

# **RIVIAN CPX-900 Battery & Electrical Diagnostic Analyzer**

#### Important - Before You Start

- Before operating the analyzer, refer to Instruction Manual
- Always follow battery manufacturer instructions and BCI (Battery Council International) safety recommendations
- For additional support go to support.cpx900.com

#### Consent to Collection and Use of Data:

You agree that Midtronics, Inc. may collect, store, transmit, and use technical data and related information, including but not limited to technical information about this device, system and application software, and accessories, that is gathered periodically to facilitate the provision of product support, product improvements, product development, and other services related to use of this device. If electing to collect personal data (such as e-mail addresses) the user is solely responsible for obtaining any necessary permissions, and agrees to indemnify and hold harmless Midtronics, Inc. Its subsidiaries, officers, employees and agents from any liability associated with collecting, storing, and transmitting such personal data.

#### Safety Power Capacity<sup>™</sup> (SPC<sup>™</sup>)<sup>™</sup>

The testing process uses proprietary 12V Safety Power Capacity<sup>™</sup> (SPC<sup>™</sup>) diagnostic technology to determine the battery State of Charge and Reserve Capacity. This additional analysis can take up to 60 seconds to complete



IMPORTANT: Always begin each test by connecting the tester clamps to the battery being tested. The testing process begins as soon as the clamps are connected.

## **Connections And Data Ports**





User-replaceable AA batter-

#### User-replaceable test clamps

### Main Menu



#### 2 **Main Menu Selection Area**



When displayed, the Screen Arrows show which ARROW key on the keypad to press to display other icons, screens, or item in a list.

#### Additional Screens

The dots at the bottom or side of a menu or results screen indicate additional screens are available.



## **Test Preparation**

Before starting the test visually inspect the battery for:

- Cracked, buckled, or leaking case.
- Corroded, loose, or damaged cables and connections. .
- Corrosion, dirt, or acid on the battery terminals or case top. .
- Corroded or loose battery tray and hold-down fixture.

| A DANGER  | A WARNING  |
|---|--|
| Risk of explosive gases   | Wash hands after handling.   |
| Batteries generate explosive gases<br>during normal operation, and when<br>discharged or charged. Follow all<br>manufacturers' instructions and<br>BCI (Battery Council International)<br>safety recommendations. | REQUIRED BY CALIFORNIA PROP. 65:<br>Battery posts, terminals, and related<br>accessories contain lead and lead<br>compounds, chemicals known to the<br>state of California to cause cancer<br>and birth defects or other reproduc-<br>tive harm. |

#### **Before Testing:**

Disconnect First Responder Loop and Ground Cables.

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#### In Vehicle Battery Test / Single Battery

The tester will first ask "Is this a Dual Battery Vehicle", referring to the number of Batteries the RIVIAN model has. For SINGLE BATTERY RIVIAN MODELS, follow this process –

- 1. Enter Work Order Use displayed keyboard to Enter Work Order information.
- VIN Capture (optional) Scan VIN bar code, usually located in the right corner of the vehicle's front windshield or on the driver's side door frame

*Manual Entry:* Use the on-screen keypad to manually type the 17-digit VIN and tap **Next**.

- 3. Connect Tester clamps to battery terminals.
- 4. *Temperature* Hold sensor 6 to 12 inches over battery and select **Capture**.

Following Temperature Capture, the CPX-900 will automatically run the Battery Test.

5. Battery Test Setup - Edit vehicle and battery information based on the VIN & select **Start**.

| Application    | Automotive, 4D/8D, Group 31  |  |
|----------------|--|--|
| Battery Post   | Top Post, Side Post  |  |
| Battery Type   | Flooded, EFB, AGM Spiral, AGM, Gel   |  |
| Battery Units  | CCA, MCA, CA, DIN, SAE, EN, EN2  |  |
| Battery Rating | Hold $\blacktriangle$ or $\blacktriangledown$ to increase scrolling speed. |  |

#### **Battery Test Results**



Icons are color-coded to indicate status.



| Greens  | All test parameters were completed and have passed. | Red   | The battery has failed the test.       |
|---------|---|-------|--|
| Yellows | Some test parameters may require further testing.   | Grays | Insufficient data to perform the test. |

Refer to Appendix B: Decision Tables in the User Manual for a complete explanation of all possible test results.

## In Vehicle Battery Test / Dual Battery

The tester will first ask "Is this a Dual Battery Vehicle", referring to the number of Batteries the Rivian model has. For DUAL BATTERY RIVIAN MODELS, follow this process –

- 6. Enter Work Order Use displayed keyboard to Enter Work Order information.
- **7.** *VIN Capture* (optional) Scan VIN bar code, usually located in the right corner of the vehicle's front windshield or on the driver's side door frame.
- 8. Connect Tester clamps to battery terminals of the Primary Battery.



9. Temperature - Hold sensor 6 to 12 inches over Primary Battery and select Capture.

Following Temperature Capture, the CPX-900 will automatically run the Primary Battery Test and display the test results

- 10. Select 'BATTERY 2' to begin the Secondary Battery Test.
- 11. Connect the clamps to the Secondary Battery.



12. Temperature - Hold sensor 6 to 12 inches over the Secondary Battery and select Capture.

Following Temperature Capture, the CPX-900 will automatically run the Secondary Battery Test and display the test results

| Test Results - Battery         |                                   |                     |  |  |
|--------------------------------|-----------------------------------|---------------------|--|--|
| A11111111111111111<br>Voltage: |                                   | Battery 2<br>12.94V |  |  |
| $\checkmark$                   | Temperature:<br>Internal Res.: 7. | 72 F<br>80 mOhms.   |  |  |
| Good Battery                   | % SOC:<br>% Ah:                   | 100 %<br>80 %       |  |  |
|                                |                                   |                     |  |  |
| Send Results                   |                                   | Done                |  |  |

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13. <u>Test Results</u> - PRIMARY and SECONDARY BATTERY Test Results will be displayed, following the Secondary battery test.



14. <u>Result Variability (Single or Dual Battery)</u> - The screens below represent other test results that may return.



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