
VAS 6161

Vehicle Battery and Electrical Diagnostic Platform

For testing 6 and 12-volt automotive batteries



INSTRUCTION MANUAL

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Chapter 1: Before You Begin

Starting the tester for the first time

When the tester is first used the operator is asked to enter a couple of items. Items such as dealer ID and Region are used to set-up specific utilities such as date/time stamps and hour indication.

Changes can be made afterwards by going in to the Utility Menu and selecting CONFIG TESTER.

Safety

Because of the possibility of personal injury, always use extreme caution when working with batteries. Follow all manufacturers' instructions and BCI (Battery Council International) safety recommendations.

General Precautions

- **DANGER—RISK OF EXPLOSIVE GASES:** 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. Never smoke or allow a spark or flame in the vicinity of a battery.
 - **WARNING—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. **Wash hands after handling.**
 - Battery acid is highly corrosive. If acid enters your eyes, immediately flush them thoroughly with running cold water for at least 15 minutes and seek medical attention. If battery acid gets on your skin or clothing, wash immediately with 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 it.

The tester is manufactured in line with the latest state of the art and according to recognised safety standards. If used incorrectly or misused, however, it can cause

- injury or death to the user or a third party,
- damage to the tester and other material assets belonging to the operator,
- inefficient operation of the tester.

All persons involved in commissioning, operating, maintaining and servicing the tester must

- be suitably qualified,
- have knowledge of and experience in dealing with testers and batteries and
- read and follow these operating instructions carefully.

Conventions Used in This Manual

To help you learn how to use your analyzer, the manual uses these symbols and typographical conventions:



The safety symbol followed by the word **WARNING** or **CAUTION** indicates instructions for avoiding hazardous conditions and personal injury.

CAUTION

The word **CAUTION** without the safety symbol indicates instructions for avoiding equipment damage.



The wrench symbol indicates procedural notes and helpful information.

UP ARROW

The text for keypad buttons and soft-key functions are in bold capital letters.

POST TYPE

The text for screen options are in regular capital letters.

Utilisation in accordance with „intended purpose“

The tester is to be used exclusively for its intended purpose. Utilisation for any other purpose, or in any other manner, shall be deemed to be „not in accordance with the intended purpose“. The manufacturer is not liable for any damage, inadequate or incorrect results arising out of such misuse.

Utilisation in accordance with the “intended purpose” also comprises

- carefully reading and obeying all operating instructions and safety and danger notices
- performing all stipulated inspection and servicing work.
- following all instructions from the battery and vehicle manufacturers.

Disposal

Do not dispose of this device with normal domestic waste!



To comply with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment and its implementation as national law, electrical equipment that has reached the end of its life must be collected separately and returned to an approved recycling facility. Any device that you no longer require must be returned to our agent, or find out about the approved collection and recycling facilities in your area. Ignoring this European Directive may have potentially adverse effects on the environment and your health!

Chapter 2: Description

Connections and Data Ports



- ① Integrated thermal printer
- ② Release lever for door to paper compartment
- ③ Paper slot
- ④ LCD screen with Main Menu
- ⑤ Control Panel: keypad and power button
- ⑥ 6-pin connector for the battery test cable
- ⑦ Spring-loaded data card slot for test data storage and software upgrades.
- ⑧ Infrared temperature sensor with a range of -28 °C to +93 °C (-20 °F to +200 °F).
- ⑨ Data transmitter: sends test results to a PC using an optional hardware and software kit



