at the module level, The GRX-5100 reduces manufacturer warranty costs and repair time.

The GRX-5100 features a versatile electrical harness between vehicle batteries and communication systems via unique adapters for each vehicle model. The station also utilizes USB-based memory, which supports system updates for future vehicle battery systems without a hardware upgrade.



### Product Specifications

#### Inputs

- AC Main Power
  - 100-240 VAC 50/60 Hz
  - 12A maximum, continuously monitored for maximum charge rate
  - > 0.95 PFC
  - 89% efficiency
- Control Inputs
  - RS-232 power
  - USB – A; USB- B
  - Wi-Fi

#### Input / Output

- Independent CAN BUS (2)
- LIN (1)
- Digital I/O (8)

#### Discharger

- 0 – 7.5 amperes DC
- Continuously variable
- 0 – 384 VDC compliant
- Reverse polarity protected
- Hard safety disconnect
- Monitors battery section temperature
- Monitors high-voltage leakage to chassis
- Terminates session for excessive leakage

#### Charger

- 0 – 5.0 amperes DC
- Continuously variable
- 0 – 384 VDC compliant
- Reverse polarity protected
- Hard safety disconnect
- Monitors battery section temperature
- Monitors high-voltage leakage to chassis



Use your smart phone QR scanner app to read this code and view a product demo video.

# Hybrid Battery System Analyzer



The HYB provides technicians with the capability to perform battery service maintenance testing on several leading Hybrid vehicles. Simply connect the wireless convergence communication module to the vehicle's on-board diagnostics port and follow the menu instructions on the HYB.

The drive test is an interactive, menu-driven test that uses live vehicle sensor information while performing an accelerated drive test. The technician can see live results on the tester while performing the test, and print the results to an IR printer at the end of the test.

## Product Specifications

The drive test provides the state of health (SOH) of the battery pack at the end of the test:

- Pack OK
- Pack needs Service – low conductance
- Pack needs Service – out of balance
  - Corrosion or connection issues between cells
  - Weak cells that can be replaced
- Includes a bar graph showing relative indication of pack SOH
- Indicates when battery pack service is needed

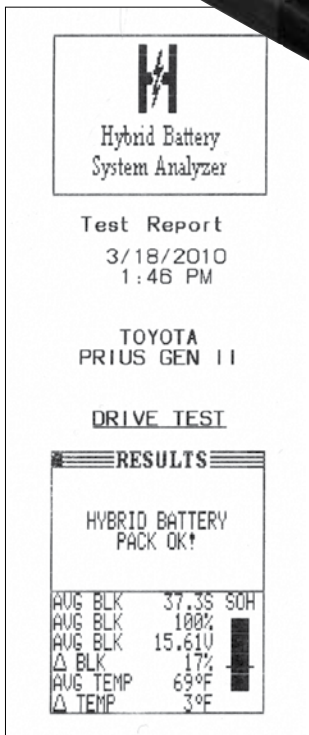
## Collected data includes:

- Block Conductance (G) – in Siemens
- % Block Conductance (G) Remaining
- Average Block voltage
- Voltage change from highest to lowest
- Average temperature of blocks, in °C
- Temperature range of blocks, from highest to lowest, in °C

## Applications:

- Drive Test – Test Hybrid Batteries while in-vehicle
- Test 12-Volt Auxiliary battery
- Read/Clear DTC Codes
- Live Data-Run Chart

Make	Model
Cadillac	Escalade
Chevrolet	Malibu
Ford	Escape Gen I, Escape Gen II, Fusion
Honda	Civic Gen II, Insight I, Insight II
Lexus	LS600h
Toyota	Prius Gen I, Prius Gen II, Camry



Use your smart phone QR scanner app to read this code and view a product demo video.

Part No. :	Includes:
<b>HYB-1000</b>	Hybrid Battery System Analyzer, wireless communication module, CVG wireless convergence module, 120 cm battery test cables for auxiliary battery test, carrying bag
<b>HYB-1000 KIT</b>	Everything included with HYB-1000, <b>plus Infrared Printer</b>

# Accessories & Replacement Parts

Below is a full list of Midtronics accessories and replacement parts at the time of printing. For the most updated list and/or to see accessory photos, please visit [www.midtronics.com/transportation](http://www.midtronics.com/transportation) and select the Accessories option under the Products tab. To order Midtronics accessories, call Customer Service at +31 (0)30 68 68 150, or contact your local Midtronics Sales/Service distributor.

