MIDTRONICS

167-001137EN-A
May, 2024

DCA-8000

Diagnostic Battery Charger

User Guide

Contents

General Safety Precautions **6**
General Safety Precautions 6
Personal Precautions 7
Preparing To Charge The Battery 7
Grounding & Power Cord Connections 8
Charger Location 9
DC Connection Precautions 10
Installing The Battery 10
Removing the Battery 10
Maintenance & Storage 11
Locking Power Cord 11
Wireless Safety 11

Product Specifications **12**

1 – Introduction & Overview **13**
Safety Reminder 13
Safety Precautions 13
Manual Conventions 13
Front View 14
Rear View 14
Connections 15
Charging Cables 15
Locking Power Cord 15
Scanner Cable (Optional Accesory) 15
Charging Out-of-Vehicle (Battery Test) 16
Connecting To The Battery 16
Initial Setup 16
Main Menu 19
Additional Screens 19
Main Menu Icons 20
Inspecting the Battery 20

2 – Diagnostic Charge **21**
Battery Test 21
Battery Test Results 22
System Test 24
System Test Results-Summary 24

3 – Manual Charge **25**

4– Reflash **26**

5 – Jump Start **27**
Jump Start Summary 28

6 – History **29**
Tool History 29
Totals By Test Decision 29
Totals By Charge Decision 29
Totals By Test Type 30
Totals By Date And Location 30
Vehicle History 30
Vehicle Select Option 30
User History 31
Totals By Test Decision 31
Totals By Charge Decision 31
Totals By Test Type 31
Totals By Date And Location 31

7 – Messages **32**
Accessing Messages 32
Message Types 32

8 – Support **33**

9 – Settings **34**
WiFi 34
Adding A Network 34
Deleting A Network 34
Printer Settings 35
Adding A WiFi Printer (Admin Only) 35
Adding A Bluetooth Printer (Admin Only) 35
Deleting A Printer (Admin Only) 35
Email 36
Add Address (Admin Only) 36
Edit Address (Admin Only) 36
Deleting An Address (Admin Only) 36
Server Settings 36
User Settings (Admin Only) 37
User Management (Admin Only) 37
Language Settings 37
System Language 37
Test Result Language 37
Email Language 37
Print Language 37
Display Settings 38
Brightness 38
Auto Brightness 38
Sleep Time 38
Dim Time 38
BMIS Login (Admin Only) 38
Shop Information (Admin Only) 39
Shop Information 39
Test Settings 40
Date/Time Settings 40
Version Information 41
Factory Reset 41
Legal Information 41
Check for Updates 41

Appendix A: Recommended Scanning Procedure **42**

VIN Scanning 42

Scanning Tips 42

Appendix B: Battery Information Definitions **43**

Appendix C: Test Results Decision Tables **44**

Battery Test Results 44

Battery Test Results *(cont'd.)* *45*

Starter Test Results 46

Alternator Test Results 46

Diode Test Results 47

General Safety Precautions

IMPORTANT SAFETY INSTRUCTIONS. WORKING IN THE VICINITY OF A LEAD-ACID BATTERY IS DANGEROUS. BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION. FOR THIS REASON, IT IS OF THE UTMOST IMPORTANCE THAT THESE INSTRUCTIONS ARE FOLLOWED EACH TME THE CHARGER IS USED.

For safe, efficient, and accurate charging and testing, review the safety and operating instructions in this manual before using the analyzer. In addition, follow all manufacturers' instructions and BCI (Battery Council International) safety recommendations.

1 General Safety Precautions

⚠ CAUTION

Charging a non-rechargeable battery may cause the battery to burst.

To reduce the risk of injury, only charge rechargeable lead-acid type batteries including maintenance-free, low-maintenance, or deep-cycle batteries.

⚠ WARNING

Risk of explosive gases.

Batteries generate explosive gases during normal operation, and when discharged or charged.

1.1 To reduce risk of battery explosion, follow these safety instructions and those published by the battery manufacturer and the manufacturer of any equipment you intend to use in the vicinity of a battery. Review cautionary marking on these products and on the engine, and on the vehicle or equipment containing the battery.

If you are uncertain as to the type of battery you are attempting to charge, or the correct procedure for checking the battery's state of charge, contact the seller or battery manufacturer.

1.2 Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.

1.3 To reduce risk of damage to the electric plug and cord, pull by the plug rather than by the cord when disconnecting the charger.

1.4 Position the AC and DC leads to avoid tripping over them and to prevent damage from moving engine parts; protect from heat, oil, and sharp edges.

1.5 Do not operate the charger if it has received a sharp blow, been dropped or otherwise damaged in any way; take it to a qualified service center.

1.6 Do not disassemble charger; take it to a qualified service center when repair is required. Incorrect reassembly may result in a risk of electric shock or fire.

1.7 To reduce risk of electric shock, unplug the charger from the AC outlet before attempting any maintenance or cleaning. Turning off the controls will not reduce this risk.

1.8 Connect and disconnect the battery leads only when the AC supply cord is disconnected.

1.9 Do not overcharge the battery.

1.10 Charge the battery in a dry, well-ventilated area.

1.11 Never place articles on or around the charger, or locate the charger in a way that will restrict the flow of cooling air through the cabinet.

1.12 An extension cord should not be used unless absolutely necessary. (See paragraph 4.2)

1.13 Have a damaged cord or plug replaced immediately.

1.14 Do not expose the charger to rain or snow.

2 Personal Precautions

2.1 This charger is not to be used by people with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.

2.2 Children should be supervised to ensure they do not play with the appliance

2.3 Always have someone within range of your voice, or close enough to come to your aid, when working around lead acid batteries.

2.4 Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing or eyes.

2.5 Wear complete eye protection, clothing protection, and wear rubber soled shoes. Place damp cloth over battery to protect against acid spray. When ground is very wet or covered with snow, wear rubber boots. Avoid touching eyes while working near battery.

2.6 If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters the eye, immediately flush with cold running water for at least 10 minutes, and seek medical attention.

2.7 NEVER smoke or allow a spark or flame in vicinity of a battery or engine.

2.8 Be extra cautious to reduce risk of dropping a metal tool onto the battery. It might spark or short circuit the battery or other electrical part that may cause an explosion.

2.9 Before working with a lead-acid battery, remove personal metal items such as rings, bracelets, necklaces, watches, etc. A lead-acid battery can produce a short circuit current high enough to weld such items causing a severe burn.

⚠ CAUTION

To avoid electrical shock or burn, never alter the charger's original AC cord and plug. Disconnect plug from outlet when charger is idle.

The charger is not intended to supply power to a low-voltage electrical system other than applications using rechargeable, lead-acid type batteries. Do not use the battery charger for charging dry-cell batteries commonly used with home appliances. These batteries may burst and cause personal injury and property damage.

2.10 **NEVER** charge a frozen battery; thaw it out first.

3 Preparing To Charge The Battery

3.1 If it is necessary to remove the battery from vehicle to charge it, always remove the grounded terminal from the battery first. Make sure all accessories in the vehicle are off, so as not to cause an arc.

3.2 Be sure the area around the battery is well ventilated while the battery is being charged. Gas can be forcefully blown away by using a piece of cardboard or other non-metallic material as a fan.

3.3 Clean the battery terminals. Be careful to keep corrosion from coming into contact with your eyes.

3.4 Add distilled water in each cell until the battery acid reaches the level specified by the manufacturer. This helps purge excessive gas from the cells. Do not overfill. For a battery without caps, carefully follow the manufacturer's recharging instructions

3.5 Study all battery manufacturer's specific precautions such as removing or not removing cell caps while charging and recommended rates of charge.

3.6 Determine the voltage of the battery by referring to the car owner's manual and make sure that the output voltage selector switch is set at the correct voltage. If the charger has an adjustable

charge rate, charge the battery initially at lowest rate. If the charger has only one voltage, verify that the battery voltage matches the voltage of charger.

For a charger not having an output voltage selector switch, determine the voltage of the battery by referring to car owner's manual and make sure it matches the output rating of the battery charger.

4 Grounding & Power Cord Connections

4.1 The charger must be grounded to reduce risk of electric shock. The charger is equipped with an electric cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

⚠ DANGER

Hazardous voltage.
An improper connection can result in electric shock.

To avoid electrical shock or burn, never alter the charger's original AC cord and plug. Disconnect plug from outlet when charger is idle.

