



xRC-3363 Hybrid Rescue Charger

Users Guide

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General Safety Guidelines

 **IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS**

IT IS OF UTMOST IMPORTANCE THAT BEFORE USING YOUR xRC-3363, YOU READ THIS MANUAL AND FOLLOW THE SAFETY AND OPERATING INSTRUCTIONS EXACTLY.

⚠ DANGER





 **Hazardous voltage. Do not remove protective covers. Failure to follow this instruction may result in electric shock, personal injury, or death.**

Circuit boards, test points, and output voltages also may be floating above or below chassis ground.

NOTICE

This xRC-3363 is designed for indoor use only. Do not operate the xRC-3363 outdoors. Operation of the xRC-3363 in an outdoor environment can result in equipment damage.


Manual 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.

1. Maintenance


- **SAVE THESE INSTRUCTIONS** - This manual contains important instructions that shall be followed during installation, operation and maintenance of the unit.

⚠ WARNING

 **Risk of explosion.**

This device contains internal arcing and sparking parts which should not be exposed to flammable vapors. This device should be located at least 18 inches (457mm) above grade. Failure to follow this instruction may result in personal injury or death.


- Periodic inspection and care are highly recommended, especially if the xRC-3363 is operating in a harsh environment.
- Inspect for signs of overheating, rust, paint deterioration and general condition of the unit. If corrective measures should be taken, contact Midtronics. [Contact information on back cover.](#) Removal of dust, dirt and debris from the external enclosure surfaces is encouraged and may be performed while the unit is in operation.

 **IMPORTANT:** No user-serviceable parts are inside the xRC-3363. No unauthorized personnel should ever remove the cover.

- Ensure that the AC power line ground is connected properly to the xRC-3363 input connector or chassis. Similarly, other power ground lines including those to application and maintenance equipment must be grounded properly for both personnel and equipment safety.
- In normal operation, the operator does not have access to hazardous voltages within the chassis. However, depending on the user's application configuration, HIGH VOLTAGES HAZARDOUS TO HUMAN SAFETY may be normally generated on the output terminals. The customer/user must ensure that the output power lines are labeled properly as to the safety hazards and that any inadvertent contact with hazardous voltages is eliminated.
- This xRC-3363 is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the xRC-3363 by a person responsible for their safety.

⚠ DANGER	
Risk of explosive gases.	
Batteries may generate explosive gases. To reduce risk, follow these safety instructions and those published by the battery manufacturer and OEM. Failure to follow these instructions may result in personal injury or death.	

- 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.

⚠ DANGER	
	Charging a non-rechargeable battery may cause the battery to burst.
Only charge batteries for which xRC-3363 has been designed and is intended for use. Failure to follow these instructions may result in personal injury or death	

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 xRC-3363 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 xRC-3363.
- 1.4 Do not operate the xRC-3363 if it has received a sharp blow, been dropped or otherwise damaged in any way; contact Midtronics (see contact information on back cover).
- 1.5 Do not disassemble the xRC-3363; when repair is required contact nearest Midtronics regional office ([see back cover of this manual for locations and contact information](#)). Incorrect reassembly may result in a risk of electric shock or fire.
- 1.6 To reduce risk of electric shock, unplug the xRC-3363 from the AC outlet before attempting any maintenance or cleaning. Turning off the controls will not reduce this risk.
- 1.7 Connect and disconnect the battery leads only when directed to do so by the xRC-3363.
- 1.8 Do not overcharge the battery (See Section 3).
- 1.9 Charge the battery in a dry, well-ventilated area.
- 1.10 Never place articles on or around the xRC-3363, or locate the xRC-3363 in a way that will restrict the flow of cooling air through the cabinet.
- 1.11 An extension cord should not be used with xRC-3363.
- 1.12 Have a damaged cord or plug replaced immediately.

NOTICE

The xRC-3363 has not been designed for exposure to rain or snow. Operate the xRC-3363 only indoors in a clean environment. Failure to follow these instructions may result in equipment damage.

2. Personal Precautions**⚠ WARNING**

Only qualified technicians may use this equipment. The required qualifications vary by region. Always observe local laws and legislative directives. Failure to follow this instruction may result in serious personal injury or death.