## Cables & Replacement Cables

<i>Part Number</i>	<i>Description</i>	<i>Product(s)</i>
A018	Inductive Amp Clamp	EXP-1000, EXP-1000 HD
A028	DMM Cable Assembly with Clamps	EXP-1000 EST, EXP-1000 HD EST
A126	DMM Adapter & Probe kit	EXP-1000 EST, EXP-1000 HD EST
A207	120 cm Replacement cable for MDX-600	MDX-600(P)
A208	300 cm Replacement cable for MDX-600	MDX-600(P)
130-072	120 cm Replacement cable – Muller Clamps	EXP-1000
130-078	300 cm Replacement cable – Muller Clamps	EXP-1000
130-079	450 cm Replacement cable – Muller Clamps	EXP-1000 HD
130-000291	300 cm Replacement cable - Piranha Clamp	EXP-1000
130-000312	450 cm Replacement cable - Piranha Clamp	EXP-1000 HD
130-000097	190 cm Replacement cable for GRX-3000	GRX-3000
130-000320	290 cm Replacement cable for GRX-3000	GRX-3000
130-846	Charge cable (500 cm) CX PRO 25	CX PRO 25
130-849	Charge cable (500 cm) CX PRO 50-2	CX PRO 50-2
A033	Lead stud adapter set (2 Female; 2 Male)	All

**Note:** *For the assurance of the accuracy of the measurements, it is advised to have the cable replaced and the readings validated at an Authorized Midtronics Service Location.*

## Carrying Cases & Bags

<i>Part Number</i>	<i>Description</i>	<i>Product(s)</i>
A106	Hard Carrying Case	EXP-1000, EXP-1000 HD
115-456	Universal Soft Carry-All Bag	HYB-1000, IDR
115-911	Carrying case	MDX-600, EXP-1000, EXP-1000HD

## Printers & Print Accessories

Part Number	Description	Product(s)
A088	Infrared printer EU	EXP-1000, EXP-1000 HD, MDX-600 series
A089	Infrared printer UK	EXP-1000, EXP-1000 HD, MDX-600 series
457-005	In-vehicle Charger for A088/A089 (cigarette lighter)	A088, A089
157-002	Charger Adapter EU	A088, A089
157-003	Charger Adapter UK	A088, A089
MJ10	Rechargeable batteries 1.2V 1600 mAh	A088, A089
856607-10	Thermal Printer Paper (10 pcs.)	A088, A089, MDX-300, MDX-600P
A224	Plastic Printer Roller Assembly	MDX-300, MDX-600P
A256	Printer Module GRX	GRX-3000
DVP-100 USB	Data Viewer program kit (USB)	Check compability before ordering!
301-090	Replacement USB IR Receiver for DVP-100	DVP-100



## AMP-100 Portable Multimeter

- Low-level DC Amp range for easy detection of excessive parasitic drain
- 200 DC Amp range to measure system output level for advanced starter diagnosis
- Small jaw size
  - Fits into tight places
  - Easier to get the right cable for accurate measurement
- One-touch zero button sets the reading to zero as a reference value or to eliminate the offset value caused by residual magnetism
- 9,5 cm digital LCD display
- Probes make it a useful tool for pinpoint diagnostics like finding shorts and voltage drop tests
- Can also be used to troubleshoot AC-powered equipment and shop circuits

### Specifications:

- Part Number:  
AMP-100, includes carrying case, cables and manual
- Measurement Ranges:
- Using the Jaw:
- Measures DC current from 0-40 A, 0-200 A
  - Measures AC current from 0-40 A, 0-200 A
- Using the Probes:
- Measures DC voltage: 400 V, Resolution: 0.1 V
  - Measures AC voltage: 400 V, Resolution: 0.1 V
  - Measures Resistance: 40# Ohm-400# Ohm
  - Continuity upon voltage: 0.4 V

# BMIS | Battery Management Information System



Midtronics *Battery Management Information System* (BMIS) is a fully customizable, web-based data analysis and reporting service designed to make your equipment, staff, and processes more profitable and effective.