IMPORTANT: If the plug does not fit the outlet, have a proper outlest installed by a qualified electrician.

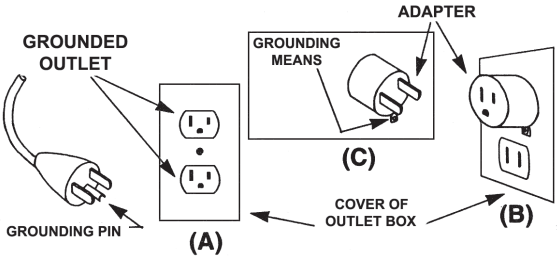
4.2 This battery charger is for use on a nominal 120-volt circuit and has a grounding plug that looks like the plug illustrated in Figure A. A temporary adapter, which looks like the adapter illustrated in Figures B and C, may be used to connect this plug to a two-pole receptacle as shown in Figure B, if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician.

⚠ DANGER

Hazardous voltage.
An improper connection can result in electric shock.

Before using an adapter be certain the center screw of the outlet plate is grounded. The rigid ear or lug extending from the adapter must be connected to a properly grounded outlet. Make certain it is grounded. If necessary, replace the original screw that secures the adapter ear or lug to the cover plate and make the ground connection to the grounded outlet.

IMPORTANT: Use of an adapter is not allowed in Canada. If a grounding-type receptacle is not available, do not use this appliance until the proper outlet is installed by a qualified electrican.



4.3 An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in a risk of fire and electric shock. If an extension cord must be used, make sure:

a. that the pins on plugs of the extension cord are the same number, size, and shape as those of the plug on the charger;

b. that the extension cord is properly wired and in good electrical condition;

c. that the wire size is large enough for the AC ampere rating of charger as specified in the following table.

Recommended minimum AWG* size for extension cords for battery chargers					
AC input rating Amps		AWG* size of cord			
Equal or greater than:	But less than:	Length of cord, feet (m)			
		25 (7.6)	50 (15.2)	100 (30.5)	150 (45.6)
8	10	18	14	12	10
10	12	16	14	10	8
12	14	16	12	10	8
14	16	16	12	10	8
16	18	14	12	8	8

*American Wire Gauge

5 Charger Location

Not for permanent installation: Modifying this charger for permanent installation in a vehicle or installing this charger in a vehicle for permanent use is not recommended.

⚠ WARNING

In the event of fail device may generate and emit sparks.

Only charge rechargeable flooded maintenance-free, low-maintenance or deep-cycle batteries.

This charger is **NOT** designed outside use or for wet location mounting. The charger must always be protected from direct contact with water.

5.1 The charger must be located in an area with sufficient air space to allow unrestricted airflow in and around the charger.

5.2 Locate the charger as far away from the battery as the charger cables permit.

5.3 Never place the charger directly above the battery being charged; gases from the battery will corrode and damage the charger.

5.4 Never allow battery acid to drip on the charger when taking gravity readings or filling a flooded cell battery.

5.5 Operate the charger only in a well-ventilated area that is free of dangerous vapors.

5.6 Store the charger in safe, dry location and maintain it in perfect condition.

5.7 Do not set the battery on top of the charger or where its acid might drip onto the charger.

6 DC Connection Precautions

6.1 Connect and disconnect the charger clamps only after the charger has been turned off and the AC supply cord is disconnected from the electric outlet.

6.2 Never allow the charger clamps to touch each other.

6.3 When attaching the charger clamps, be certain to make the best possible mechanical as well as electrical connection. This will tend to prevent the clamps from slipping off the connections, avoid dangerous sparking, and assure safer and more efficient charging. The clamps should be kept clean.

⚠ DANGER

Hazardous voltage.
Can cause death or serious personal injury.

Setting the switches to "OFF" does not always disconnect the charger electrical circuit from the AC power cord or the DC charger clamps.

7 Installing The Battery

⚠ WARNING

Risk of explosive gases.

A spark near the battery may cause a battery explosion. Follow these steps when the battery is installed in the vehicle to reduce the risk of explosion.

7.1 Locate the charger as far away from the battery as the charger cords permit and position the AC and DC cords to avoid stepping on or tripping over them and to prevent damage by moving engine parts.

7.2 Turn **OFF** all vehicle loads, including door lights, and correct any defects in the vehicle's electrical system that may have caused low battery.

7.3 First connect the **POSITIVE (RED)** clamp from the charger to the **POSITIVE (POS., P, +)** ungrounded post of the battery. Then connect the **NEGATIVE (BLACK**) clamp to the **NEGATIVE (NEG., N,–)** post of the battery. Do not connect the clamp to the carburetor, fuel lines, or sheet-metal body parts.

8 Removing the Battery

8.1 If it is necessary to remove the battery from the vehicle or equipment, always remove the grounded terminal from the battery first.

⚠ WARNING

Risk of explosive gases.

A spark near the battery may cause a battery explosion. Follow these steps when the battery is installed in the vehicle to reduce the risk of explosion.

⚠ WARNING

Risk of explosive gases.

Make sure all vehicle loads are **OFF** to prevent a possible arc.

8.2 Check the polarity of battery posts.

8.3 Connect the **POSITIVE (RED)** charger clamp to the **POSITIVE (POS., P, +)** post of battery.

8.4 Position yourself and the free end of cable as far away from the battery as possible—do not face the battery when making the final connection—then connect the **NEGATIVE (BLACK)** charger clamp to the free end of the cable.

8.5 When disconnecting the charger, always do so in the reverse sequence of the connecting procedure; break the first connection while staying as far away from the battery as practical.

9 Maintenance & Storage

Follow these guidelines to protect the charger and test cables from damage and premature wear:

9.1 The grease, dirt, and sulfation that build up on battery terminals are highly corrosive and can damage the clamps over time. Before connecting the clamps, ensure accurate test readings and protect the clamps by cleaning the battery case and terminals using a wire brush and a mixture of water and baking soda.

9.2 Periodically clean the clamps using a mixture of baking soda and water, or a mild hand-soap, and a small bristle brush.

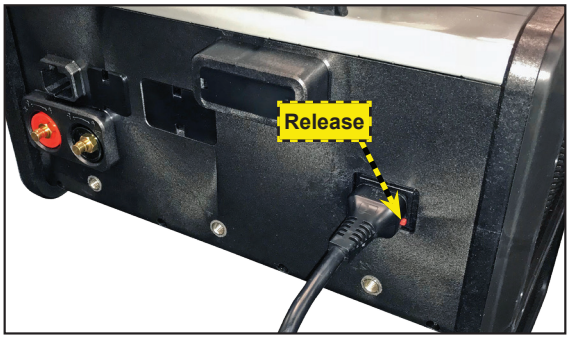
9.3 Clean the battery terminals. If stud adapters are required, fasten them with the proper tool. Do not use the battery clamps to tighten adapters.

9.4 Never remove the clamps from a battery to abort an active charging session. Always press the red **STOP** button before removing the clamps.

9.5 Do not leave the clamps laying in battery acid.

Locking Power Cord

Always pull back on the red tab on the side of the power cord connector to release/remove it from the charger's power socket.



Storage

Always store the charger in safe, dry location and maintain it in perfect condition.

10 Wireless Safety

The operation of this equipment is subject to the following two conditions.

1. This equipment or device may not cause harmful interference.
2. This equipment or device must accept any interference. Including interference that may cause undesired operation.