- 2.1 Have plenty of fresh water and soap nearby in case battery electrolyte contacts skin, clothing or eyes.
- 2.2 Always wear all personal protective equipment (PPE) defined by OEM when working with batteries serviced by xRC-3363.
- 2.3 If battery electrolyte contacts skin or clothing, wash immediately with soap and water. If electrolyte enters the eye, immediately flush with cold running water for at least 10 minutes, and seek medical attention.
- 2.4 NEVER smoke or allow a spark or flame in vicinity of a battery or engine.
- 2.5 Before working with a battery, remove personal metal items such as rings, bracelets, necklaces, watches, etc. A battery can produce a short circuit current high enough to weld such items causing a severe burns.
- 2.6 The xRC-3363 is not intended to supply power to a low-voltage electrical system other than applications using rechargeable batteries.
- 2.7 **NEVER** charge a battery outside of recommended operating temperature range as defined by OEM. Allow battery to come within operating temperature range xRC-3363 (Pg.7) and battery operating range prior to charging.

3. Grounding & Power Cord Connections

- 3.1 The xRC-3363 must be grounded to reduce risk of electric shock. The xRC-3363 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

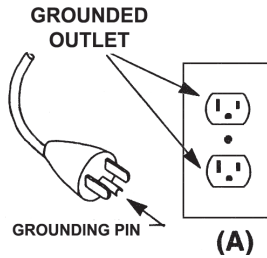
**Hazardous voltage.
An improper connection can result in electric shock**

To avoid electrical shock or burn, never alter the xRC-3363's original AC cord and plug. Disconnect plug from outlet when xRC-3363 is idle. Failure to follow these instructions may result in personal injury or death.

IF THE PLUG DOES NOT FIT THE OUTLET, HAVE A PROPER OUTLET INSTALLED BY A QUALIFIED ELECTRICIAN.

3.2 This xRC-3363 is for use on a nominal 120 volts or 240 volts circuit.

The 120V grounding plug looks like the plug illustrated in *Figure A*.



3.3 Use of an extension cord could result in a risk of fire and electric shock.

3.4 The plugs and receptacles have dedicated grounding terminals and must be mated with plugs and receptacles having matching grounding terminals.

4. xRC-3363 Location



IMPORTANT: The xRC-3363 is designed for indoor use only!



It is the responsibility of the operator to provide a controlled environment for the equipment. Work tents are a common method of protecting equipment in adverse conditions.

The xRC-3363 depends upon the surrounding air for cooling. The free flow of air is important as is the air temperature. The xRC-3363 must be mounted so that air can freely circulate all around it.

- 4.1 Do not place combustible materials on or near the xRC-3363 or mount the xRC-3363 closer than 3 inches from any adjacent wall. The xRC-3363 must never be mounted next to or above heat generating equipment.
- 4.2 Locate the xRC-3363 as far away from the battery as the cables permit.
- 4.3 Never place the xRC-3363 directly above the battery being charged; gases from the battery will corrode and damage the xRC-3363.
- 4.4 Only operate the xRC-3363 in a well-ventilated area that is free of dangerous vapors.
- 4.5 Store the xRC-3363 in safe, dry location.
- 4.6 Do not operate the xRC-3363 in high relative humidity conditions (85% non-condensing maximum).
- 4.7 When using the xRC-3363, follow all regulations for the locality in which the equipment is used.

Product Specifications

Power

Input: 100 – 240 , 50/60 Hz; 12A max.
Output: 336 V , 3A

Charge Cables

- 2m

Power Cord

Accepts C19 locking connector for region-specific power cables:

- United States: EMA 5-15 termination, rated at 15A/125V UL CSA
- EU: EMA 5-15 termination, rated at 16A/250V UL CSA
- UK: EMA 5-15 termination, rated at 13A/250V UL CSA

Applications

- Automotive
- Heavy-Duty

Battery Chemistry Compatibility

- Lithium ion
- Nickel Metal Hydride

Humidity

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

Dimensions

(without cables)

- **WEIGHT:16,78 KG (37 LBS)**
- **44 CM (L) X 43,5 CM (W) X 23 CM (H)**

Temperature

- Operating temperature range: 0°C to +50°C (32°F to +140°F)
- Storage temperature range: -10°C to + 85°C (14°F to 185°F)

