



Advancing
Battery Management

START SOME- THING

Battery and
Electrical Diagnostics
Catalog



Advancing Battery Management

The Midtronics tradition of industry-leading innovation continues, building on over 30 years of experience in transportation battery management. Our battery and electrical diagnostic and charging equipment is the most reliable and powerful in the industry, but we're never satisfied. Working closely with leading vehicle OEMs, dealers and aftermarket parts and service providers, we're 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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Toll-free in North America: 866.592-8052

Email: CustomerHelp@midtronics.com

Website: www.midtronics.com

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Kits

Kits Offer Value and Convenience

Most Midtronics products are available as a standalone product or in a kit. When ordering a full kit, you receive a variety of value-added extras that offer convenience and functionality.

From lead stud adapters and convenient protective carrying cases, to carts, printers, and amp clamps – product kit options offer a more economical way to purchase products and accessories than purchasing separately.



KIT AVAILABILITY AND DETAILS ARE LISTED ON APPLICABLE PRODUCT PAGES IN THE PART NUMBER/PRODUCT DETAIL BOX

Part No. :	Includes:
EXP-1000 BASIC	EXP-1000 Analyzer, 10-ft cable set/standard clamps, lead stud adapter set
EXP-1000	Everything included with EXP-1000 BASIC, plus carrying case
EXP-1000 KIT	Everything included with EXP-1000 BASIC, plus carrying case and infrared printer
EXP-1000 AMP	EXP-1000 Analyzer, 10-ft cable set/standard clamps, lead stud adapter kit, carrying case, amp clamp, DMM adapter & probe kit, 10-ft DMM cable assembly
EXP-1000 AMP KIT	Everything included with EXP-1000 AMP, plus infrared printer

DSS-7000 Battery Diagnostic Service System



2014 winner of both the *MOTOR Magazine* Top 20 Tool Award and the *PTEN* Innovation Award



An Innovative solution for new vehicles, new batteries, and new business challenges.

The DSS-7000 Battery Diagnostic Service System answers the challenges posed by contemporary and future vehicles, including capabilities for new battery and system types, new business procedures, and a new generation of service technicians familiar with app-based technology.

The DSS-7000 enables you to broaden your service expertise by giving you the technology you need to service current and future vehicles:

- Service for advanced vehicles, including start-stop and hybrids, as well as conventional vehicles
- Vehicle database-driven testing creates a service history for each vehicle tested, providing easy access to service records for technician and customer review
- Removable full-color tablet controller provides simple system navigation, detailed reference information, and test results easy to share with customers
- Service apps promote quick error-free testing – ideal for busy shops or inexperienced technicians
- Advanced testing capabilities including more decisive results (less charge & retest), reserve capacity testing, and battery registration & reset functions



Product Specifications:

Supported Battery Types

12V Standard batteries:

- Flooded Lead Acid
- AGM Flat Plate
- AGM Spiral
- Gel

Battery Ratings

- CCA
- CA
- MCA
- JIS
- DIN
- SAE
- IEC
- EN

Battery Connections

- Side post
- Top post
- Remote post

Reverse Polarity Detection

Temperature Sensor

Located on bottom of base unit

Primary Battery Voltage

1.0 to 36V

Battery Test Cables

3 ft; removable/field-replaceable

Tablet Controller

Removable; 7" diagonal display

Temperature & Humidity

- Operating temperature range: -17°C / +40°C (0°F to +122°F)
- Humidity: 20-80% R.H. (non-condensing)

Wireless Communications

Class 2 Bluetooth

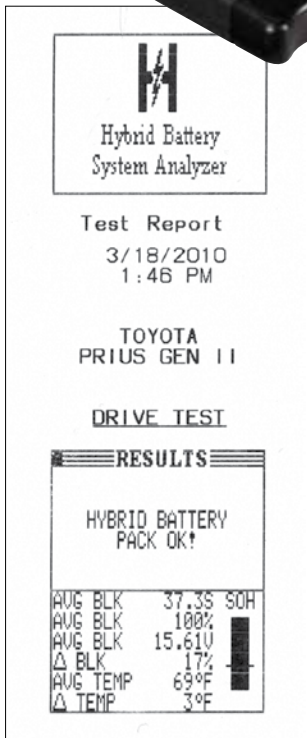
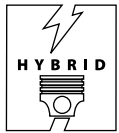
Wi-Fi Communications

802.11 b,g,n



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

HYB-1000 Hybrid Battery System Analyzer



The HYB-1000 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.