SAVE THESE INSTRUCTIONS

Product Specifications

Power

Input: 100 – 240 ∿, 50/60 Hz; 12A max.
Output: 12 V ⎓, 70A

Charge Cables
- 5m

Power Cord
Accepts C19 locking connector for region-specific power cables:
- United States: NEMA 5-15 termination, rated at 15A/125V UL CSA

Applications
- Automotive
- Power Sports
- Lawn and Garden
- Marine
- Group 31
- Commercial 4D/8D

Battery Chemistries
- Lead acid
- AGM
- AGM Spiral
- EFB

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

Operating Parameters
- Input Voltage:
  100 – 240 ∿, 50/60 Hz; 12A max.
- Output:
  14VDC ⎓; 70A maximum

Humidity
- 15% to 85% R.H., non-condensing

Dimensions
(without handle or base)
- Weight: 34 lbs (15.45 kg)

Temperature
- Operating temperature range: 0°C to +60°C (32°F to +140°F)
- Storage temperature range: -10°C to + 85°C (14°F to 185°F)

Certifications
- CUL
- ETL
- FCC
- RoHS
- VL
- UKCA

Connectivity
Wi-Fi
- 802.11 b/g/n 2.4GHz
- Security – WEP, WP, WPA-2 Enterprise

Bluetooth
- 2.0
- USB 2.0 connectionCAN bus interface
- CAN bus interface

Protection Features
- Reverse polarity
- Non-12V battery connection
- Clamp connection
- Battery voltage too low (< 5.5 V)
- Clamp high temperature detection

BMIS-Enabled
- Remote "over the air" software updates
- Enterprise asset management
- Reporting and analytic tools
- Communication with next generation Midtronics platforms and tools

User Interface
- Advanced navigation and charge applications
- Remote notifications (Wi-Fi- or Bluetooth-enabled)
- Intuitive charge cycle feedback
- 5" Touch Screen

1 – Introduction & Overview

Safety Reminder

For safe, efficient, and accurate charging and testing, review the safety and operating instructions in this manual before using the analyzer. In addition, follow all manufacturer instructions and BCI (Battery Council International) safety recommendations.

Safety Precautions

Inspect the battery for damages and check the electrolyte level. If the electrolyte level is too low, replenish it and fully charge the battery. Always use the necessary safety precautions when working with batteries to prevent severe injury or death. Follow all manufacturers' instructions and BCI (Battery Council International) safety recommendations, which include the following precautions:

⚠ DANGER

Risk of explosive gases. Never smoke or allow a spark or flame in the vicinity of a battery.

Batteries can produce a highly explosive mix of hydrogen gas and oxygen, even when the battery is not in operation. Always work in a well-ventilated area.

⚠ CAUTION

Wash hands after handling.

REQUIRED BY CALIFORNIA PROP. 65: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

- ✓ Battery acid is highly corrosive. If acid enters your eyes, immediately flush them thoroughly with cold running water for at least 15 minutes and seek medical attention. If battery acid gets on your skin or clothing, wash immediately with a mixture of water and baking soda.
- ✓ Always wear proper safety glasses or face shield when working with or around batteries.
- ✓ Keep hair, hands, and clothing as well as the analyzer cords and cables away from moving engine parts.
- ✓ Remove any jewelry or watches before you start servicing the battery.
- ✓ Use caution when working with metallic tools to prevent sparks or short circuits.
- ✓ Never lean over a battery when testing, charging, or jump starting.
- ✓ Never charge a frozen battery. Gases may form, cracking the case, and spray out battery acid.

Manual Conventions

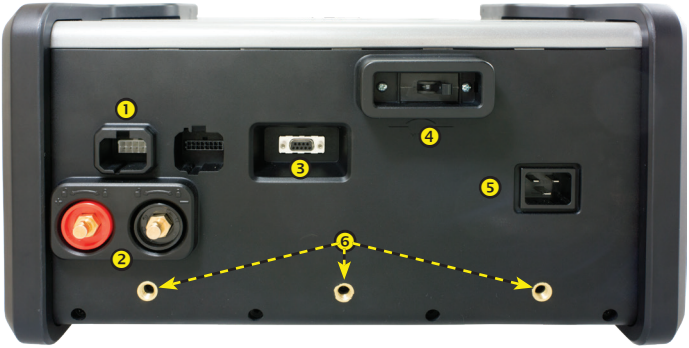
This manual uses these symbols and typographical conventions:

Symbol	Description
⚠	The safety symbol indicates instructions for avoiding hazardous conditions and personal injury.
⚠	The safety symbol with the words **CAUTION**, **WARNING, or DANGER** indicates instructions for avoiding hazardous conditions and personal injury.
🔧	The wrench symbol indicates procedural notes and helpful information.
◀▲▼▶■	These symbols indicate which arrow keys on the keypad to press for a given function.
Bold Letters	The text for screen options are in **Bold** letters.

Front View

1	Thermal Printer	3	Charger Power Button
2	Touch Screen Display	4	USB Port

Rear View

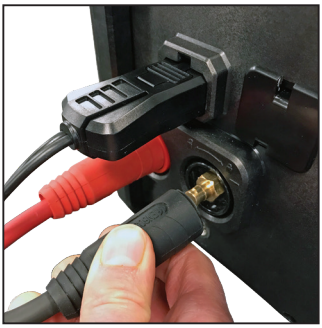


1	Communication Cable Connection	4	Circuit Breaker Reset
2	Charge Cable Connections	5	Power Cord Socket
3	VIN Scanner Connection (DB-9)	6	For Charger Cart Mounting Bolts

Connections

Charging Cables

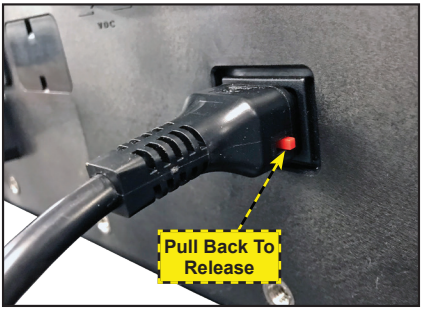
1. Insert the communication cable.
2. Insert and rotate the charge cable quick connectors clockwise 180° to lock them onto the Quick Connector Locking Post on the charger.



3. The connection process is complete when all three cables are connected to the charger.

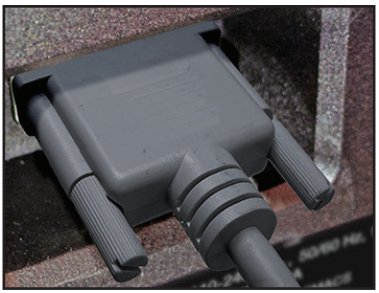
Locking Power Cord

Pull back on the red tab on the side of the connector to release/remove the power cord from the charger's power socket.



Scanner Cable (Optional Accesory)

Use the screws on the connector to secure the cable to the charger.



Charging Out-of-Vehicle (Battery Test)

The preferred battery charging location is in the vehicle. However, if you plan to charge out of the vehicle:

- Always disconnect the negative cable from the battery first and reconnect it last.
- Always use a carry tool or strap to lift and transport the battery.

⚠ CAUTION

Do not test at the battery's steel bolts.

Failure to properly install lead terminal adapters, or using adapters that are dirty or worn, may cause false test results. Always use lead terminal adapters provided with the charger when testing side-post or Group 31 batteries

IMPORTANT: To avoid damage, never use a wrench to tighten the adapters.

Connecting To The Battery

Connect the charging clamps to the battery in accordance with all precautions and safety instructions. **Do not connect either clamp to the vehicle's chassis.**

Connect the **Red** clamp to the positive (+) terminal and the **Black** clamp to the negative (–) terminal. An alert is displayed if the clamps are reversed on the battery terminals.

To make sure both sides of the clamps are gripping the terminals, rock the each clamp back and forth. A poor connection will prevent testing, and the analyzer will display the message CHECK CONNECTION. If the message reappears after you have correctly reconnected the clamps, clean the terminals and reconnect.

Initial Setup

1. Upon initial power-up, the Language Settings screen is displayed. Tap **Next** to continue.

System Language	Select the Controller default language displayed on the screen.
Test Result Language	Select the Controller default language for all displayed tests and test results.
Email Language	Select the default standard language for the analyzer to use for all tests and results sent via email.
Print Language	Select the default standard language for the analyzer to use for all tests and results printed using a networked printer.

2. A Consent to collect data screen is displayed. Tap the Consent check box and then tap **Next** to continue.
3. Using the displayed keypad template, enter username and password for the administrator account
4. Tap **Next** to continue.

IMPORTANT: By default, the first user created is assigned Administrator rights. Tap Add User to add additional users. See Chapter 9: Settings to change these defaults.

5. The Date/Time Settings are displayed. Tap **Next** to continue after making any adjustments.

Select Time Format:	12-hour or 24-hour format
Select Date Format:	DD/MM/YYYY, MM/DD/YYYY, or YYYY/MM/DD
Select Time Zone:	Time zone offset from Greenwich Mean Time
Set Date:	Set the current date
Set Time:	Set the current time in the selected time zone

6. The Test Settings are displayed. Tap **Next** to continue after making any adjustments.

Battery Rating	Default: CCA (Cold Cranking Amps)
Temperature Units	Select Fahrenheit or Celsius
Decimal Separator	Select decimal point or comma

NOTE: A passkey number is automatically generated once the Bluetooth pairing has been established.