Certifications

- CE
- RoHS
- FCC
- UL

Connectivity

- Bluetooth 2.0
- WiFi
- USB 2.0 connection
- CAN bus interface


User Interface

- Advanced navigation and charge applications
- 5" Touch Screen
- 5 button directional input pad

1 – Introduction & Overview

Safety Precautions

For safe, efficient, and accurate charging, review the safety and operating instructions in this manual before using the xRC-3363. In addition, follow all manufacturers' instructions and SAE instructions. Always use the necessary safety precautions when working with batteries to prevent severe injury or death. Follow all OEM instructions and SAE safety recommendations, as well as the following precautions:

<div style="background-color: red; color: white; padding: 5px; text-align: center;">⚠ DANGER</div> <div style="display: flex; align-items: center;">  <div> <p>Risk of explosive gases. Never smoke or allow a spark or flame in the vicinity of a battery.</p> <p>Batteries can produce a highly explosive mix of gases, even when the battery is not in operation. Always work in a well-ventilated area. Failure to follow these instructions may result in personal injury or death.</p> </div> </div>	<div style="background-color: yellow; color: black; padding: 5px; text-align: center;">⚠ CAUTION</div> <div> <p>Wash hands after handling.</p> <p>REQUIRED BY CALIFORNIA PROP. 65: Battery posts, terminals, and related accessories may contain lead and lead compounds, chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.</p> </div>
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- Battery electrolyte can be hazardous. Refer to Material Safety Data Sheet for precautions and safety procedure for the type of battery being serviced
- Keep hair, hands, and clothing as well as the xRC-3363 cords and cables away from moving engine parts.
- Before working with a battery, remove personal metal items such as rings, bracelets, necklaces, watches, etc. A battery can produce a short circuit current high enough to weld such items causing a severe burn.
- Use caution when working with metallic tools to prevent sparks or short circuits.
- Never lean over a battery when charging.
- Never operate xRC-3363 outside of defined operating temperature range (pg. 7).
- Never charge a battery outside of OEM specified temperature range.

Connecting To AC Power

Plug the xRC-3363 into a dedicated, grounded nominal 15-amp or higher AC outlet.

Front View



- | | |
|-----------------------|----------------------------------|
| ① Touchscreen Display | ③ Screen Power Button |
| ② USB Port | ④ 5 Button Directional Input Pad |

Note: It is normal for the xRC-3363 fans to continue running after turning screen off

Rear View



- | | |
|------------------------------|---------------------|
| ① LV Common Cable Connection | ③ Fuse Door Cover |
| ② HV Common Cable Connection | ④ Power Cord Socket |

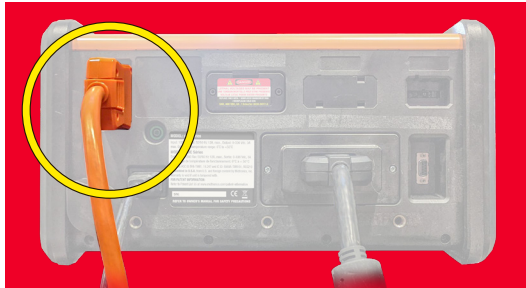
Connections

Charging Cables

1. Insert the LV Common Cable.

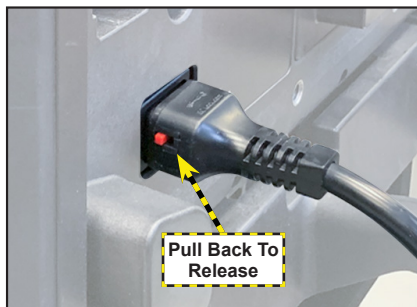


2. Insert the HV Common Cable.



Locking Power Cord

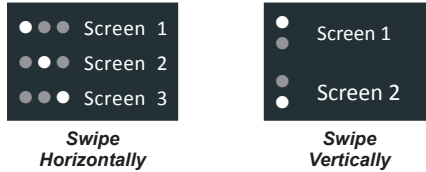
Pull back on the red tab on the side of the connector to release/remove the power cord from the unit's power socket.