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 °F
- Temperature range of blocks, from highest to lowest, in °F

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

Part No. :

Includes:

HYB-1000

Hybrid Battery System Analyzer, wireless communication module, CVG wireless convergence module, 4-ft battery test cables for auxiliary battery test, carrying bag

HYB-1000 KIT

Everything included with HYB-1000, **plus Infrared Printer**



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

PBT Series Battery Testers

Only the Midtronics PBT series offers the advantages of OEM technology at a toolbox price. With four models to choose from, the Midtronics PBT series provide test capabilities from simple powersports battery testing with the PBT-50 to auto/light truck battery and electrical system testing with the PBT-300.

- Conductance-based testing is safe, fast, and simple
- PBT Series testers are built using the same core battery testing technology required for warranty testing at automotive dealers and battery resellers worldwide
- PBT Series testers provide fast and accurate test decisions in seconds without heat, sparks, or user interpretation



PBT-300

Diagnostic Battery Conductance / Diagnostic Electrical System Tester

PBT-300

- All the features of the PBT-200, *plus*:
- Expanded measurement range from 100–1400 CCA
- Green and red LEDs give fast decisions on starter and charging system testing
- Starter system testing: pressing the down arrow displays the captured voltage from cranking the engine
- Charging system testing: pressing the up arrow displays the captured high voltage from the alternator



PBT-200

Advanced Battery Conductance / Electrical System Tester

PBT-200

- All the features of the PBT-100, *plus*:
- Shows available power in CCAs at the end of each test
- Bad cell detection
- High/low voltage capture for improved starter/charging system testing



PBT-100

Battery Conductance Testers

PBT-100

- Measurement range from 200-850 CCA
- Accurate battery test decision in seconds
- No user interpretation required
- Voltmeter mode for testing both the starter and the charging system



PBT-50

PBT-50

Powersports battery testing – safe, fast and simple

- Motorcycle and recreation batteries
- Accurate battery test decision in seconds
- Simple reference number-based testing
- Tests discharged batteries

Part No. :	Includes:
PBT-300	PBT-300 Diagnostic Battery Conductance/Electrical System Tester
PBT-200	PBT-200 Advanced Battery Conductance/Electrical System Tester
PBT-100	PBT-100 Battery Conductance Tester
PBT-50	PBT-50 Powersports Battery Tester