7. A listing of detected Configured WiFi networks is displayed.

   To select a network: For initial setup, no networks will be displayed here yet.

   To add a network: Tap the plus (+) sign, then select from one of the displayed detected networks.

   To manually add a network, tap the plus (+) sign again. Follow the on-screen instructions to select the Network SSID, Security, and IP Settings. Tap **Next** when finished.

   Use the onscreen keypad to manually enter the Network SSID, security type, and IP settings. If necessary, enter the WiFi network password. Tap **Next** when finished.

   A confirmation screen is displayed when the analyzer has successfully connected to the WiFi network.

   To delete a network: Tap a displayed network to select it. Tap trash can icon (3) to delete it.

8. The Location ID screen is displayed. Enter your location ID/Dealer ID, and press OK. A location verification screen will be displayed for you to confirm the proper location by selecting Verify, or if it is incorrect, select Reconfigure. If your location ID does not pull up any location information, call Midtronics support.

9. The BMIS (**B**attery **M**anagement **I**nformation **S**ystem) log-in screen is displayed to confirm you are connected to be able to send data via WiFi. Select Next to continue.

10. The Email Address Book screen is displayed.

    To add an email address: Tap the plus (+) sign, then use the displayed keyboard to add the address.

    To edit an email address: Tap the pencil icon, then use the displayed keyboard to edit the address.

    To delete an email address: Tap a displayed email address to select it. Tap trash can icon (3) to delete it.

    To use the Default Email Server Settings: Tap the gear icon to use the default.

11. The Shop Information screen (Admin Only) is displayed

    Use the onscreen keypad to enter the store name, address, and phone number. Tap **Next** to continue.

Store Name	
Street Address	
Street Address 2	
City	
State	
Zipcode	
Phone #	

12. The login screen is displayed.

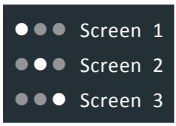
13. Tap a user name to access the Main Menu.

Main Menu

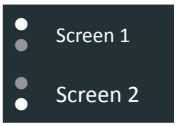
1	**Menu Bar**		
Log Out	Log out current user		Bluetooth connectivity status
12.65V	Measured battery voltage		
	WiFi signal strength		
2	**Main Menu Selection Area**		

Additional Screens

The dots at the bottom or side of a menu or results screen indicate additional screens are available. Use your finger to swipe horizontally left, right, up or down across the Controller screen to view all of the results.



Swipe Horizontally



Swipe Vertically

Main Menu Icons

Icon	Description	Icon	Description
Diagnostic Charge	Use Diagnostic Charge to test a battery installed and connected in a vehicle using test parameters determined by the vehicle vin or the year, the brand and the model of the vehicle that is being tested .	Manual Charge	Provides a timed charge that ranges from 5 to 120 minutes or a continuous charge that ends when **STOP** is pressed.
Reflash	Evaluates and maintains battery voltage at 13.5 volts to provide uninterrupted reprogramming and retention of a vehicle's system settings	Jump Start	Makes high output current available to boost charge an in-vehicle battery and assist in starting the engine.
History	Access archived test histories or search test history by VIN or by technician.	Messages	Displays alerts, notifications, and tool software updates.
Support	Access the analyzer Self-Test.	Settings	Setup/adjust: WiFi, printer setup, email settings, user information, default language, display/sound settings, BMIS, shop info, connected devices, tool software version information.

Inspecting the Battery

Before starting the test visually inspect the battery for:

- Cracked, buckled, or leaking case. If you see any of these defects, replace the battery.
- Corroded, loose, or damaged cables and connections. Repair or replace them as needed.
- Corrosion on the battery terminals, and dirt or acid on the case top. Clean the case and terminals using a wire brush and a mixture of water and baking soda.
- Low electrolyte level. If the electrolyte level is low, add distilled water to fill up to ½ above the top of the plates and fully charge the battery. Do not overfill.
- Corroded or loose battery tray and hold-down fixture. Tighten or replace as needed.

2 – Diagnostic Charge

Use Diagnostic Charge to test a battery installed and connected in a vehicle using test parameters determined by vehicle VIN or year, make, and model of the vehicle being tested.

At any time during the test tap ◀ to return to the previous screen or 🏠 to return to the Main Menu.

Battery Test

1. Connect the charger clamps to the appropriate battery posts.
2. At the Main Menu tap **Diagnostic Charge**. The Acquire VIN screen is displayed.
3. Use your connected barcode scanner to scan the VIN bar code. The VIN is an optional field that you can skip, but VIN is a required input for the DCA to generate a test code.

   For best results, use the barcode located on the driver's side door frame. The VIN is also displayed behind the windshield on the driver's side dashboard. The VIN may also be entered manually.

> **NOTE**: Refer to Appendix A for recommended scanning procedures and VIN scanning help

Windshield

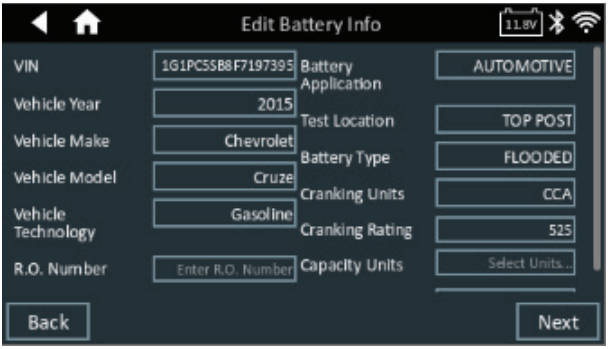
Drivers Door Frame

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

1	2	3	4	5	6	7	8	9	0
W	E	R	T	Y	U	P			
A	S	D	F	G	H	J	K	L	
Z	X	C	V	B	N	M			⌫
Back									Next

The displayed digit counter will count up the alphanumeric characters as they are entered on the keypad.

Year/Make/Model Entry: Use the Search Library screen to select the year, make and vehicle model. Based on the entered information, the original equipment specifications, including battery rating is displayed. The Edit Battery Information screen displays vehicle and battery information based on the VIN.



If the displayed information is correct, tap **Next** to begin the Battery Test or **Reset** to reset the parameters to the factory defaults.

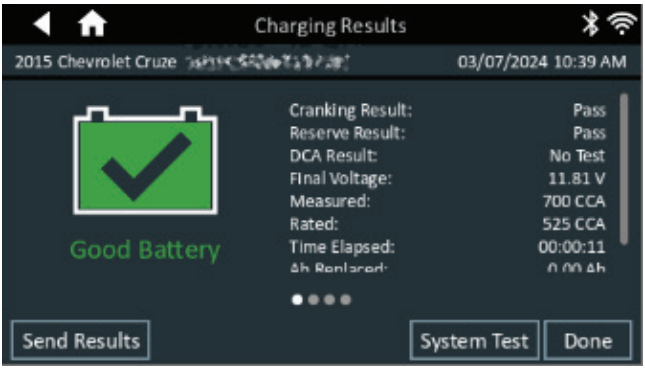
4. Tap the box across from each displayed parameter and select the correct information from the displayed list.

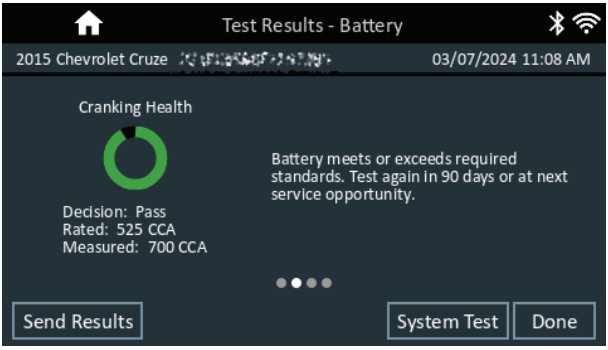
> **NOTE:** See Appendix B for complete parameter descriptions.