Main Menu

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.



Initial Setup

- 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.

- The Create User screen is displayed. Enter a WSLX ID: and tap **Next**.

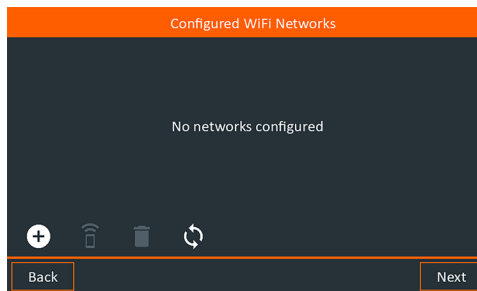
IMPORTANT: By default, the first user created is assigned Administrator rights. Tap **Add User** to add additional users. See [Chapter 6: Settings to change these defaults](#).

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

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

Temperature Units	Celsius or Fahrenheit
Decimal Separator	00.00 (dot) or 00,00 (comma)

- The Configured WiFi Networks screen is displayed. Tap **Next** to continue after making any adjustments.



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



Adding A Network

- Tap **+** to add a WiFi network.
A list of detected wireless networks is displayed with ● next to the selected network.

5. Tap **>** to access the network Security and IP Settings.

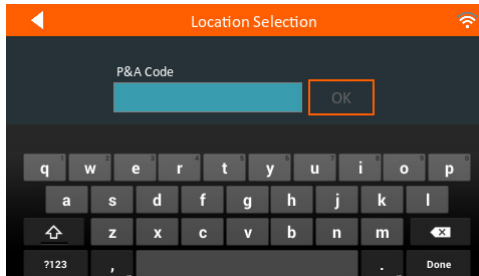
Security	None
	WEP
	WPA/WPA2 PSK
IP Address	DHCP
	Static

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

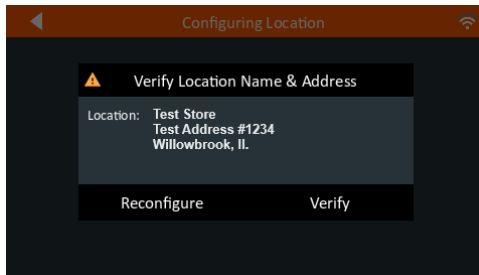
Deleting A Network

- Tap a displayed network.
- Tap **🗑** to delete the network and tap Yes to confirm.

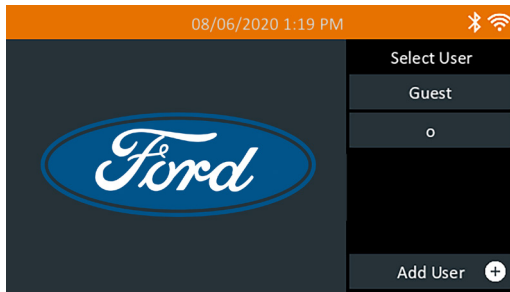
6. For Ford Dealers, enter dealership P&A Code. If not a Ford dealer, the BMIS Login screen is displayed. If you have a Midtronics 7BMIS account, enter your Username and Password. Tap **X** to skip. Contact Midtronics for inquiries regarding Midtronics BMIS accounts.



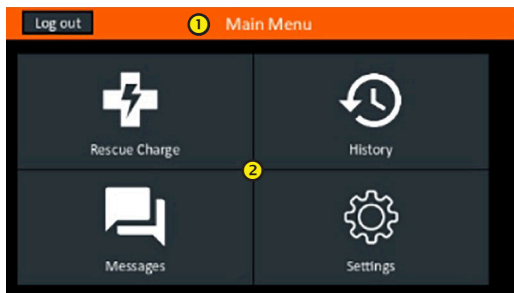
7. The Shop Settings screen is displayed. Tap **Next** to continue after making any adjustments.



8. The login screen is displayed.



9. Select your User ID to access the Main Menu



- ① **Menu Bar**
- ② **Main Menu Selection Area**

Main Menu Icons

Icon	Description	Icon	Description
	Charges battery to sufficient State of Charge (SOC) to turn over engine		Access archived test histories or search test history by VIN or by technician.
	Access messages, alerts and notifications on tool		Setup/adjust: WiFi, printer setup, email settings, user information, default language, display/sound settings, BMIS, shop info, connected devices, tool software version information.