MDX-P300 Battery & Electrical System Analyzer

Battery Conductance and Electrical System Analyzer with Integrated Printer

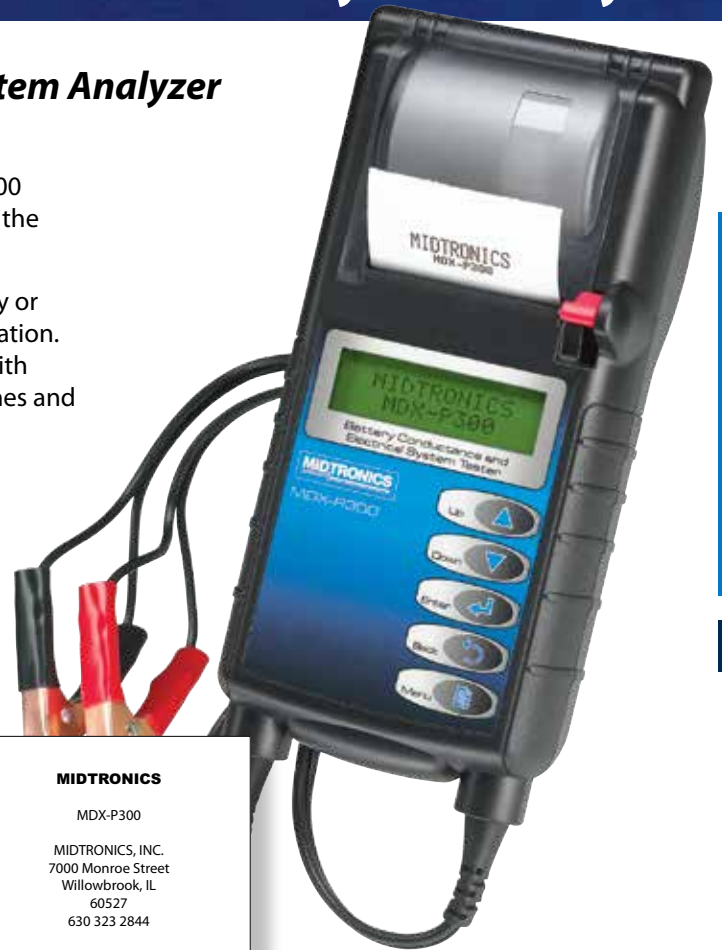
Complete with an integrated printer, the Midtronics MDX-P300 makes it easy and more affordable to determine and present the current state of a battery and electrical system.

The MDX-P300 performs 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 1400 CCA
- Bad cell detection
- Reverse polarity protection
- Tests discharged batteries down to one volt
- Multiple rating system compatible (CCA, SAE, DIN, EN, IEC, JIS)
- Tests multiple battery chemistries, including standard (flooded), AGM, and Gel
- Multi-language capability including English, French-Canadian, Spanish, and Japanese



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



MIDTRONICS	
MDX-P300	
MIDTRONICS, INC. 7000 Monroe Street Willowbrook, IL 60527 630 323 2844	
<u>BATTERY TEST</u>	
GOOD BATTERY	
VOLTS:	12.64V
MEASURED:	541 CCA
RATING:	600CCA
BATT. TYPE:	REGULAR
BATT. LOCATION:	IN VEHICLE
BATT. TEMP:	ABOVE 32°F
<u>STARTER TEST</u>	
OK	
VOLTS:	10.56V
<u>CHARGING TEST</u>	
OK	
VOLTS:	14.63V

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

Part No. :	Includes:
MDX-P300	MDX-P300 Battery & Electrical System Analyzer with Integrated Printer

MDX-600 Series Battery Conductance & Electrical System Analyzers

Analyzer Evolution

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
- Field-replaceable cables

Vehicle Applications

- Automotive
- Motorcycle
- Marine Cranking
- Lawn and Garden
- Group 31
- Commercial 4D/8D

Battery Type

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

Global Systems

- CCA, CA, MCA, JIS, SAE, EN, DIN, IEC
- 6 and 12 volt batteries

Advanced Starter/Alternator Testing (650 / 650P Models Only)

- 12 & 24 volt charging system testing
- Quick starter analysis without disabling the ignition
- Advanced menu-driven interface for a complete charging system analysis in seconds
- QC MODE for performing quality control testing



MDX-640

MDX-650P

Part No. :	Includes:
MDX-640	MDX-640 Battery Conductance Analyzer, lead stud adapter set, 4-ft cable set
MDX-650	MDX-650 Battery Conductance and Electrical System Analyzer, lead stud adapter set, 10-ft cable set, carrying bag
MDX-650P	Everything included with MDX-650, plus integrated printer

Use your smart phone QR scanner app to read the codes and view these product videos.



MDX-640



MDX-650



MDX-650P

EXP-800 Battery & Electrical System Diagnostic Analyzer

Get more out of your preventative maintenance routines with the EXP-800

The EXP-800 combines base EXP technology enhancements for battery and electrical system diagnostics with additional program management features, creating a new standard for battery and electrical preventative maintenance.