Connecting the Battery Test Cable

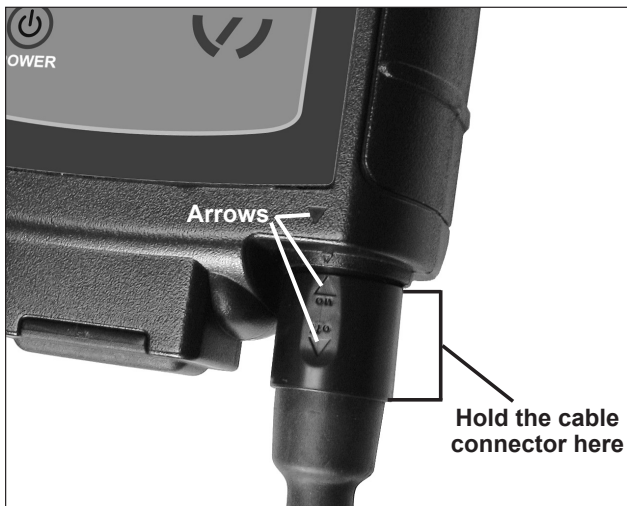


CAUTION: To prevent damage to the analyzer's circuitry, do not connect the analyzer to a voltage source greater than 30 Vdc.

To connect the battery test cable to the analyzer align the arrow on the cable connector with the arrows on the analyzer's housing. Hold the part of the cable connector as shown and firmly insert the connector into analyzer's six-pin receptacle.

Do not twist.

To avoid damaging the battery test cable, always hold the ridged part of the cable connector (as shown in the photo) when inserting and removing the cable.



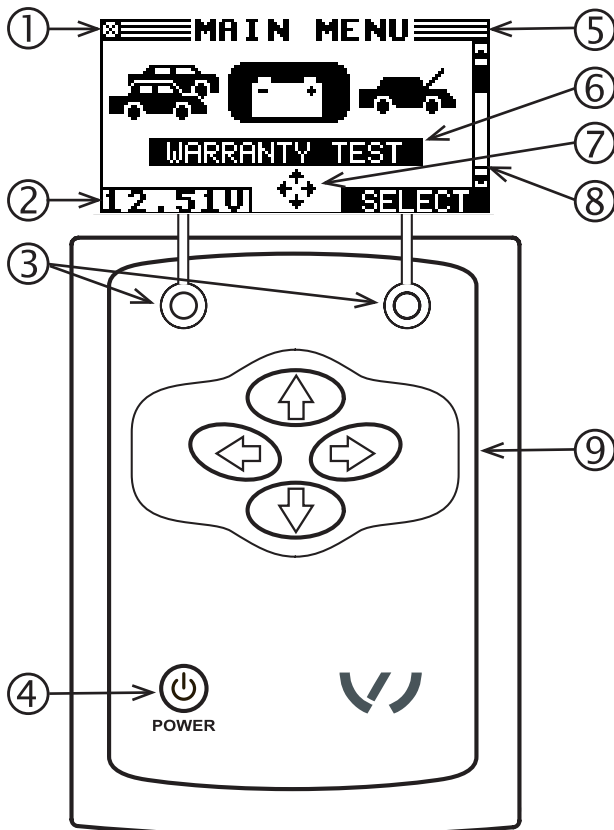
Removing and Inserting the Data Card

The analyzer ships with a plastic insert in the data card slot to protect it from dust and debris. To remove the plastic insert or a data card, push briefly on its edge to release it and pull it from the slot.

When inserting a card, push it into the slot until it locks. The card is correctly inserted when it is not protruding from the slot. To protect the card slot and enable the analyzer to read and write to the card, leave the card in the slot.

Display and Keypad

The keypad and display work together to help you quickly find and use the right tools at the right time. The display also keeps you on track with on-screen navigation aids, directions and messages.



1 Internal Batteries Status Indicator

This indicator appears in the screen's top left corner, lets you know the status and charge level of the analyzer's six 1.5-volt batteries. The **X** in the top left corner of the screen shows that the analyzer is powered by the battery you're testing to conserve the analyzer's internal batteries.

2 Voltmeter

When you first connect the analyzer to a battery it functions as a voltmeter. The voltage reading appears above the left soft key until you move to other menus or functions.

3 Soft Keys

Press the two **Soft Keys** linked to the bottom of the screen to perform the functions displayed above them. The functions change depending on the menu or test process. So it may be helpful to think of the words appearing above them as part of the keys. Some of the more common soft-key functions are **SELECT**, **BACK**, and **END**.