2 – Rescue Charge



Use this function to perform a rescue charge on the battery pack.

⚠ DANGER

Hazardous voltage.
An improper connection can result in electric shock

To avoid electrical shock or burn, never alter the xRC-3363's original AC cord and plug. Disconnect plug from outlet when the xRC is idle. Failure to follow these instructions may result in personal injury or death.

⚠ WARNING

High Voltage Present.

Make sure to properly prepare the battery pack by following all required OEM procedures. Failure to follow these instructions may result in personal injury or death.

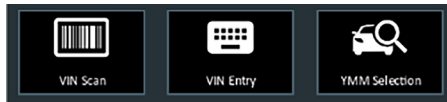
⚠ WARNING

High Voltage Present.

Before charging, inspect all cables to be used for damage to insure that all are in good working order. Damage may include but is not limited to: breakage, swelling, discoloration, corrosion or softening. Do not operate xRC-3363 with damaged cables. Failure to follow these instructions may result in personal injury or death.

Procedure

1. At the Main Menu, select Rescue Charge.
2. Select the Vehicle Input method.



VIN Scan: Scan the VIN using a handheld barcode scanner.

VIN Entry: Manually enter the VIN using the on-screen keyboard.

YMM Selection: Select the vehicle year, make, and model.

3. Confirm the Vehicle information displayed and tap **Next**.
4. Follow the on screen instructions to connect to battery and complete rescue charge. xRC-3363 will direct you to correct cable set based on vehicle input. The xRC begins the rescue charge process once the initialization process has been successfully completed.

Rescue Charge

Line indicates battery charge sufficient to start engine

Rescue Charge in progress

Target Pack Voltage: 300.00 V

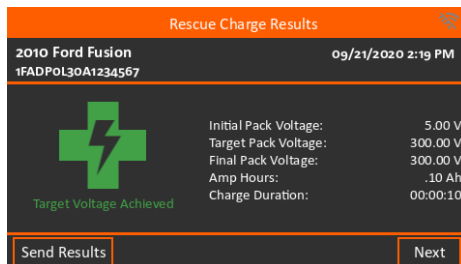
Pack Voltage: 150.00 V

Current: 3.00 A

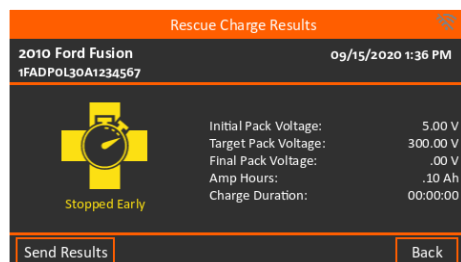
Elapsed Time: 00:00:05

Field	Description
Initial Pack Voltage	The voltage of the pack when the rescue charge was started
Target Pack Voltage	Preprogrammed finishing pack voltage based on pack type
Final Pack Voltage	The voltage of the pack when the rescue charge was completed
Amp Hours	The total number of Amp Hours accepted by the pack
Charge Duration	The amount of time that the rescue charge was operational. The format is HH:MM:SS

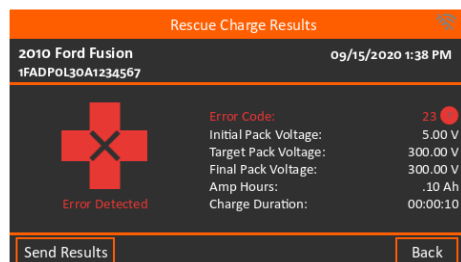
The results are displayed on the xRC screen.



Target Voltage Achieved: The rescue charge ran to completion without any errors.



Stopped Early: The rescue charge was stopped by the user before running to completion.



Error Detected: There was a fault encountered during the rescue charge. Tap ? for additional error code details.

Tap **Send Results** to email or print the Rescue Charge Results.

- Follow the on-screen directions to disconnect the cables.