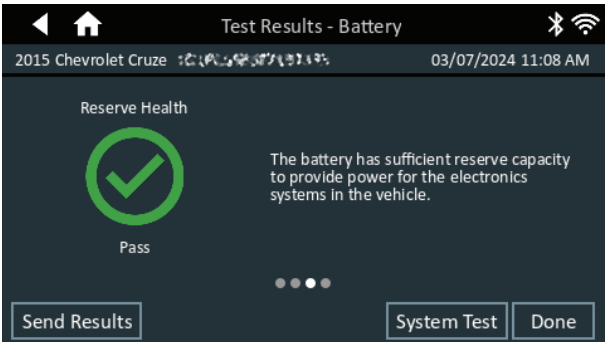
The charger performs a series of tests to determine the overall condition of the battery before applying a charge. Those steps include measuring the ambient battery temperature, Cranking Health, Reserve Capacity, Charge Acceptance, and applying a Load Test to the battery.

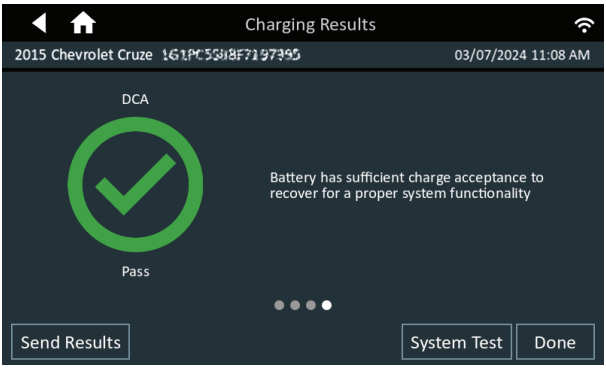
The test results are then displayed on the charger screen.

Battery Test Results









Icons are color-coded to indicate status.

Green:	All test parameters were completed and have passed.	**Red:**	The battery has failed the test.
Yellow:	Some test parameters may require further testing.	**White:**	Insufficent data to perform the test.

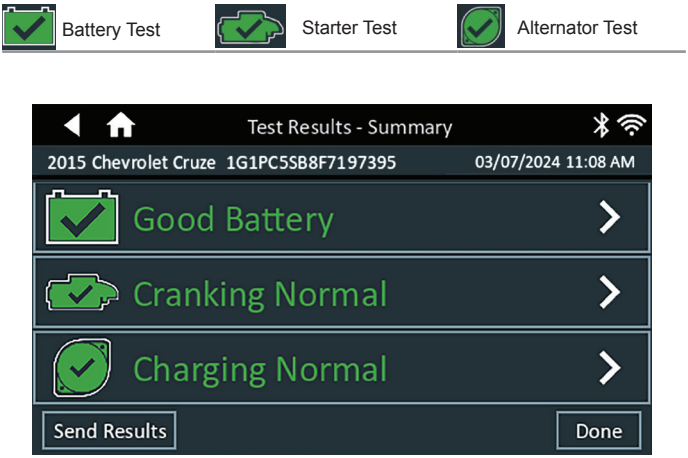
To print or send the test results to a configured printer or via email tap **Send Results** and select an option. To return to the Home Screen, tap **Done** or **System Test** to continue with the System Test.

NOTE: Refer to Appendix C: Test Result Decision Tables for a complete explaination of possible test results.

System Test

1. Start the engine and let it idle.
2. Turn off all electrical accessories such as headlights and the interior ventilation blower fan and tap **Next**.
3. The analyzer tests the alternator output at idle.
4. When prompted, rev and hold the engine to between 2000 to 3000 RPM and tap **Next**.
5. The analyzer tests the alternator output again.
6. When prompted Idle the engine.
7. Turn on the high beam headlights and interior ventilation blower motor and tap **Next**.
8. The analyzer tests the alternator output at idle.
9. When prompted, rev and hold the engine to between 2000 to 3000 RPM and tap **Next**.
10. The analyzer tests the alternator output again.
11. When prompted turn off all loads and Idle the engine.
12. Tap **Next** to display the test results.

System Test Results-Summary



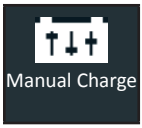
Test Results - Summary

A Test Results - Summary screen is displayed following a System Test. Tap > to view detailed test results for each part of the test.

NOTE: Refer to Appendix C: Test Result Decision Tables for a complete explaination of possible test results.

To send the test results to a configured printer or via email tap **Send Results** and select an option. To return to the Home Screen, tap **Done** or ⌂ to return to the Main Menu.

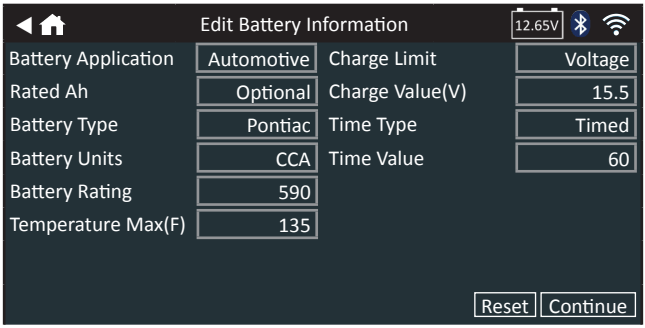
3 – Manual Charge



Provides a timed charge that ranges from 5 to 120 minutes or a continuous charge that ends when STOP is pressed.

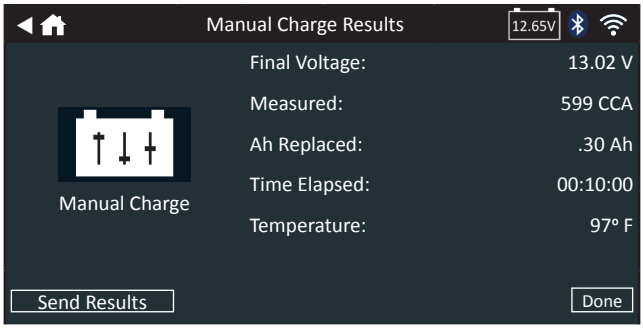
At any time during the test tap ◀ to return to the previous screen or 🏠 to return to the Main Menu.

1. Connect the Diagnostic Device test clamps to the battery.
2. At the Main Menu tap **Manual Charge**. The Edit Battery Information screen is displayed.
3. Enter the battery information and charging parameters.



NOTE: See Appendix B for complete parameter descriptions.

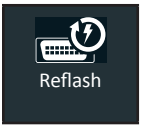
If the displayed information is correct, tap **Continue** to begin the Manual Charge. Tap on the corresponding box to edit the parameter information.



The test results are displayed on the charger screen.

To send the test results to a configured printer or via email tap **Send Results** and select an option. To return to the Home Screen, tap **Done** or 🏠 to return to the Main Menu.

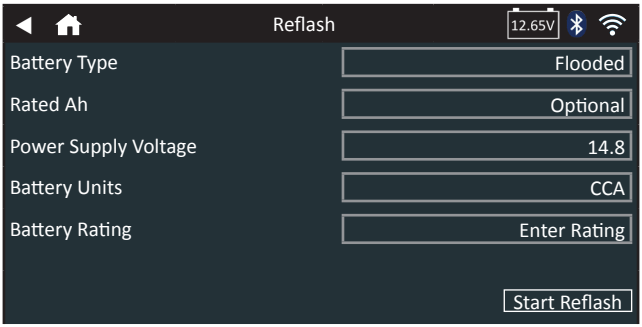
4– Reflash



Use Reflash to test and maintain battery voltage in a vehicle at 13.5 volts to allow for uninterrupted reprogramming of vehicle's computer, retain vehicle system settings, or simply to maintain battery voltage.

At any time during the test tap ◀ to return to the previous screen or ⌂ to return to the Main Menu.

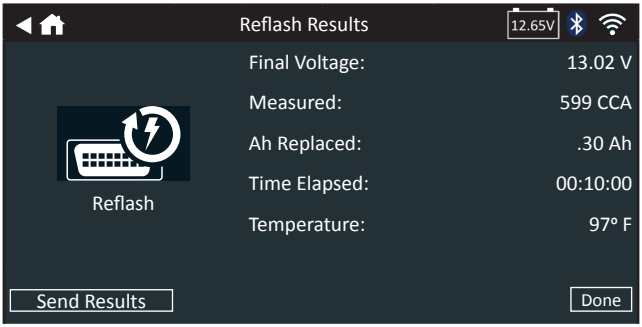
1. Connect the Diagnostic Device test clamps to the battery.
2. At the Main Menu tap **Reflash**. The Reflash screen is displayed.



NOTE: See Appendix B for complete parameter descriptions.

3. Enter the battery information and reflashing parameters.

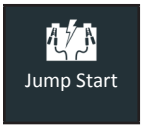
   If the displayed information is correct, tap **Start Reflash** to begin.