4 POWER Key

Press the **POWER** button to turn the analyzer on and off. The analyzer also turns on automatically when you connect its test leads to a battery.

5 Title Bar

The title bar shows you the name of the current menu, test tool, utility, or function.

6 Selection Area

The selection area below the Title Bar contains selectable items or dialog boxes that display information or require a response.

7 Menu Screen Arrows

When displayed in menu screens, the menu screen arrows show you which **ARROW** key on the keypad to press to display other icons or screens. The Up and Down Menu Screen Arrows, for example, indicate when to press the **UP** (**▲**) and **DOWN** (**▼**) **ARROW** keys to display the screens above and below the current screen.

The Left and Right Menu Screen Arrows tell you when to use the **LEFT** (**◀**) or **RIGHT** (**▶**) **ARROW** keys to select an icon.

When displayed under a list of options, the menu screen arrows show you which keypad arrow to press to highlight a character or item in a list.

8 Scroll Bar

Another navigational aid is the scroll bar on the right side of the screen. The position of its scroll box shows you whether the screen is the top (or only screen), middle, or last in a series.

9 Arrow keys

Press the **UP ARROW** key to move up to the next selectable item or row. When entering text, use the **UP ARROW** key to move to the previous character.

Data Entry Methods

To perform a particular test or function, the tester will ask for different types of information. This means that the methods you use to enter information will change depending on the type of information requested. The four types of entry methods are described below.

Typically, the soft key below the right half of the screen confirms your choice, although the word above it may vary. In a similar fashion, the soft key below the left half of the screen cancels your choice or returns you to the previous screen, although the word above it may also vary.


Menu icons

A menu icon is a graphical representation of a function you can select. To select an icon, use the **LEFT** or **RIGHT ARROW** key to highlight it. Highlighting changes the icon to a white picture on a black background. To confirm your selection, press the appropriate soft key.

Option Buttons

Some lists have option buttons before each item. To select an item, use the **UP/DOWN ARROW** keys to move the dot into the button next to the item you want. You can also use the alphanumeric keypad to enter the number preceding the option button. To confirm your selection, press the appropriate soft key.

Scrolling Lists

Scrolling lists contain items that extend above and below the screen or the selection box that contains them. To indicate that there are more items, the symbols  appear to the right of the first visible or highlighted item on the list.

To select from this type of list, use the **UP/DOWN ARROW** keys to scroll to the item, or use the keypad to enter your choice, and press the appropriate soft key.

Alphanumeric Entries







Even though the tester does not use an alphanumeric keypad it is possible to enter alphanumeric values. When applicable the alphanumeric values appear on the display. Use the **UP/DOWN** or **LEFT/RIGHT ARROW** keys to scroll and confirm this with the > key. To return one or more steps use the < key.

Menu Structure




This section will help you get to your destination while letting you know what test leads you may need when you arrive. The test leads are represented by symbols for their connectors.

Main Menu

The Main Menu is the starting point for all tools and utilities, which are depicted as icons. Some icons lead directly to the function they represent, while others are menu icons that lead to two or more functions. Menu icons are marked here with an asterisk (*) and are mapped on the following pages.


Icon	Description
	Stock maintenance: For testing on batteries of stationary and stock vehicles, prior to delivery to the customer.
	Orig. VW battery Test: For testing of genuine Volkswagen batteries in all service works as well as within the scope of warranty processing.
	Non-VW battery Test: For testing of external batteries during service works.
 *	Enables you to view your stored test results and print them to the internal printer.
 *	Includes a test counter, data transfer utility and displays the tester software versions.
 *	Utilities, many of which customize your user interface in the tester.

Info Menu

Icon	Description
	Displays the total number of tests performed since the tester was first used.
	An optional IR software and hardware package enables you to transfer test data to a PC.
	Displays the software version, total tests from first use, and the serial number.










Print/View Menu

The tester stores the last test results in its memory until you perform another test. To review or print results before you retest, select a test type in the Print/View Menu.

