

# Get the Big Picture in the Palm of Your Hand

**MIDTRONICS**

## EXP-1000 Expandable Electrical Diagnostic Platform

The EXP-1000 Expandable Electrical Diagnostic Platform marks the next generation of handheld analyzers. So revolutionary, it makes other electrical system diagnostic tools obsolete. Allowing you to diagnose every part of the electrical system, from the battery to the starter and alternator, more accurately and decisively than ever before. This platform combines one of the largest, easiest-to-read displays in the industry with the full functions of an advanced analyzer, digital multimeter, and data management tool... all in the palm of your hand.

### Features:

#### 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) provides the ability to analyze the amplitude level and frequency of the ripple pattern for improved accuracy and identification of open or shorted diodes and open-phase conditions

#### DMM Function for Advanced Diagnostics

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

#### Patented Conductance Cable Drop Test

- Interactive test 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 graphical screen for icons and improved explanations
- Scroll bar capability means fewer overall screens
- Alphanumeric keypad, icon-based menus and hot keys improve logic and flow



#### FEATURES:



6-pin connector

Easy to read  
Large backlit screen

305 cm cable with  
dual conductor  
Kelvin clamps

DB-9 connector for  
future expandability

Soft keys

Arrow key scrolling

Alphanumeric  
keypad

Data card slot for  
future upgrades

Accessory port



IR Data  
Transmitter

IR Temperature  
Sensor

## Dynamic Conductance Technology

*Breakthrough battery testing technology from Midtronics delivers improved battery testing accuracy and decisiveness.*



### Direct Temperature Measurement

Creates a third dimension to the Midtronics battery test algorithms, improving decisiveness and making all decisions more accurate.



### Deep Scan Testing

Uses multiple frequencies and test points on deeply discharged batteries to make more decisions so that customers can avoid charging batteries with shorts, opens, and bad cells.



## ENHANCED DIAGNOSTICS:



**EXP**

V1.00 EU

**TEST REPORT**

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**BATTERY TEST**

**RESULTS**

**GOOD BATTERY**

VOLTAGE: 12.72V  
 MEASURED: 407 A(SRE)  
 RATED: 390 A(SRE)  
 TEMPERATURE: 19°C

STATE OF HEALTH

SOC

**TEST CODE**

**K98JE-181B38**

**STARTER TEST**

**RESULTS**

**CRANKING NORMAL**

VOLTAGE: 10.49V  
 AMPS: 63.0A  
 TIME: 937ms  
 LOOP OHMS: 37.6mΩ

**CHARGING SYSTEM TEST**

**RESULTS**

**NO PROBLEMS**

NO LOAD	LOADED
14.40V	14.42V
13.4A	39.1A

MAX  
MIN

NO LOAD LOADED

RIPPLE  
46mV

DRAIN CURRENT  
-0.9A  
PASS

### More functions and expandability



From battery, starter, and alternator diagnostics to circuit integrity testing, the EXP is the most versatile and reliable electrical diagnostic tool on the market today. With the ability to perform more tests with one tool, you can be more efficient, cut costs, and easily update to the newest technologies

### Enhanced Starter Diagnostics



Using the optional Amp Clamp provides an enhanced level of diagnostics beyond just starter voltage drop. The EXP starter diagnostics include starter amps draw, voltage drop, start time, and starter circuit resistance resulting in more accurate results.

### Digital Signal Processing (DSP) Capability



For Advanced Alternator Diagnostics the EXP uses superior DSP capability to digitize the measured alternator output voltage and evaluate the spectral content of the signal. This digitized signal allows the EXP to combine pattern recognition with the amplitude level of the AC signal for improved accuracy and identification of open or shorted diodes and open phase conditions, (multiple diode failure or winding problems).

### SPECIFICATIONS:

- Model:**
- EXP-1000 includes EXP-1000 Analyzer, 305 cm / 10' Battery Test Cable, Manual CD and Carrying Case
  - EXP-1000 EST includes EXP-1000 Analyzer, Amp Clamp, 305 cm / 10' Battery Test Cable, DMM Clamps and Probes, Cable Drop Leads, Manual CD and Carrying Case
- Applications:**
- Tests 6 and 12 volt batteries (including AGM, AGM Spiral and GEL batteries)
  - 12 & 24 volt starting and charging systems
- Power Requirements:**
- (6) AA Alkaline batteries
- Operating Range:**
- 6 and 12 volt batteries
- Rating System**
- | Rating System | Range          |
|---------------|----------------|
| DIN           | 100–1000       |
| EN            | 100–3000       |
| IEC           | 100–1000       |
| JIS           | By Part Number |
| SAE           | 100–3000       |
- Display:**
- 128 x 64 pixel graphics, backlit display
- Temperature Compensation:**
- Built-in temperature measurement when prompted by analyzer
- Operating Temperature:**
- 0° C – 49° C (32° F – 120° F)
- Test Leads:**
- 305 cm / 10' cable with dual conductor Kelvin clamps
- Housing Material:**
- ABS plastic with Santoprene overmolds
- Dimensions:**
- 23 cm x 10,2 cm x 6,5 cm
  - 9.5 in x 4 in x 2.5 in
- Weight:**
- 427 g / 1 lb
- Carrying Case:**
- Heavy-duty molded plastic
- Languages:**
- 24 Languages

DMM Function	Range	Tolerance
DC Voltage	0–60V	0.05% + 2 VDC
AC Voltage	0–24V	0.1% + 3 VAC
Resistance	10 ohm–2 Mohm	2.0% + 4
DC and AC Amps	0–70 A	+/- 3% of reading +/- 1 A
	0–700 A	+/- 3% of reading +/- 1 A
Continuity	< 10 ohm	2.0% + 4 ohm
Diode	0–1.5 V	0.05% + 2 V
Temperature	-20–200°F	1.0% + 5

EXP-1000 Analyzer with Attached Battery Test Cable



Every EXP model includes a protective molded hard-side carrying case. Depending on which configuration you choose, the carrying case will hold the accessories, with room for future options.