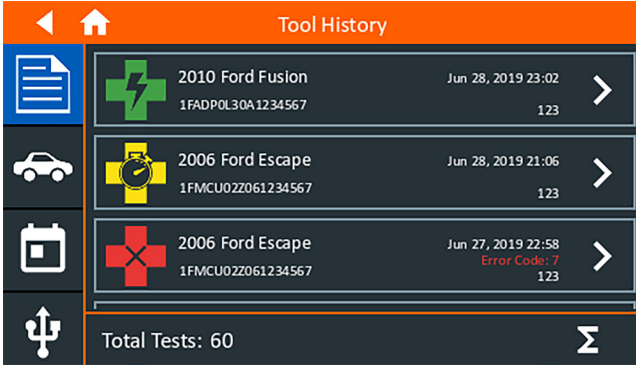
3 – History



History

History shows tests that have been performed on the tool. Records are listed in order of occurrence with the most-recent record on the top of the list.

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



Tool History



Use Tool History to view test history. Selecting a record will show the full test results.

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.

Vehicle History



Vehicle History shows tests associated with a given vehicle. When first selected, all records for the most recent vehicle will be shown. The user will have the ability to search for vehicles by VIN to show records for another vehicle.

Tap > to view individual test details.

Tap 🔍 to search Vehicle History.

Manual VIN Lookup: Manually enter the VIN using the on-screen keyboard.


VIN Scan: Scan the VIN using a handheld barcode scanner.

YMM Selection: Select the vehicle year, make, and model. The list returned will include all VINs that have been tested for that Year, Make, Model. There is also the option to show tests for all vehicles with that Year, Make, Model.

Date History



Date History shows results by date tested.

Tap  to select a date.

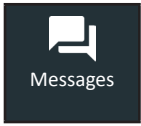
USB Data Upload



Export history

1. Connect a USB drive to the front panel of the xRC.
2. Select the type of data to export.
3. Tap Confirm once the data has been exported.
4. Remove the USB drive.

4 – Messages



Messages

The Messages function displays alerts and notifications for upcoming tests and activities. This includes scheduled testing as well as tool software updates and maintenance opportunities.



Mark Read Or Unread

Perform Message Action



Delete Notification

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.

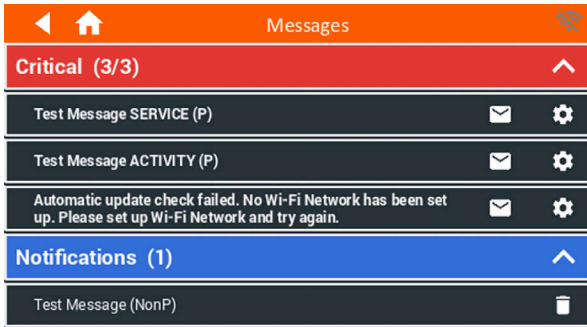


Unread Critical Messages



Read Critical Messages

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



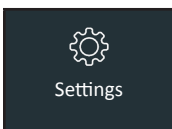
- 2. Tap to read a message.
Tap to perform the message action item.
Tap to delete a message.
- 3. Tap to collapse a list of messages or to expand the list.

Message Types

Critical: An important action cannot be performed and may require user input in order to complete action.

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

5 – Settings



Use the Setup options to setup and adjust WiFi, user information, default language, display settings, shop information, user management, connected accessories, and device information.

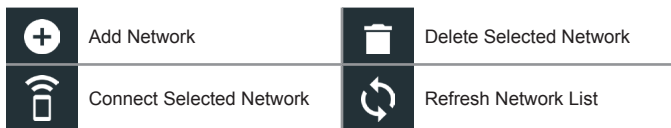
Tap to return to the previous screen or to return to the Main Menu.

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.



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

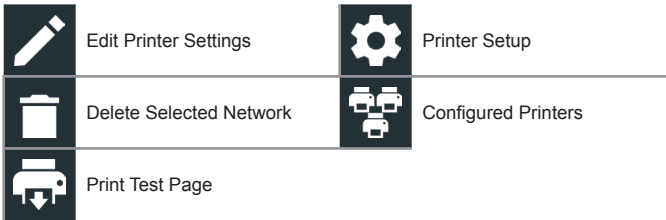


Use Printer to view, add, and delete WiFi printers.