Icon	Description
	Displays the last Test results. The results can be printed to the integrated printer.

Utility Menu

The Utilities Menu lets you customize your analyzer to suit your needs.

Icon	Description
	Configure the tester by selecting several specific functions: TIME, MODE, DATE, DATE FORMAT, TEMPERATURE UNITS and WRITE FAIL.
	Settings to adjust the screen contrast and backlight time.
	Sets the language of the display and printouts.
	Enables you to add a custom header to printed test results.
	If you have created a coupon in the Edit Coupon utility, use Coupon to turn it on and off.
	Enables you to create a coupon at the bottom of printed test results.
	Formats the SD card to receive data. Also erases all data on the card.
	Enable you to Update the software in the tester with a specific SD Card
	Battery List allows you to add and delete batteries, and import and export battery lists.

Chapter 3: Test Preparation

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.
- When electrolyte level is too low, replace the battery.

Testing Out-of-Vehicle

The preferred battery test location is in the vehicle. However, if you plan to test 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.

Testing In-Vehicle

The preferred test position is at the battery posts.

At the start of the test, make sure **all vehicle accessory loads are off, the key is not in the ignition, and the doors are closed**. If systems in the vehicle are still active it might lead to a **SYSTEM NOISE** message, the tester will automatically continue to test the battery until the noise is gone.

Connecting the Battery Test Cable

CAUTION: Do not connect the tester to a voltage source greater than 30 Vdc.

Connect the clamps to the battery: the red clamp to the positive (+) terminal and the black clamp to the negative (-) terminal.

If you connect the clamps in the wrong polarity (positive to negative or negative to positive), the tester displays **CLAMPS REVERSED!** Reconnect the clamps correctly.

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 tester will display the message **CHECK CONNECTION**. If the message reappears after you have correctly reconnected the clamps, clean the terminals and reconnect.

Setting User Preferences

Before starting your test you may want to customize the use of your analyzer by setting preferences in the Utility Menu. The menu has settings for the display's date and time, the contrast and backlight time, a utility to customize printouts, among others.



To conserve the analyzer's internal batteries, the tester will turn off after 30 seconds of inactivity.

Chapter 4: Battery Testing

The tester will guide you through the steps of selecting your battery test parameters and interpreting the results. Before you start the test, review the instructions in *Chapter 3: Test Preparation*.

Stock Maintenance Mode

This test mode is particularly designed for stationary and stock vehicles that are stored by the importer or dealer prior to delivery to the customer.

1. POWERING UP SCANNER....
2. Scan the VIN bar code

When it is impossible to scan the VIN code press the **NEXT** soft key to enter it manually.

3. Select the TEST LOCATION

- TOP POST
- JUMP START POST

Press the **NEXT** soft key to continue.

4. If indicated, select the VEHICLE (JUMP START POST)

- TOUAREG
- TOUAREG V10 TDI
- OTHER

By selecting a vehicle the tester will use a pre-defined compensation factor to overcome the extra resistance caused by the JUMP START POST cable. Selecting the wrong vehicle can lead to incorrect measurements.

Press the **NEXT** soft key to continue.

5. POWERING UP SCANNER....
6. Scan the BATTERY Data Matrix code

When it is impossible to scan the VIN code press the **NEXT** soft key to select it from a predefined list.

7. Select the BATTERY RATING / PRODUCER CODE.

One or more options become available depending on which battery type and location you are testing.

Press the **NEXT** soft key to continue.

8. Select the TEMPERATURE.

Aim the tester 2 inches (5 cm) from the sides or top of the battery case. As soon as the temperature reading is stable the operator can press **NEXT**

For the next few seconds the tester will display the word TESTING and a stopwatch while it evaluates the battery.

Orig.VW-Batt.Test Mode

This test mode is particularly designed for the testing of genuine Volkswagen batteries during all service works, as well as within the scope of warranty processing.