   The test results are displayed on the charger screen.

To send the test results to a configured printer or via email tap **Send Results** and select an option. To return to the Home Screen, tap **Done** or ⌂ to return to the Main Menu.

5 – Jump Start



Makes high output current available to boost charge an in-vehicle battery and assist in starting the engine..

This charging mode makes high output current available to boost charge an in-vehicle battery as well as assist in starting the engine. Press **STOP** to abort at any time.

IMPORTANT: Before entering the Jump Start Mode, verify that all vehicle loads are off and the key is not in the ignition.

At any time during the test tap ◀ to return to the previous screen or 🏠 to return to the Main Menu.

1. Connect the charger clamps to the appropriate battery posts.
2. At the Main Menu tap **Jump Start.** The Jump Start screen is displayed.

3. Tap the box across from each displayed parameter and select the correct information from the displayed list.
4. Tap **Begin Jump Start** to begin the Jump Start process.

   The charger performs a series of tests to determine the overall condition of the battery before applying a boost charge to the battery.

   IMPORTANT: ***Do not*** crank the engine during the boost charging process.

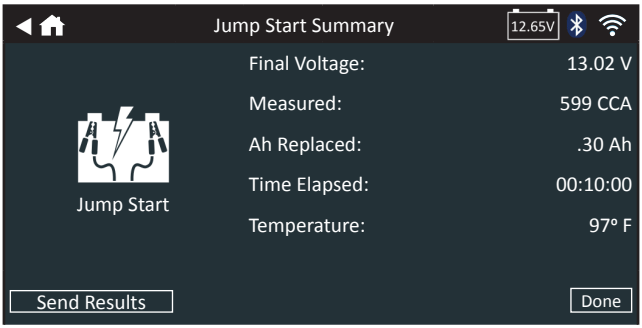
   NOTE: The maximum charge time is 10 minutes.

   NOTE: The charger will not boost charge a battery that has tested unsafe.

5. Following a successful boost charge, the charger displays CRANK ENGINE NOW. The engine can now be cranked the engine for up to five seconds.
6. When the charger displays "JUMP START COMPLETE," press **STOP** key. (The warning tone sounds every second until you press **STOP**.)

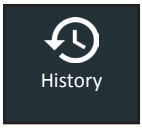
Jump Start Summary

The results of the Jump Start session are displayed on the charger screen at the end of session.



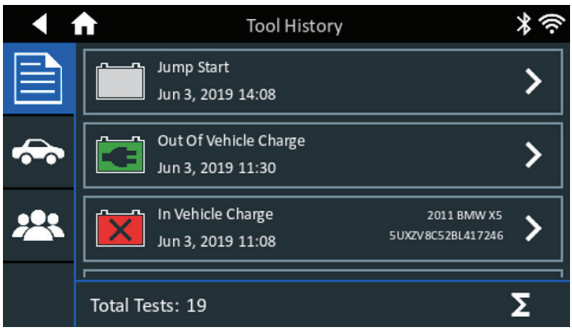
To send the test results to a configured printer or via email tap **Send Results** and select an option. To return to the Home Screen, tap **Done** or to return to the Main Menu.

6 – History



Use History to access the tool usage history, a vehicle history based on VIN, and user histories. The search function can also be used find test records for specific vehicles and technicians.

At the Main Menu, tap **History**. By default the Tool History screen is displayed.



	Tool History		User History
	Vehicle History		Totals

Tool History

Use Tool History to view test total history as well as in vehicle and out of vehicle test totals. Individual test results are also displayed.

Tap > to view individual test details.

Tap Σ to view Total By Test Decision, Total By Test Type, and Total By Date And Location.

Tap **Done** to return to the Tool History screen.

Totals By Test Decision

Good Battery	Charge & Retest
Good Recharge	Replace Battery
Aborted	Badcell Short Replace

Totals By Charge Decision

Good Battery	Replace Battery
Good Recharge	Badcell Short Replace
Aborted	NO DECISION

Totals By Test Type

Out Of Vehicle Charge	Battery Replacement
In Vehicle Charge	Manual Charge
Jump Start	

Totals By Date And Location

Last 7 Days	In Vehicle
Last 30 Days	Out Vehicle
Last 90 Days	

Vehicle History

Vehicle History displays test totals conducted on specific vehicles based on the VIN. It is also possible to enter a VIN to search for test records for a specific vehicle by tapping the displayed buttons.

Tap on the records displayed on the right side of the screen to view the individual test results.

NOTE: Refer to Appendix C: Test Result Decision Tables for a complete explaination of possible test results.

Vehicle Select Option

Tap 🔍 to select vehicle search option.

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

VIN Scan: Use a connected bar-code scanner (optional accessory) to capture a VIN barcode, usually located on the driver's side door frame.

Search: Search records by Vehicle Year, Make, and Model.

User History

User History displays test totals for the user that is currently logged in to the analyzer.

Tap > to view individual test details.

Tap Σ to view Total By Test Decision, Total By Test Type, and Total By Date And Location.

Totals By Test Decision

Good Battery	Charge & Retest
Good Recharge	Replace Battery
Aborted	Badcell Short Replace

Totals By Charge Decision

Good Battery	Replace Battery
Good Recharge	Badcell Short Replace
Aborted	NO DECISION

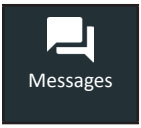
Totals By Test Type

Out Of Vehicle Charge	Battery Replacement
In Vehicle Charge	Manual Charge
Jump Start	

Totals By Date And Location

Last 7 Days	In Vehicle
Last 30 Days	Out Vehicle
Last 90 Days	

7 – Messages



The Messages function displays alerts, notifications and tool software updates.

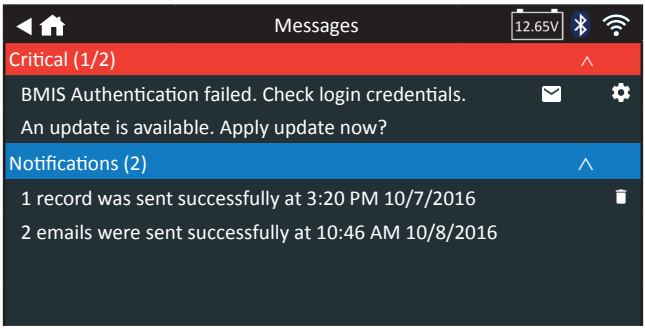
Tap to return to the previous screen or to return to the Main Menu.

Accessing Messages

A number is displayed next to the Messages icon when the analyzer has received any critical messages. The number does not include non-critical Notifications.

Unread Critical Messages Read Critical Messages

1. Tap **Messages** on the Main Menu screen.



2. Tap to read a message.

   Tap to perform the message action item.

   Tap to delete a message.

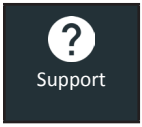
3. Tap ∧ to collapse a list of messages or ∨ to expand the list.

Message Types

Critical: An important action cannot be performed and may require user action.

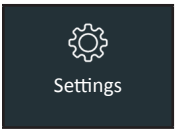
Notifications: Indicates an action has been performed or data has been sent.

8 – Support



Access the analyzer Self-Test and a digitized version of the Instruction Manual that was shipped with the analyzer.

9 – Settings



Use the Setup options to setup and adjust WiFi, printer setup and selection, email settings, user information, default language, display settings, sound settings, BMIS login information, shop information, connected accessories, and tool software version information.

Tap ◀ to return to the previous screen or to return to the Main Menu.

WiFi

Use WiFi to view, add, and delete wireless networks.

Tap on the WiFi icon to display a list of detected and configured WiFi networks.

	Add Network		Delete Selected Network
	Connect Highlighted Network		Refresh Network List

Adding A Network

1. Tap to add a WiFi network.

   A list of detected wireless networks is displayed with ● next to the selected network.

2. Tap > to access the network Security and IP Settings.

Security	None
	WEP
	WPA/WPA2 PSK
IP Address	DHCP
	Static

3. Tap → to configure the selected network.

4. Once the network has been successfully configured, tap → to return to the list of available configured networks. A ● indicates the selected network.

