Phantoms. Gremlins. Glitches. Ghosts in the Machine. We all have names for them; those hard-to-find problems that seem to randomly appear, then disappear.

The new inGEN® Diagnostic Data Recorder from Midtronics will help you locate and identify those elusive electrical system problems once and for all. After installation in your customer’s vehicle, it becomes a continuous diagnostic monitoring tool that captures and records all electrical system activity, even those mysterious intermittent errors. Then you can analyze the data and quickly locate, diagnose, and correct the problem, thereby eliminating time-consuming guesswork and unhappy customer returns.

**Features:**

- The inGEN Diagnostic Data Recorder is installed in the vehicle to provide in-line testing and recording of voltage, amps, and temperature for advanced troubleshooting of simple and complex electrical problems
- The inGEN Diagnostic Data Recorder has a variety of installation configuration options to monitor a variety of vehicle systems and system functions
- Uses a common data card for transferring or storing data
- User-defined events for identifying possible faults using Boolean functions
- Continuously samples at 50 millisecond intervals in full power mode
- When trigger is engaged, data is flushed to the data card
- Allows the ability to record voltage and current from 20mAmps to 350 amps
- Included inGEN Diagnostic Analysis software package for data analysis and diagnostics
- The data card stores data as set-up in the inGEN Diagnostic Analysis software
- Test triggers can be set by time, event, power level, or any number of combination of other variables
- Auxiliary Voltage Cable connections can be used to monitor specific current channels
- Multiple operation modes help you collect the right information at the right time, without removing excess power from the vehicle battery
**Measurement Specifications:**

### Current Measurements:
- **Main:** -350 A to 350 A*, +/- 1A + 1%, -7.5 A to 7.5 A*, +/- 20 mA
  *charge and discharge current
- **Aux:** -30 to 30 A max (fused), +/- 40 mA, connected in-line with vehicle fuse

### Voltage Measurements:
- **Main:** 9 to 16 Vdc, +/- 20 mV
- **Aux:** on/off with settable threshold (triggerable)

### Temperature Sensor:
- Located in IDR housing to approximate battery temperature
- Measurement range: -4°F to 158°F (-20°C to 70°C)

### Operating Voltage:
- 7 to 16 Vdc

**Data Recording Specifications:**

### Current Consumption (approximate):
- **Full Power Mode:** 150 mA
- **Low Power Mode:** 20 mA (with auxiliary current disabled)
- **Deep Sleep Mode:** less than 5 mA

### Full Power Mode:
- Data is sampled at 50 ms intervals, averaged, and updated to data card every 30 seconds

### Low Power Mode:
- Data is recorded every 30 seconds
- Check for current and voltage triggers every 1 second

### Deep Sleep Mode:
- Data is recorded every 5 minutes
- Check for current and voltage triggers every minute

### Trigger Points:
- In Full Power mode store 60 seconds of data centered on the trigger event at 50 ms intervals
- In other modes store 60 seconds of data after the trigger event
- Triggers are set in Diagnostic Analysis software and loaded into inGEN Diagnostic Data Recorder with data card prior to installation in vehicle
- **Trigger Channels:**
  - Main Current Measurement
  - Aux Voltage Channel 1

**Physical Specifications:**

### Display:
- 2-line, 16-character LCD display
- Updates every 2 seconds with live data

### Dimensions:
- 9 in x 3.875 in x 1.5 in
- 22.86 cm x 9.84 cm x 3.81 cm

### Weight:
- 1.6 lb / 703 g

### Operating Temperature:
- -4°F to 158°F, -20°C to 70°C