At the end of the test, a test code can be created. This code is currently not used in the German market for the assertion of the warranty claim and is thus not recognised.

1. Select the BATTERY TYPE.

- VW AG ORIGINAL
- VW AG ECONOMY

Press the **NEXT** soft key to continue.
The **BACK** soft key returns you to the Main Menu.

2. Select the POST TYPE. (IN VEHICLE)

- TOP POST
- JUMP START POST

Press the **NEXT** soft key to continue.

3. Select the VEHICLE (JUMP START POST)

- TOUAREG
- TOUAREG V10 TDI
- OTHER

By selecting a vehicle the tester will use a pre-defined compensation factor to overcome the extra resistance caused by the JUMP START POST cable. Selecting the wrong vehicle can lead to incorrect measurements.

Press the **NEXT** soft key to continue.

4. POWERING UP SCANNER....

5. Scan the BATTERY Data Matrix code

When it is impossible to scan the BATTERY Data Matrix code press the **NEXT** soft key to enter it manually.

6. Select the BATTERY RATING / PRODUCER CODE.

One or more options become available depending on which battery type and location you are testing.

Press the **NEXT** soft key to continue.

7. Select the BATTERY TYPE (OTHER)

- REGULAR
- AGM
- 2 * 6V SPIRAL
- EFB/EFB+

Press the **NEXT** soft key to continue.

8. Press the **UP/DOWN ARROW** keys to select the battery rating or in the case of JIS, the part number. Press **NEXT**.

9. Select the TEMPERATURE.

Aim the tester 2 inches (5 cm) from the battery post or jumpstart post. As soon as the temperature reading is stable the operator can press **NEXT**

Non-VW Batt.Test Mode

This test mode is particularly designed for the testing of third-party batteries. Correct checking of genuine Volkswagen batteries is not possible in this mode.

1. Select the TEST LOCATION
 - TOP POST
 - JUMP START POST

Press the **NEXT** soft key to continue.
2. If Select the VEHICLE (JUMP START POST)
 - TOUAREG
 - TOUAREG V10 TDI
 - OTHER

By selecting a vehicle the tester will use a predefined compensation factor to overcome the extra resistance caused by the JUMP START POST cable. Selecting the wrong vehicle can lead to incorrect measurements.

Press the **NEXT** soft key to continue.

3. Select the BATTERY TYPE
 - REGULAR
 - AGM
 - 2 * 6V SPIRAL
 - EFB/EFB+

Press the **NEXT** soft key to continue.
4. Select the RATING UNITS
 - CCA
 - JIS
 - DIN
 - SAE
 - IEC
 - EN

Press the **NEXT** soft key to continue.

5. Press the **UP/DOWN ARROW** keys to select the battery rating or in the case of JIS, the part number. Press **NEXT**.

6. Select the TEMPERATURE.

Aim the tester 2 inches (5 cm) from the battery post or jumpstart post. As soon as the temperature reading is stable the operator can press **NEXT**

For the next few seconds the tester will display the word TESTING and a stopwatch while it evaluates the battery.

Additional tester messages

Surface Charge

The battery can hold a surface charge if the engine has been running or after the battery has been charged. The tester may prompt you to remove the surface charge before it displays a test result.

1. Follow the instructions indicating when to turn the headlights on and off (IN-VEHICLE)
2. The tester will resume testing after it detects that the surface charge is removed.

System Noise

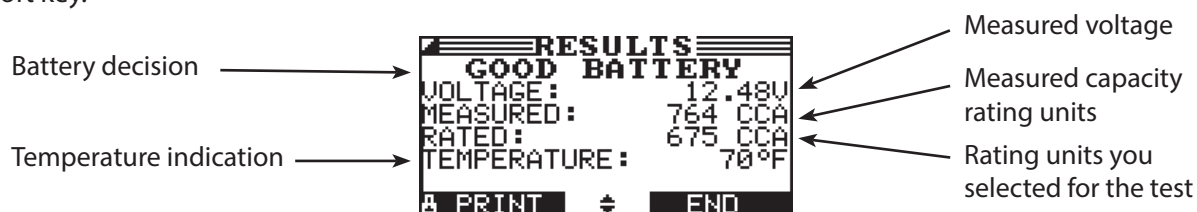
To perform a correct measurement the tester requires the vehicle to be in rest. After the car has been driven some vehicle specific systems might still be active in the background. The tester will detect this and displays the message **SYSTEM NOISE**. When this message appears switch off all consumers (radio, airconditioning) and remove the key from the ignition. As soon as there is no more activity in the vehicle the tester will continue testing and display the test result.