Dynamic Conductance Battery Testing Technology

- Combines direct temperature measurement with deep scan technology to improve accuracy and decisiveness
- Advanced preventative maintenance algorithms identify batteries as they approach end-of-life

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)

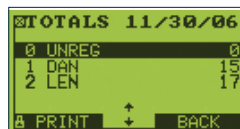
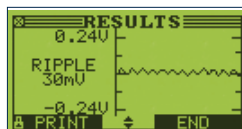
Program Management Tools

- User ID system to help drive and manage product use
- Enhanced counters report testing data, including lifetime use, results dispersion, system test dispersion, and number of tests by user
- Help functions for troubleshooting and service information
- PDI test function for testing new batteries prior to delivery

Advanced Communications Capabilities

- Integrated printer to enhance and enforce the selling/service process
- Integrated data card read/write drive for simple software update capability and data storage

Make a preventative maintenance routine, including battery and electrical system testing, part of your value-added solution



The large graphical screen in the EXP-800 displays results for customers to view and understand easily. These results can be printed out as well. The screens above demonstrate the battery's state-of-health, DSP alternator diagnostics and user ID system.

Use your smart phone QR scanner app to read the codes and view these product videos.



Features & Benefits



Preparing to Perform a Battery Test



Testing a Battery

Part No. :

Includes:

EXP-800

EXP-800 Battery and Electrical System Diagnostic Analyzer with integrated printer, lead stud adapter set, 4-ft cable set, carrying bag

EXP-800L

Everything included with EXP-800, with 10-ft cable set

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 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)

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

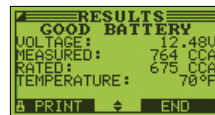
- IR printer option
- Data card reader/writer for future upgrades

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



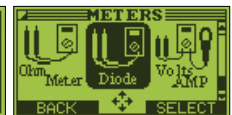
Improve customer service through more accurate and decisive results.



Dynamic Conductance including direct temperature measurement results



Enhanced starter diagnostics results



Menu icons to access DMM functions

Part No. :	Includes:
EXP-1000 BASIC	EXP-1000 Analyzer, 10-ft cable set/standard clamps, lead stud adapter set
EXP-1000	Everything included with EXP-1000 BASIC, plus carrying case
EXP-1000 KIT	Everything included with EXP-1000 BASIC, plus carrying case and infrared printer
EXP-1000 AMP	EXP-1000 Analyzer, 10-ft cable set/standard clamps, lead stud adapter kit, carrying case, amp clamp, DMM adapter & probe kit, 10-ft DMM cable assembly
EXP-1000 AMP KIT	Everything included with EXP-1000 AMP, plus infrared printer

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 7-ft replaceable cables
- **Applications:** 6 and 12 volt regular flooded, AGM, and Gel batteries
 - Automotive
 - Marine
 - Motorcycle
 - Group 31
 - Commercial 4D/8D
 - Lawn & Garden
- **Dimensions:** 18.0 in L x 17.0 in W x 9.7 in H (45.7 cm L x 43.2 cm W x 24.6 cm H)
- **Weight:** 49.5 lbs
- **Operating Temperature:** 32°F–120°F (0°C–49°C)
- **Display:** LCD graphics display
- **Rating Systems:** CCA, CA, MCA, JIS, DIN, SAE, IEC, EN
- **Charging Voltage:** Up to 17 volts, .1 resolution
- **Charging Current:** 0–60 Amps, 1 Amp resolution
- **Compliance:** UL, CUL, ROHS
- **Supported Languages:** English, Spanish, French-Canadian
- **Housing Material:** Acid-resistant ABS plastic
- **Integrated Data Card Slot and USB Port**
- **Optional Integrated Printer**
- **Optional Communications Modules:**
 - Ethernet port
 - Wireless ports (WiFi, Bluetooth, Zigbee)
 - Serial ports to support features like a bar code reader or RFID wand



Shown with optional cart (A067-GRX)



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
GRX-3000 KIT	Everything included with GRX-3000, plus printer module

GR8-1200 Multi-Tasking Battery & Electrical Diagnostic Station

The GR8-1200 Multi-tasking Battery and Electrical Diagnostic Station combines GR8 Diagnostic Charging expertise with EXP Battery and Electrical System Diagnostics to create a complete, flexible and expandable diagnostic station.