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

1. Tap to add a printer. Printer must be turned on and connected to WiFi..
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 → once ready to connect.

Email




Displays all entered email addresses. Addresses can be added, edited, and deleted. 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

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





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


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.

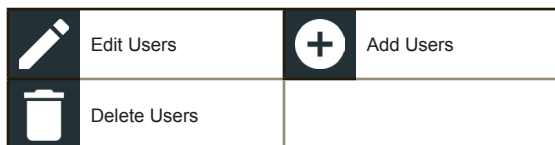
Server Settings

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.

Users

 Modify Usernames and Passwords..



User Management (Admin Only)

5. Tap  to edit a User.
6. Tap  to delete the selected user.
7. Tap  to add a user.

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 language for the charger to use for all messages, tests and results sent via email.

Print Language

Select the default language for the charger to use for connected printers.

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.

BMIS



Displays current BMIS login information.

1. Tap  to change location set by P&A Code.

Shop Information



Access default shop information including store name, address, and phone number. Also access battery test defaults including decimal separator, date, and time settings.



Settings Home

Test Settings

Date/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	
City	Willowbrook
State	IL
Zipcode	60527
Phone #	1-630-323-2800

For Ford Dealers, Shop Information is set by P&A Code entered during initial set-up


Test Settings

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

Decimal Separator

Decimal Separator

Default number display using commas or periods separators.

2. Enable Power to Serial Bus. Check this box to enable Bar Code Scanner when Barcode Scanner is connected to unit.
3. Tap  to return to the Shop Information screen.

Date/Time Settings

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

Select Time Format

Select Date Format

Select Time Zone

Set Date 

Set Time 

Select Time Format

12 or 24 Hour Format



Select Date Format

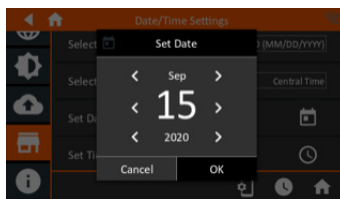
Month/Day/Year, Day/Month/Year, or Year/Day/Month

Select Time Zone

Time zone in which the analyzer will be operated.

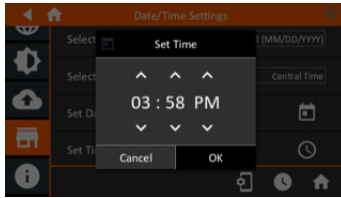
Set Date


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



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 data for the unit.



Factory Reset



Check For Updates



Legal Information

Serial Number	0987654321
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 unit to the original, as built configuration. All test history and test setting preferences will be reset.

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 unit software.

6 – Error Codes

Error Description	Error Code	Error Message
Fuse Door Open	1	Fuse door open. Remove power and close the fuse door.
High Voltage Cable Fuse Door Open	2	High voltage cable fuse door open. Remove power and close the fuse door.
High Voltage Connection Error	3 (Gen1)	Connection Error Detected. Please verify high voltage cable and service disconnect are connected properly.
High Voltage Cable Not Connected	3 (Gen II)	High voltage cable not connected properly. Check cable connections.
Low Voltage Cable Not Connected	4	Low voltage cable not connected properly, or incorrect low voltage cable connected for selected battery pack. Check cable connections.
Expansion Board Fault	5	Internal Error. Contact Midtronics customer service.
Battery High Voltage	6	Battery pack voltage exceeds the threshold maximum allowed voltage at which rescue charging is allowed. Check for BECM DTCs using a Scan Tool and diagnose as necessary.
Battery Low Voltage	7	Battery pack voltage insufficient for use of this charger. Re-try charge cycle in a few hours. Battery pack voltage may increase sufficiently to allow rescue charge, after several hours with no battery loads. If error condition persists disconnect charger, restore vehicle harness connections, check for BECM DTCs using a Scan Tool and diagnose as necessary.
Battery Not Detected	8	Battery pack voltage not detected. Restore vehicle harness connections, check for BECM DTCs using a Scan Tool and diagnose as necessary.
Battery Cell Voltage Out Of Range	9	Battery cell voltages not within acceptable range. This can be the result of cell voltage variance within the battery. Disconnect the charger, restore vehicle harness connections, check for BECM DTCs using a Scan Tool and diagnose as necessary.
Battery Temperature Too High	10	Battery pack temperature is too high. This may be the result of environmental factors or an internal battery fault. Ensure the vehicle is stored at room temperature before attempting charging. If this error returns, please disconnect the charger, restore vehicle harness connections, check for BECM DTCs using a Scan Tool and diagnose as necessary.