Deep Scan Test

In some cases the tester may need to further analyze the battery to determine whether the battery should be replaced or it has a significant chance to be recovered. It will then conduct a Deep Scan Test of the battery for a few seconds. This test will typically be performed on batteries that are in a low state of charge.

Battery Test Results

After the test the tester will display the battery decisions with the complete results in a series of screens. Use the **UP/DOWN ARROW** keys to scroll through each result. To print the results press the **PRINT** soft key. To return to the Main Menu, press the **END** soft key.



*Battery Decisions
and Recommendations*

Stock Maintenance

Decision	Recommended Action
GOOD BATTERY	Return the battery to service
CHARGE INSTANTLY	Immediately fully charge the battery and retest.
MARK AS DEFECT	Mark this battery as DEFECTIVE and replace the battery before HANDOVER to the end user.

Orig. VW-Batt. Test

Decision	Recommended Action
GOOD BATTERY	Return the battery to service
GOOD-RECHARGE	Fully charge the battery and put the battery back into operation.
PERFORM CHARGE ACCEPTANCE TEST	Perform the Charge Acceptance test as described in the repair manual
BATTERY DEFECT	Replace the battery. For the assertion of any warranty claims, please observe the relevant instructions from your importer.
BAD CELL	Replace the battery. For the assertion of any warranty claims, please observe the relevant instructions from your importer.
REMOTE POST	The decision is based on a measurement on the JUMP START POST. Advise is to retest directly on battery post

Non-VW Batt. Test

Decision	Recommended Action
GOOD BATTERY	Return the battery to service
GOOD-RECHARGE	No warranty
CHARGE&RETEST	Perform the Charge Acceptance test as described in the repair manual
Battery dead	Replace the battery. The BATTERY DEAD message may also be displayed if there is poor contact between battery cables and battery. Before replacing the battery, disconnect battery cables and test the battery again with the option EXTERNAL VEHICLE
REMOTE POST	The decision is based on a measurement on the JUMP START POST. Advise is to retest directly on battery post

Chapter 5: Utilities

The Utility Menu allows you to easily set up your analyzer:

Config Tester

TIME :	15:23
MODE :	24 HOUR
DATE :	01/01/2017
FORMAT :	DD/MM/YYYY
TEMP. UNITS	C
WRITE FAIL	ASK
BARCODE READER	YES
REGION	OTHER
DEALER-ID	12345678

Time

- Use the **LEFT/RIGHT ARROWS** to highlight the hour, minutes. To rapidly scroll, hold down an **ARROW** key.

9 : 19 PM

- Press the **SAVE** soft key to save your setting or **BACK** to return to the ADJUST screen.

Mode

Use the **LEFT/RIGHT ARROWS** to select the option of your choice.

- Select the 24-hour or AM/PM mode
- Press the **OK** soft key to save your setting

Date

Date cannot be changed.

Format

Use the **UP/DOWN ARROWS** to select the desired option.

- MM/DD/YYYY (month/day/year) or DD/MM/YYYY (day/month/year)
- Press the **OK** soft key to save your setting.

Temp. units

Use the **LEFT/RIGHT ARROWS** to select either Celsius or Fahrenheit as temperature indication.

Write fail

After each measurement the test results are stored on the data card. In case the data cannot be stored on to the card you can select the way this is notified to the operator.