The GR8-1200 features the innovative Multi-tasking Bridge, which allows the user to perform battery and electrical diagnostics on other vehicles while the charger is in use. That means you can now effectively multi-task in the garage and get more value out of one complete diagnostic station.

Features:

- **Wireless Multi-tasking**
- **EXP Battery and Electrical Diagnostic Capabilities**
 - Dynamic Conductance Battery Testing Technology
 - Advanced Electrical System Diagnostics Featuring Digital Signal Processing
 - DMM Function for Advanced Diagnostics
 - Patented Conductance Cable Drop Test
- **GR8 Diagnostic Charging Functions**
 - Diagnostic Charging Mode
 - ECM - Power Supply Mode
 - Jump-start Mode
 - Manual Mode
- **Flexible Design for Maximum Service Garage Utility**
 - Integrated, cart design puts controls at the user's level
 - Removable controller design provides flexibility and isolates key electronics away from the heat associated with battery charging
 - Provides service and repair flexibility
 - Quick connect removable test cables and charging cables for maximum service flexibility
- **Advanced Communications**
 - Large back-lit graphical screen
 - Full alphanumeric keypad including hot keys
 - USB port
 - Data card reader/writer for simple in-field upgrades and data storage
 - Optional Integrated printer



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

Part No. :	Includes:
GR8-1200 AMP	GR8-1200 Multi-tasking Battery and Electrical Diagnostic Station with Amp Clamp
GR8-1200 AMP KIT	Everything included with GR8-1200, plus integrated printer

Power Supply Chargers

PSC Series

A clean power supply for maintaining batteries during service or on the showroom floor.

Midtronics PSC Power Supply/Battery Chargers provide clean and reliable power for charging and maintaining battery state-of-charge during service reflash, complex maintenance, and in the showroom where vehicle demonstrations can require significant power from the battery.



PSC-700

Power Supply Charger Series

The PSC Power Supply Charger Series converts a 120 VAC line input into a virtually “noise free,” 13.6 VDC output. Operating as a battery charger, the PSC delivers current up to the rated value to charge any 12 volt lead acid battery when voltage is depressed due to a discharge event. Once the battery is fully charged, the unit senses the battery condition and tapers current to operate as a regulated power supply, which will offset parasitic drain and sustain accessory loads.

Features:

- Allows for vehicles to be displayed with all electrical features and accessories activated
- Great for maintaining the battery while powering aftermarket accessories that drive sales
- Provides a constant clean power supply for using scan tools and reprogramming of ECMs without discharging battery
- Automatically maintains the battery when performing complex mechanical service
- Advanced switch-mode design
 - Provides a cleaner, more reliable power source than a standard charger
 - Fully regulated DC output prevents overcharging of the battery and provides precise control to maintain the necessary battery voltage during complex service and reflash
 - Quiet, small, and compact for portability
- Commercial design and heavy-duty internal components ensure years of continuous use
- Multiple protection features for a long, trouble-free life:
 - Reverse battery polarity protection via replaceable fuses
 - Brownout input protection
 - Over-current protection—cycle-by-cycle peak-limiting as well as rated current-limiting to maximize the life of the converter
 - Over-temperature protection
- Unique “proportional” fan control circuit
 - Sets the fan speed directly proportional to the converter’s internal ambient temperature enabling the fan to turn on and off very slowly, minimizing unwanted fan-starting noise
- High quality, detachable cables for easy field service
- Optional protective carrying case for storage or during use



Protective Carrying Case

PSC Power Supply Chargers	PSC-300 S KIT	PSC-550 S KIT	PSC-700 S KIT
Power Supply Voltage Regulation	13.6 V	13.6 V	14.4 V
Maximum Amps Output at Regulated Voltage	30 A	55 A	70 A
On/Off Switch	Yes, with Power LED indicator	Yes, with Power LED indicator	Yes, with Power LED indicator
Protection	Internal Breaker	Internal Breaker	Internal Breaker
Removable Cable Set	6' Clamp Set	6' Clamp Set	6' Clamp Set
Soft Protective Carrying Case	Included	Included	Included