Deleting A Network

1. Tap a displayed network.

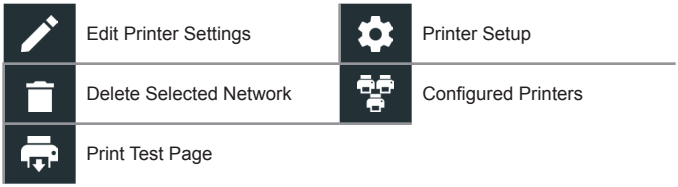
2. Tap to delete the network and tap Yes to confirm.

Printer Settings

The Printer Setup function detects and displays a list of connected and available WiFi and Bluetooth printers.

NOTE: WiFi network communication must be successfully established before a printer or printers can be detected and setup.

Tap on the Printer icon to display a list of available printers on the configured WiFi and Bluetooth networks.



Adding A WiFi Printer (Admin Only)

1. Tap ⚙ to access the Printer Setup functions.
2. Tap ⊕ to add a WiFi printer.

   Make sure the printer is on and connected to the same wireless network as the analyzer.
3. Tap → to add the printer to the list of eligible printers.
4. Tap > to connect to the selected printer. A message is displayed when the configuration is successful.
5. Tap > to return to the printer list.

Adding A Bluetooth Printer (Admin Only)

1. Tap the + sign to add a Bluetooth printer.
2. Make sure the printer(s) is on.
3. Tap → to add the printer to the list of eligible printers.
4. Tap > to connect to the selected printer.
5. When prompted, enter the device PIN and tap →. A message is displayed when the pairing is successful.
6. Tap > to return to the printer list.

Deleting A Printer (Admin Only)

1. Tap ⚙ to access the Printer Setup functions.
2. Tap a displayed printer.
3. Tap 🗑 to delete the printer and tap Yes to confirm.

Email

Displays all entered email addresses. Addresses can be added, edited, and deleted (Admin Only). Entered email accounts are added to the email address book. Frequently used email addresses can be selected from the displayed address list rather than being re-typed each time.

	Add Address		Server Settings
	Edit Address		Address Book
	Delete Selected Address		Send Test Email

Add Address (Admin Only)

1. Tap to add an email address.
2. Use the displayed keypad to enter the contact name and email address.
3. Tap Add to add the address to the email list or Cancel to exit and return to the email list.

Edit Address (Admin Only)

1. Select a displayed email address by tapping it.
2. Tap to edit the address.
3. Use the displayed keypad to edit the contact name and email address.
4. Tap Add to add the address to the email list or Cancel to exit and return to the email list.

Deleting An Address (Admin Only)

1. Select the email address by tapping it.
2. Tap to delete the address and tap Yes to confirm or Cancel to exit and return to the email list.

Server Settings

Enter and edit the email settings for sending outgoing email.

1. Tap to access the email sever settings.
2. Tap to enter or modify existing server settings including Host, Port, Login, Password, SMTP Authorization, Enable TLS, and From Email Address information.
3. Tap to clear all server settings.
4. Tap to return to the email Address Book.

User Settings (Admin Only)

Modify Usernames and Passwords..

Edit Users	User Settings
Delete Users	User Management

User Management (Admin Only)

1. Tap to access User Management functions.
2. Tap to display the current logged in Admin user.
3. Select a displayed user by tapping it.
4. Tap to edit the Username, Password, and User Type (Standard or Admin).
5. Tap **X** when complete to return to the User Management screen.
6. Tap to delete the selected user and Yes to confirm.

Language Settings

Use the Language & Input function to select the default system language used by the tool. User defaults also include Test Results, Email, and Print languages.

System Language

Select the charger default standard language.

Test Result Language

Select the default language for the charger to use for all displayed tests and results.

Email Language

Select the default standard language for the analyzer to use for all tests and results sent via email.

Print Language

Select the default standard language for the analyzer to use for all tests and results printed using a networked printer.

Display Settings

Adjust the charger display including the Brightness, Sleep Time, and Dim Time. Auto Brightness can also be turned on and off.

Brightness

Adjust the display Brightness by tapping and holding the slider, then moving it right or left to make the screen brighter or darker.

Auto Brightness

Enable and disable Auto Brightness by taping on the check box.

Sleep Time

Adjust the amount of elapsed time before the charger goes into a power saving (Sleep) mode. Default = 2 minutes.

Dim Time

Adjust the amount of elapsed time before the charger goes into a power saving (Dim) mode. Default = 1 minute.

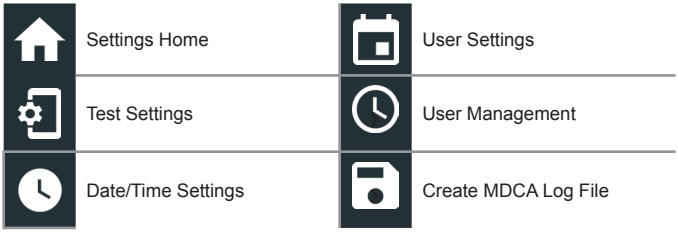
BMIS Login (Admin Only)

Enter and edit BMIS Login and Password information. Log into a BMIS account.

Login	Zone3@yourshop.com
Password	• • • • • •

Shop Information (Admin Only)

Access default Shop Information including Store Name, address, and phone number. Also access battery test defaults including rating, temperature units, and decimal separator. Use also to adjust the tester date and time settings.



Shop Information

Use the onscreen keypad to enter the store name, address, and phone number.

Store Name	Midtronics
Street Address	7000 Monroe
Street Address 2	° F
City	Willowbrook
State	IL
Zipcode	60527
Phone #	1-630-323-2800

Test Settings

1. Tap to access the test setting defaults. Tap the boxes or icons to change the values.

Battery Rating	CCA
Temperature Units	° F
Decimal Separator	00.00
Create MDCA Log File	

Battery Rating
Default battery rating units used when testing batteries.

Temperature Units
Default temperature units used when measuring battery temperature.

Decimal Separator
Default number display using commas or periods separators.

Create MDCA Log File
The MDCA function is used by Midtronics technical support.

2. Tap to return to the Shop Information screen.

Date/Time Settings

1. Tap to access the Date/Time setting defaults.

Select Time Format	12 Hour
Select Date Format	10/18/2016
Select Time Zone	EST
Set Date	
Set Time	

Select Time Format
12 or 24 Hour Format

Select Date Format
Month/Day/Year, Day/Month/Year, or Year/Day/Month

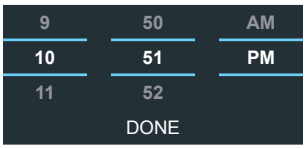
Select Time Zone
Time zone in which the analyzer will be operated.

Set Date
Tap ▲ or ▼ to enter the month, day, and year. Tap Set to save the date or Cancel to exit without saving.

May	10	2017
Jun	11	2018
Jul	12	2019
	DONE	

Set Time

Tap ▲ or ▼ to enter the hours, minutes, and AM/PM. Tap Set to save the date or Cancel to exit without saving.



2. Tap to return to the Shop Information screen.

Version Information

Use Version Information to display software version information.

Serial Number	0987654321
WiFi MAC Address	e0:e5:cf:b3:9b:25
Configuration Version	192-411340-A00-0039
Data Version	192-481341-A01-005
Controller Version	192-001339-A00-0039
Diagnostic Device Version	192-211379A-25
CVG-2 Device Version	No Device Configured
OS Version	dca8000-eng 4.4.2 DEVR10_06

Factory Reset

Use this function to return the tool to the original as built configuration including all history and test settings.

IMPORTANT: All previous modifications to the original settings will be overwritten.

Legal Information

Displays software attribution information via the Midtronics website. The analyzer must be connected to the Internet.

Check for Updates

Use this function to check via the internet connection for any updates to the tester software.

Appendix A: Recommended Scanning Procedure

VIN Scanning

For scanning VINs, the DCA-8000 Diagnostic Charger uses a handheld scanner connected to the back of charger using a DB-9 style connector. Once successfully scanned, the VIN is cross referenced with the original equipment manufacturer's battery specifications stored in the charger's database and displayed on the screen.

Scanning Tips

- **Hold Steady:** Hold the device steady when scanning the VIN barcode. This allows the user to clearly see the barcode and allows the camera to focus on it.
- **Scan Entire Barcode**: Position the scanner in and out until it covers the entire barcode.
- **Clean Barcode/Window**: Surface dirt can interfere with the scanning process. If necessary wipe the VIN barcode with a cloth or your finger remove any surface dirt.
- **Lighting/Glare:** The built-in flashlight will automatically turn on In low light situations. If the flashlight, or sunlight, is shining directly onto the VIN barcode, try pivoting the camera up or down slightly to reduce any glare.