### Improve warranty processing

Improve your warranty testing compliance, plus gain easy access to warranty test results

### Monitor and update tools

Track the usage of all tools in the field, and update tool software wirelessly

### Increase sales

Increase focus on preventative maintenance testing to drive sales and offer proactive customer service

### Easy to learn and use

Web-based interface presents results that are easy to review and analyze for immediate impact on your business operations

## Sample Reports



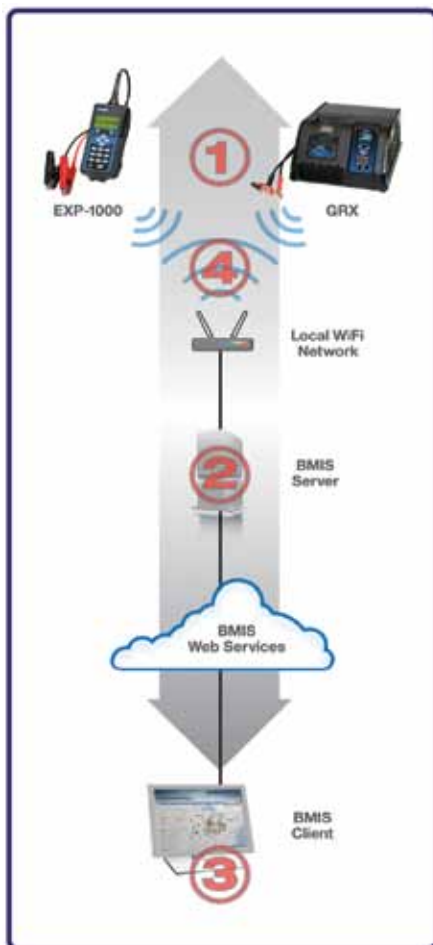
### Equipment Tracking Report

Provides tracking of equipment, showing locations and if each tool has reported in



### Test Results

Promotes battery sales by identifying opportunities to replace batteries



*The BMIS battery and electrical management reporting system is designed to provide:*

1. Centralized collection of data from performed battery and electrical testing from multiple sources
2. Test data analysis
3. Web-based reports for review
4. Automatic software updates for test equipment in the field

	inTECH 15	MDX-335P	MDX-645 [P]	MDX-655 [P]	EXP-1000	EXP-1000HD
Voltmeter	•	•	•	•	•	•
Application	Automotive	Automotive	Automotive incl. motor and truck	Automotive incl. motor and truck	Automotive incl. truck	Automotive incl. truck
Battery types and systems	12 Volt batteries. Lead acid and AGM	12 Volt batteries. Lead acid (flooded), AGM and GEL	6 and 12 Volt batteries, 12 and 24 Volt charging systems. Lead acid (flooded), AGM/Spiral and GEL	6 and 12 Volt batteries, 12 and 24 Volt charging systems. Lead acid (flooded), AGM/Spiral and GEL	6 and 12 Volt automotive, agricultural and marine batteries, incl. AGM/Spiral and GEL	6 and 12 Volt HD-commercial, automotive, agricultural and marine batteries, Lead acid, AGM/Spiral and GEL. 24 Volt system balance testing
Test range	120-550 DIN 200-900 EN 120-550 IEC 200-900 SAE	100-900 CCA 100-550 DIN 100-900 EN 100-550 IEC 100-900 SAE	100-1200 DIN 100-2000 EN 100-1200 IEC 100-2000 SAE	100-1200 DIN 100-2000 EN 100-1200 IEC 100-2000 SAE	100-1000 DIN 100-3000 EN 100-1000 IEC 100-3000 SAE	200-3000 CCA 100-1000 DIN 100-3000 EN 100-1000 IEC 100-3000 SAE
Reverse polarity protection	•	•	•	•	•	•
Custom printout headers		•	•	•	•	•
Field-replaceable cables			•	•	•	•
8.9 cm text backlit display			•	•		
11.4 cm text / graphical backlit display					•	•
Data card read (software upgrades only)			•	•	•	•
State of Health graph					•	•
Test data storage					•	•
Battery temperature sensor					•	•
Dynamic electrical system diagnostics*					•	•
Customizable coupon printout			•	•	•	•
User based usage tracking					•	•
Amp clamp					OPTIONAL	OPTIONAL
Digital multimeter function					OPTIONAL	OPTIONAL
Cable drop test					OPTIONAL	OPTIONAL
Integrated printer		•	OPTIONAL			
IR printer port			•	•	•	•
Standard starter/ alternator Voltage test	•	•	•	•		
Advanced starter/ alternator testing					•	•
Cranking Voltage graph					•	•
Diode waveform graph					•	•

\* featuring Digital Signal Processing (DSP)

## Customer Support



Should you have a question about the use of your Midtronics product, or a need for service, please contact us.

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