Part No. :	Includes:
PSC-300S KIT	PSC-300S 30 Amp Power Supply Charger, carrying case
PSC-550S KIT	PSC-550S 55 Amp Power Supply Charger, carrying case
PSC-700S KIT	PSC-700S 70 Amp Power Supply Charger, carrying case

MDX-700 HD Heavy Duty Battery Conductance and Electrical System Analyzer

Heavy-Duty

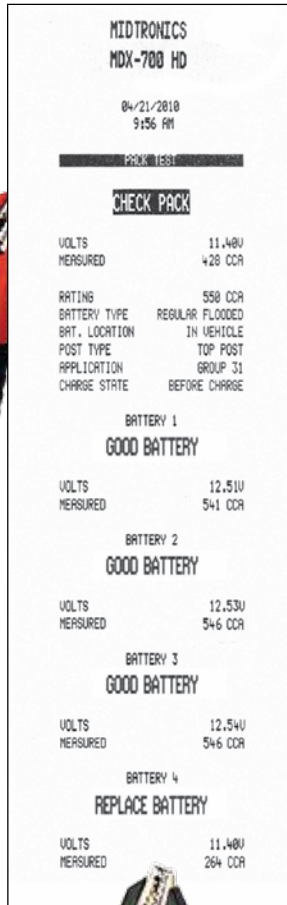
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MDX-700 HD



MDX-700P HD



Advanced System Analysis for Multiple Battery Vehicles

Created specifically for the heavy-duty commercial and fleet markets, the MDX-700 HD makes it easy for anyone to test the full electrical system on heavy duty vehicles.

Technicians can quickly find the problem in the battery, starting or charging system in minutes – not hours. Full test results, including multiple battery tests, can be printed on an optional integrated printer.

The MDX-700's 15-foot cable set enables starting and charging system tests to be run from the cab for complete control and simplicity.

The analyzer's user-friendly interface intuitively prompts the technician through the entire test sequence quickly and easily.

Vehicle Applications

- Group 31
- Motorcycle
- Lawn and Garden
- Automotive
- Marine Cranking
- Commercial 4D/8D

Battery Types

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

Global Systems

- CCA, CA, MCA, JIS, SAE, EN, DIN, IEC
- 6 and 12 volt batteries
- 12 & 24 volt charging system test

Battery Pack Testing

- Test the pack (1-6 batteries) with batteries connected
- Routine for testing and reporting individual battery results from multiple battery systems

Additional Features

- QC MODE for quality control testing
- Multiple languages
- Large back-lit display
- Data card reader for software upgrades

Part No. : Includes:

MDX-700 HD MDX-700 HD Heavy-Duty Battery Conductance and Electrical System Analyzer, 15-ft cable set with heavy-duty clamps, lead stud adapter set, carrying bag

MDX-700P HD Everything included with MDX-700 HD, **plus integrated printer**



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

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

- Battery pack testing for effective preventative maintenance testing
- Multiple battery routine: 1-6 batteries included in the test process and on the printed test report
- Special commercial battery algorithms for Group 31, 8D, and 4D batteries
- 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

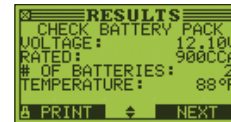
- IR printer option
- Data card reader/writer for future upgrades

Advanced User Interface

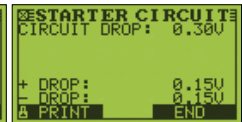
- Large graphical screen for icons and improved explanations
- Scroll bar capability means fewer overall screens
- Icon-based menus and hot keys improve logic and flow

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



Battery pack testing



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	EXP-1000 HD Analyzer, 10-ft cable set/heavy-duty clamps, lead stud adapter set , carrying case
EXP-1000 HD KIT	Everything included with EXP-1000 HD, plus infrared printer
EXP-1000 HD AMP	EXP-1000 HD Analyzer, 10-ft cable set/heavy-duty clamps, lead stud adapter kit, carrying case, amp clamp, DMM adapter & probe kit, 10-ft DMM cable assembly
EXP-1000 HD AMP KIT	Everything included with EXP-1000 HD AMP, plus infrared printer

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 and select the Accessories option under the Products tab. To order Midtronics accessories, call Customer Service at 800-776-1995, or contact your local Midtronics Sales/Service distributor.