Error Description	Error Code	Error Message
Battery Temperature Too low	11	Charge stopped due Battery temperature is too low. This may be the result of environmental factors or an internal battery fault. Ensure the vehicle is stored at room temperature before attempting charging. If this error returns, please disconnect the charger, restore vehicle harness connections, check for BECM DTCs using a Scan Tool and diagnose as necessary. to battery charging current exceeding allowable limits. Contact Midtronics customer service for additional assistance.
Excessive Charging Current	12	Charge stopped due to battery charging current exceeding allowable limits. Contact Midtronics customer service for additional assistance.
12V Fuse Fault	13	Detected 12V fuse open. Fuse is located behind fuse door on back of charger. Unplug unit from wall outlet prior to removing fuse door. Replacement fuse: 8A 400V Type 3AB. MFG.: SCHURTER INC., Part No.: 8020.5077. Contact Midtronics Customer Service if additional assistance is needed.
High Voltage Fuse Fault	14	Detected high voltage fuse open. Fuse is located behind fuse door on back of charger. Unplug unit from wall outlet prior to removing fuse door. Replacement fuse: 8A 400V Type 3AB. MFG.: SCHURTER INC., Part No.: 8020.5077. Contact Midtronics Customer Service if additional assistance is needed.
Grounding Fault	15	Internal Error. Contact Midtronics Customer Service.
Internal Circuit Fault	16	Internal Error. Contact Midtronics Customer Service.
Internal Communication Error	17	Internal Error. Contact Midtronics Customer Service.
Battery Pack Communication Error	18	Cannot communicate with BECM. Verify correct low voltage harness used and properly connected. After verifying connections, if issue persists, disconnect charger, and check for BECM DTCs using a Scan Tool. Diagnose as necessary. If BECM communicates with Scan Tool contact Midtronics Customer Service for additional assistance.
Internal Temperature Too High	19	Charger over temperature condition detected. Verify airflow around unit is not blocked, and that the fan is rotating. Contact Midtronics Customer Service if issue persists.
Internal Memory Fault	20	Internal Error. Contact Midtronics Customer Service.
Internal EEPROM Fault	21	Internal Error. Contact Midtronics Customer Service.
Internal Calibration Fault	22	Internal Error. Contact Midtronics Customer Service.
Internal Circuit Fault	23	Internal Error. Contact Midtronics Customer Service.
Internal Circuit Fault	24	Internal Error. Contact Midtronics Customer Service.

Error Description	Error Code	Error Message
Battery Polarity Fault	25	Battery voltage polarity incorrect. Check battery cable voltage connection leads. If issue persists, contact Midtronics Customer Service.
Cable Error	26	The cables are not properly connected, or the cables are damaged. Verify all low and high voltage connections and try again. If issue persists, contact Midtronics Customer Service for additional assistance.
BECM Software Version Error	27	Unable to Charge. Disconnect the charger, restore vehicle harness connections and check BECM Software Version and use Scan Tool to update PCM and BECM as needed. Retry rescue charge after updating PCM and BECM.
HV Relays Welded	28	Pack contactor error detected. Disconnect the charger, restore vehicle harness connections, check for BECM DTCs using a Scan Tool and diagnose as necessary.
Pack Already Charged	29	The detected battery pack voltage indicates the battery pack does not require charging.
High Voltage Cable Disconnect	30	HV cable disconnect detected. Check cables. No pack failure detected. If error persists after retry, contact Midtronics Customer Service.
BECM Failure Error	34	Loss of communication with BECM caused error to occur during the Rescue Charge. Disconnect the charger, restore vehicle harness connections, check for BECM DTCs using a Scan Tool and diagnose as necessary.
Internal Communication Error	100	Internal Error. Contact Midtronics Customer Service.

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 of one (1) year 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.



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