ASK (operator is asked if it is ok to continue even when results are not stored)

FORCE (measurements can only continue when data card is entered)

IGNORE (measurement is not stored and operator not notified)

Barcode reader

Switch barcode reader use ON or OFF. When set to off the tester will not ask for the reader.

Region

Indicate where the tester is being used. USA, CANADA or OTHER

Dealer-Id

Depending where the tester is used there is a predefined format for the dealer-id.

Display

The LCD OPTIONS utility enables you to adjust the contrast of the text on the display and the backlight time.

Contrast Level

The contrast level is 0 (lightest) to 10 (darkest). To change it:

1. Press the **UP** or **DOWN ARROW** to highlight the option.

CONTRAST LEVEL	10
BACKLIGHT TIME	60

2. Press the **LEFT/RIGHT ARROW** key to display the option's numerical scroll box.



3. Press the **UP/DOWN ARROW** keys to select your preference.
4. Press the **SAVE** soft key to save your setting or the **BACK** soft key to return to the CONTRAST LEVEL screen without saving the changes.

Backlight Time

Backlight time is from 0 to 60 seconds. To change it:

1. Press the **UP** or **DOWN ARROW** to highlight the option.

CONTRAST LEVEL	10
BACKLIGHT TIME	60

2. Press the **LEFT/RIGHT ARROW** key to display the option's numerical scroll box.



3. Press the **UP/DOWN ARROW** keys to select your preference.
4. Press the **SAVE** soft key to save your setting or the **BACK** soft key to return to the BACKLIGHT screen without saving the changes.

Language

The LANGUAGE utility enables you to select a language for the display and printouts. To set your preference:

1. Use the **UP/DOWN ARROWS** to move the dot to the option button of your choice. There is a selection of 24 languages.
2. Press the **NEXT** soft key to save your setting.

Shop

The SHOP INFO utility enables you to create a header for your printed test results showing your business location information. Its two information screens contain eight lines of text with up to 16 characters on each line.

Screen 1

1–YOUR SHOP NAME —
2–1000 ANY STREET
3–YOUR TOWN, STATE
4–YOUR POSTAL CODE

Screen 2

5–YOUR COUNTRY —
6–YOUR PHONE NUMBER
7–WWW.WEBSITE.COM
8–YOUR SHOP ID NUMBER

To create or overwrite a header:

1. Press the **UP** or **DOWN ARROW** to highlight the line you want to change.
2. Press **SELECT** to activate the line for editing, move the cursor backward to erase a character, press the **LEFT ARROW** key; to move the cursor forward, press the **RIGHT ARROW** key.
3. Insert a character by pressing the key associated with the character as many times as needed.
4. You can center text by selecting blank spaces before and after lines of text or insert spaces between words.
5. Press the **SAVE** soft key to save your setting or the **BACK** soft key to return to the SHOP INFO screen without saving the changes.

Coupon

The COUPON SELECT utility enables and disables the printing of the custom coupon you've created in the EDIT COUPON utility.

1. Use the **UP/DOWN ARROWS** to move the dot to the option button of your choice.
2. Press the **NEXT** soft key to save your setting or the **BACK** soft key to return to the COUPON SELECT screen without saving the changes.

Edit Coupon

The EDIT COUPON utility enables you to create a promotional coupon for your customers that prints at the bottom of every test result. Its two information screens contain eight lines of text with up to 16 characters each. The editing process is the same as when you create a header for your test results printouts. See the SHOP utility for more information.

Format Disk

Select this utility to format a data card to receive data or erase all data on the card. The Tester will warn you before formatting the disk and ask you if you want to continue. When a new blank data card is used you always have to use this function before the tester can write to the card.

Update

As software updates become available you'll be able to use this utility to update the Tester software using files on an SD card. The use of a special formatted disk is required for this action.