Cables & Replacement Cables

Part Number	Description	Product(s)
A018	Inductive Amp Clamp	EXP-1000, EXP-1000 HD, GR8-1200 Series
A028	10-ft DMM Cable Assembly with Clamps	EXP-1000, EXP-1000 HD, GR8-1200 Series
A083	10-ft Replaceable Cable	EXP-1000, EXP-1000 HD
A084	4-ft Replaceable Cable	EXP-1000, EXP-1000 HD
A104	Stock Replacement Cable/Clamp Set	PSC Series
A108	5-ft USB-to-Serial Adapter Kit	EXP-800, EXP-1000
A114	12-ft Replacement Cable/Clamp Set	PSC Series
A126	DMM Adapter & Probe Kit	EXP-1000, EXP-1000 HD, GR8-1200 Series
A128	Control Module Update Cable: USB-to-Mini USB	GR8 Series
A129	Charge Engine Output Cable	GR8 Series
A136	1-ft Black Serial DB9 Cable	GR8 Series
A139	10-ft Replaceable Cable with Heavy-Duty Clamps	EXP-1000, EXP-1000 HD
A148	4-ft Replaceable Cable with Standard Clamps	EXP-800
A152	10-ft Replaceable Cable with Standard Clamps	EXP-800, GR8-1200 Series
A164	8-in USB-to-Serial Adapter Kit	Various
A185	10-ft Replaceable Cable with Heavy-Duty Dura Clamps	EXP-800, GR8-1200 Series
A207	4-ft Replaceable Cable	MDX Series
A208	10-ft Replaceable Cable	MDX Series
A246	10-ft Replaceable Cable with Heavy-Duty Clamps (Piranha)	EXP-800
A250	4-ft Replaceable Cable with Heavy-Duty Clamps (Piranha)	EXP-800
A260	15-ft Replaceable Cable with Heavy-Duty Clamps	MDX-700 HD
A291	Replaceable Charge Cable / Clamp Set	GRX-3000
A303	Fused Cable	GR8-1200 Series

Carrying Cases & Bags

Part Number	Description	Product(s)
A046	Soft Vinyl Carrying Case	PBT Series
A103	Nylon Padded Soft Case	PSC Series
A106	Hard Carrying Case	EXP-1000, EXP-1000 HD
A156	Universal Soft Carry-All Bag	EXP-800, HYB-1000, MDX Series

Miscellaneous Accessories

Part Number	Description	Product(s)
A008	Lead Stud Adapters (Female; 1 Pair)	All
A033	Lead Stud Adapter Set (2 Female; 2 Male)	All
A067-GRX	Wheeled Cart with Battery Enclosure Door	GRX-3000
A072	Lead Stud Adapters (Male; 1 Pair)	All
A073	Lead Stud Adapters (Male; 2 Pair)	All
A125	Protective Rubber Boot	EXP-800

Accessories & Replacement Parts

Printers & Print Accessories

Part Number	Description	Product(s)
A025	In-Vehicle Charge Cable for A087 Infrared Printer (for cigarette lighter / accessory outlet)	EXP-1000, EXP-1000 HD, HYB-1000
A087	Infrared Printer	EXP-1000, EXP-1000 HD, HYB-1000, MDX Series
A090	Charger Adapter for A087 Infrared Printer	EXP-1000, EXP-1000 HD, HYB-1000
A093	Rechargeable Batteries for A087 Infrared Printer	EXP-1000, EXP-1000 HD, HYB-1000
A095	6-Pack Thermal Printer Paper (2.25-in w x 1.875-in d) (Also available at most office supply stores)	EXP-800, EXP-1000, EXP-1000 HD, GR1-120, GR8 Series, HYB-1000, MDX Series
A096	Machined Aluminum Printer Roller Replacement	EXP-800
A098	Shelf-Mount Printer Bracket for A087 Infrared Printer	EXP-1000, EXP-1000 HD, HYB-1000
A141	Printer Assembly	GR8 Series
A224	Plastic Printer Roller Replacement	GR8 Series, MDX Series
A256	Printer Module	GRX-3000