Appendix B: Battery Information Definitions

Battery Application Automotive, Marine, Powersport, Group 31, Commercial 4D/8D, Lawn and Garden

Battery Installation Single Battery or Dual Batteries

Battery Post Top Post, Side Post, Dual Post

Battery Rating Enter the Battery Rating Units value

Battery Type Flooded, AGM (Absorbed Glass Mat), AGM Spiral, Gel, EFB (Enhanced Flooded Battery)

Battery Units

CCA	Cold Cranking Amps: Battery current at 0 ºF (–17.8 ºC).	100 to 3000
CA	Cranking Amps: Battery current at 32°F (0 ºC).	100 to 3000
JIS	Japanese Industrial Standard: Usually printed on battery label.	26A17 to 245H52
DIN(A)	**D**eutsche **I**ndustrie-**N**orm	100 to 1000
SAE(A)	European labeling of CCA	100 to 3000
IEC(A)	**I**nternational **E**lectrotechnical **C**ommission	100 to 1000
EN(A)	**E**uropa-**N**orm	100 to 1700
EN2(A)	**E**uropa-**N**orm	100 to 1700

Charge Limit Limit charge by Voltage or Amperage

Charge Value Maximum amount of applied charge (Voltage or Amperage)

Rated Ah Rating of battery being charged in Amp-hours (optional)

Temperature (Max) Maximum temperature of battery during a manual charge

Test Location Top Post, Side Post, Remote Post

Time Type Timed (10 to 120 minutes) or Continuous

Time Value (Timed Charge Only) Length (In Minutes) of Manual Timed Charge

VIN A unique code, including a serial number, used by the automotive industry to identify individual motor vehicles, motorcycles, scooters and mopeds, as defined by ISO 3833.

Vehicle Make Vehicle manufacturer

Vehicle Model Vehicle name or number

Vehicle Technology Hybrid, Gasoline, Electric, Start-Stop, Hybrid Start-Stop, Diesel

Vehicle Year Model year that a vehicle was manufactured.

Appendix C: Test Results Decision Tables

Battery Test Results

Overall Decision	Cranking Health	Reserve Health	Charge Acceptance
Good Battery	Pass	Pass	Pass
Good Recharge	Pass		
No result displayed.	Charge and Retest		
Replace Battery	Fail		
	Pass	Fail	
		Pass	Fail
		Fail	Pass
Bad Cell Replace Battery	Fail	No Test	No Test

Battery Test Results (cont'd.)

SOH Message	RC Message	CA Message
Battery meets or exceeds required standards. Test again in 90 days or at next service opportunity.	The battery has sufficient reserve capacity to provide power for the electronics systems in the vehicle.	The battery has sufficient charge aceptance to recover for a proper system funtionality.
Battery is good, but low on charge. Fully charge the battery for optimal performance and lifespan.		
No result displayed. DCA to use Advanced Diagnostics for decision.		
Battery fails to meet industry accepted standards.		
Battery is good for cranking but shows low reserve capacity. Low reserve capacity will compromise the battery's ability to provide system current or hold a charge.	The reserve capacity of the battery is low. Low reserve capacity could impact the ability of the battery to provide power for the electronics systems in the vehicle.	
The battery meets or exceeds required standards. Test again in 90 days or at next service opportunity.	The battery has sufficient reserve capacity to provide power for the electronics systems in the vehicle.	Battery has poor charge acceptance and may not be able to recover from a proper system operation.
Battery is good for cranking but shows low reserve capacity. Low reserve capacity will compromise the battery's ability to provide system current or hold a charge.	The reserve capacity of the battery is low. Low reserve capacity could impact the ability of the battery to provide power for the electronics systems in the vehicle.	The battery has sufficient charge aceptance to recover for a proper system funtionality.
Battery fails to meet industry accepted standards.	Test not performed	Test not performed

Starter Test Results

Decision	Action
Cranking Normal	The starter voltage is normal and the battery is fully charged.
Low Voltage	The starter voltage is low and the battery is fully charged.
Charge Battery	The starter voltage is low and the battery is discharged. Fully charge the battery and repeat the starter system test.
Replace Battery	If the battery test result was REPLACE, the battery must be replaced before testing the starter.
Low Current	The starter voltage is high but the cranking amps are low.
No Start	The engine didn't start and the test was aborted or the vehicle's starting profile was not detected and the Starter Test was skipped.

Alternator Test Results

Decision	Action
CHARGING NORMAL	The output from the alternator is normal.
NO OUTPUT	No output detected. Check belts to ensure alternator is rotating when engine is running. √ Check all alternator connections including to the battery. Clean or replace if necessary and retest. √ If the belts and connections are in good working condition, replace alternator or external voltage regulator.
LOW OUTPUT	Alternator not providing enough current to power electrical loads and charge the battery. √ Check belts to ensure the alternator is rotating with the engine running. √ Check alternator connections to and from the battery. If loose or heavily corroded, clean or replace the cable and retest.
HIGH OUTPUT	Alternator voltage to the battery exceeds normal limits of a functioning regulator. √ Check for loose and normal ground connections. If no connection problems are found, replace the regulator. The normal high limit of a typical automotive regulator is 14.5 volts +/–0.5. Refer to the manufacturer specifications for the correct limit, which may vary by vehicle type.

Diode Test Results

Decision	Action
NORMAL RIPPLE	The output from the alternator is normal.
EXCESSIVE RIPPLE	One or more diodes in the alternator are not functioning or there is stator damage, which is shown by an excessive amount of AC ripple current supplied to the battery. √ Make sure the alternator mounting is sturdy and that the belts are in good shape and functioning properly. If the mounting and belts are good, replace the alternator.
OPEN PHASE	Replace the alternator.
OPEN DIODE	
SHORTED DIODE	

PATENTS

This product is made by Midtronics, Inc., and is protected by one or more U.S. and foreign patents. For specific patent information, contact Midtronics, Inc. at +1 630 323-2800.

LIMITED WARRANTY

Midtronics products are warranted to be free of defects in materials and workmanship for a period for a period of two (2) years for the unit and one (1) year for the cables from date of purchase. Midtronics will, at our option, repair or replace the unit with a re-manufactured unit. This limited warranty applies only to Midtronics products, and does not cover any other equipment, static damage, water damage, overvoltage damage, dropping the unit, or damage resulting from extraneous causes including owner misuse. Midtronics is not liable for any incidental or consequential damages for breach of this warranty. The warranty is void if owner attempts to disassemble the unit or to modify the cable assembly.

SERVICE

To obtain service, contact the Midtronics office in your region (see address block below). Have your model number and serial numbers at hand. This first step is critical as Midtronics will troubleshoot the problem(s) over the phone, and many problem(s) are resolved during this step. If the problem cannot be resolved, the Customer Service Agent will issue a Return Material Authorization (RMA) number and provide instructions on where to ship your equipment. The RMA number becomes your tracking number when communicating with Midtronics. The final step is to pack the equipment to avoid damage in transit and return the equipment freight prepaid (you pay), to the attention of the RMA number and the address provided by the Customer Service Agent.

Midtronics or it's designee will repair and return the unit using the same shipping service level as received. If it is determined that the failure was caused by misuse, alteration, accident or abnormal condition of operation or handling, purchaser will be billed for the repaired product and it will be returned freight prepaid with the shipping & handling charges added to the invoice. Midtronics' products beyond the warranty period are subject to the repair charges in place at that time. Out-of-warranty repairs carry a 6-month warranty.

MIDTRONICS

www.midtronics.com

Corporate Headquarters
Willowbrook, IL USA
Phone: 1.630.323.2800
Canadian Inquiries
Toll Free: +1 1 866 592 8052

Asia/Pacific (excluding China)
Contact Corporate Headquarters
Phone: +1.630.323.2800

Midtronics b.v.
European Headquarters
Houten, The Netherlands
Serving Europe, Africa, the Middle East, and The Netherlands
Phone: +31 306 868 150

Midtronics China
China Operations
Shenzhen, China
Phone: +86 755 2374 1010

Midtronics India
Navi Mumbai, India
Phone: +91 22 2756 4103/1513

167-0001137EN-A 05/24 ©2024 Midtronics, Inc. All rights reserved.