FIRMWARE (use this option when new software becomes available from Midtronics)

SAVE CONFIG (the tester will store the workshop address to the data card, file name is CONFIG.CSV)

LOAD CONFIG (after new software is uploaded you can reload the workshop details to the tester)

1. Connect the tester to a 12V battery to ensure the tester does not switch off during the proces
2. Insert the disc in the tester
3. Select one of the options and follow the instructions on the screen
4. When finished the tester will prompt you to remove the card and reboot the tester

Battery List

In this function you can add, delete battery information that is used for the various battery tests.

BATTERY LIST

From this menu you can add or delete batteries that you can select in the STOCK MAINTENANCE MODE. When you add a battery you must have the BATTERY PRODUCER, BATTERY TYPE, BATTERY RATING, BATTERY CCA, BATTERY CAPACITY, GOOD LIMIT, CHARGE&RETEST LIMIT, REPLACE LIMIT

VW PARTNUMBER

From this menu you can add or delete VW partnumbers that correspond to the VW batteries.

IMPORT LIST

When VW delivers new battery information it can be uploaded with this function. It will have the same effect as the above mentioned steps but than in a more simple way.

Chapter 6: Info Menu

The Info Menu has 3 utilities to help you manage your test data and track the usage and history of your analyzer.

Totals

The TOTALS report displays the total number of battery tests by decision performed since the Tester was first used. The other option is to clear all the counters from the tester.

Transfer

The TRANSFER utility lets you transfer test data to a PC using an optional IR receiver/software package.

Version info

Version info displays the software version, the database version, the total tests performed and the serial number. The utility keeps a permanent count of the number of battery tests performed since the analyzer was first used.

Chapter 7: Print/View

The Print/View Menu enables you to view and print the results of the tests performed before you perform another test and overwrite the results in memory.

View Test

VIEW TEST gives you the option of viewing and printing all available test results. To return to the Main Menu, press the **END** key. To print the results press the **PRINT** key.

Chapter 8: Troubleshooting

If you have problems with the display or printer try these troubleshooting suggestions:

Problems with the display

The display does not turn on:

- Check the connection to the battery.
- The analyzer's internal batteries may need to be replaced.

The display flickers or is dim:

- The contrast may need to be adjusted in the Utility menu.
- The analyzer's internal batteries may need to be replaced.

Data Will Not Print

The internal printer will not print

- The analyzer must be connected to the vehicle battery to print to the internal printer.
- The vehicle battery may be too low to power the printer. (Battery with at least 11.5 volts)
- Verify that the paper is properly installed
- Verify that the paper sensor is clean and undamaged

Chapter 9: Tester Internal Batteries

The tester uses 6 AA, 1.5-volt batteries (alkaline recommended) to allow testing of batteries down to 1 volt and supply power while the menu is active. The analyzer can test batteries down to 5.5 volts when the internal batteries are not functioning.

Battery Power Indicator

The square in the upper left corner of the display indicates the charge level of the battery pack. The square is black when the battery pack is fully charged. It gradually changes to white as the charge level declines. The Tester will display a warning message when the batteries need replacing.

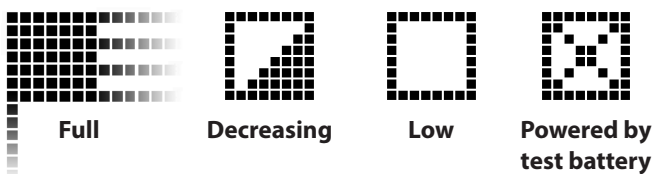


Figure 7: Power Level Indicator for AA Batteries

Replacing the Tester Batteries

1. Turn the tester face down.
2. Use a Philips screwdriver to remove the screw securing the door to the battery compartment.
3. Lift the door at the tab and place it aside.
4. Remove the discharged batteries.
5. Insert new batteries as shown, make sure the positive and negative terminals are positioned correctly.
6. Reposition the door on the battery compartment.
7. Reinsert and tighten the screw.



PATENTS

The EXP series 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

This analyzer is warranted to be free of defects in materials and workmanship for a period of two years from date of purchase. Midtronics will, at our option, repair or replace the unit with a remanufactured unit. This limited warranty applies only to the analyzer, 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.



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