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
- 3-3/4-inch 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

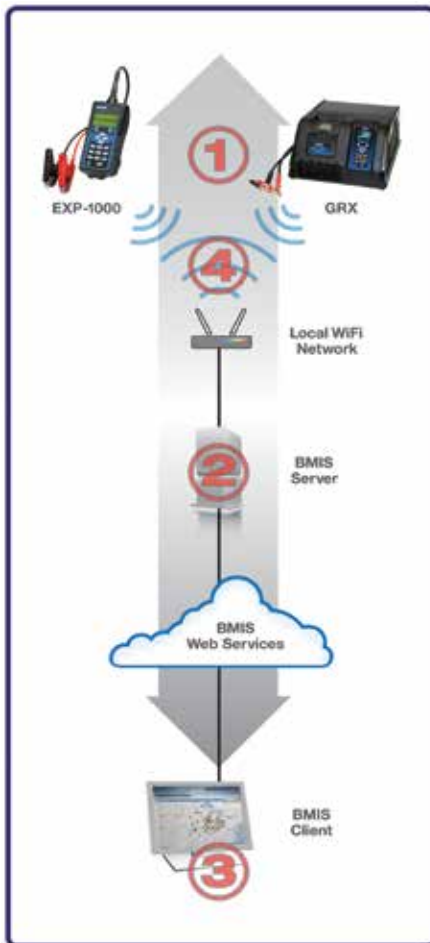
Track the usage of all tools in the field, and update tool software wirelessly

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

To find out how Midtronics BMIS can deliver high-performance results for your business, call 1.800.

Industry Awards



Midtronics products have long been recognized for their innovation and functionality, garnering 11 *Motor Magazine* Top 20 Tools Awards and five *Professional Tool & Equipment News* Innovation Awards:

2014	MOTOR Top 20 Tools Award DSS-7000 Battery Diagnostic Service System	2005	MOTOR Top 20 Tools Award inTELLECT EXP Electrical System Diagnostic Analyzer
2014	PTEN Innovation Award DSS-7000 Battery Diagnostic Service System	2004	MOTOR Top 20 Tools Award EZ-Charge √ 100/200 Scan Tool Add-On (withAutoXray)
2013	PTEN Innovation Award GRX-5100 Hybrid/EV Battery Station	2002	MOTOR Top 20 Tools Award ED-18 Early Detection Battery & Electrical Analyzer (with Interstate Batteries)
2012	MOTOR Top 20 Tools Award GRX-5100 Hybrid/EV Battery Station	2001	MOTOR Top 20 Tools Award GR-1 Diagnostic Conductance Battery Charger
2012	PTEN Innovation Award GRX-3000 Battery Diagnostic Station	1999	MOTOR Top 20 Tools Award PowerLogic Battery Tester and Charger (with Johnson Controls, Inc.)
2011	PTEN Innovation Award MDX-700 HD Heavy-Duty Battery Conductance and Electrical System Analyzer	1997	MOTOR Top 20 Tools Award PowerSensor Micro 400 Digital Battery Analyzer
2008	MOTOR Top 20 Tools Award GR8-1200 Battery Diagnostic Station	1994	MOTOR Top 20 Tools Award PowerSensor Plus Conductive Battery Tester
2008	PTEN Innovation Award IDR-10 inGEN Diagnostic Data Recorder		
2007	MOTOR Top 20 Tools Award IDR-10 inGEN Diagnostic Data Recorder		

Customer Support



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