

FASTER & EASIER FOR 1996 AND NEWER OBD II VEHICLES







OWNER'S MANUAL

DIGITAL AUTO SCANNER

P0143 Pd 03/04 Generic 02 Sensor Circuit Low Volts (Bank 1 Sensor 3)

> OBDII / EOBO + CAN T55

> > T55

DIGITAL OBD2/CAN CAR SCANNER

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1. Introduction

1.1 What Is OBD?

Definition: Onboard Diagnostics II - A second-generation emissions diagnostic system required on all 1996 and newer vehicles (though some 1994 and 1995 model year vehicles were equipped with early versions of the system).

This OBD2/EOBD/CAN Code scanner is designed to work on all OBD2 compliant vehicles (include all 1996 and newer cars,light trucks and SUVs sold in the World). OBD2 was adopted as part of a government mandateto lower vehicle emissions. This sophisticated program in the vehicle's main computer system is designed to detect failures in a range of systems, and can be accessed through vehicle's 16-pin Data Link Connector (DLC) which is usually located under the dashboard. For OBD systems, if a problem is found, the vehicle's computer turns on the "**CHECK ENGINE**" light to warn the driver, and sets a Diagnostic Trouble Code (DTC) to identify where the problem occurred. A special diagnostic tool, such as this OBD2 Code Reader, is required to retrieve these codes through vehicle's Data Link Connector (DLC), which consumers and professionals use as a starting point for repairs.



1.2 Safety Precautions and Warnings

To prevent personal injury or damage to vehicles and/or the scan tool, read this instruction manual first and observe the following safety precautions at a minimum whenever working on a vehicle:

• Always perform automotive testing in a safe environment.

• Wear safety eye protection that meets ANSI standards.

• Keep clothing, hair, hands, tools, test equipment, etc. away from all moving or hot engine parts.

• Operate the vehicle in a well ventilated work area: Exhaust gases are poisonous.

• Put blocks in front of the drive wheels and never leave the vehicle unattended while running tests.

• Use extreme caution when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.

• Put the transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and make sure the parking brake is engaged.

• Keep a fire extinguisher suitable for gasoline/chemical/electrical fires nearby.

• Don't connect or disconnect any test equipment while the ignition is on or the engine is running.

• Keep the scan tool dry, clean, free from oil/water or grease. Use a mild detergent on a clean cloth to clean the outside of the scan tool, when necessary.

1.3 Vehicle Coverage

The T55e VW/AUDI Code Scanner is specially designed to work with most Volkswagen and Audis sold worldwide of 1990 or newer models. If a VW/ AUDI has a 16 pin OBDII style Data Link Connector(DTC), the scanner tool will certainly work. If it has an old-style 2x2 Data Link Connector(DTC), then it depends on whether there are 4 or 3 wires connecting to the pins. If there are 4 wires, each connecting a pin, then it will work. If there are only 3 wires leaving one pin disconnected then it will not work. For VW/AUDI with old-style 2x2 Data Link Connector (DTC), you need to have a 2x2 cabling adapter which is not included in this product package.

1.4 Data Link Connector (DLC) Location

The 16-pin DLC is usually located under the instrument panel (dash), within 12 inches(300 mm) of center of the panel, on the driver's side of most vehicles. It should be easily accessible and visible from a kneeling position outside the vehicle with the door open. For some Asian or European vehicles, the DLC is located behind the ashtray and the ashtray must be removed to access the connector.



1.5 How To Use . . .

1. Turn the ignition off.

2. Connect the OBD2 scanner tool cable and the vehicle's 16-pin Data Link Connector (DLC).

3. Turn the ignition on. But do not start the engine.

4. Turn the OBD2 scanner tool power on.

5. Press the **Y** button. A sequence of messages showing the OBD2 protocols will be observed on the display until the vehicle protocol is detected.



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1. LCD DISPLAY -- Indicates test results. Backlit, 128 X 64 pixel display with contrast adjustment.

2. "Y" BUTTON -- Confirms a selection (or action) from a menu. When a DTCs definition covers more than one screen.it is used to move down to the next screen for additional data.

3. "N" BUTTON -- Cancels a selection (or action) from a menu or returns to the menu. It is also used to set up the unit when being pressed and held for at least 3 seconds.

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4. ▲ **UP SCROLL BUTTON** -- Moves up through menu and submenu items in menu mode. When more than one DTC is retrieved, moves up through the current screen to the previous screens for additional DTCs and definitions.

5. ▼ DOWN SCROLL BUTTON -- Moves down through menu and submenu items in menu mode. When more than one DTC is retrieved, moves down through the current screen to the previous screens for additional DTCs and definitions.

6. POWER BUTTON -- Turns POWER ON or OFF.

7. OBDII CONNECTOR---Connects the scan tool to the vehicle's Data Link Connector (DLC).

2.2 Specifications

- 1). Display: Backlit,128 x 64 pixel display with contrast adjustment.
- 2). Operating Temperature: 0 to 50 C(32 to 1 22 F)
- 3). Storage Temperature: -20 to 70 C(-4 to 1 58 F)
- 4). External Power: 8.0 to 15.0 Volts provided via vehicle battery.
- 5). Dimensions:

Length	Width	Height
209 mm (8.22")	107 mm (3.74")	37 mm (1.38")
$N_{\rm L} = 0.72 {\rm km} \left(1.611 {\rm k} \right)$	$M_{\rm L} = 0.00 {\rm km}(0.101 {\rm h})$	

6). NW: 0.73kg (1.611b), GW: 0.98kg(2.161b).

2.3 Accessories Included

1). User's Manual --- Instructions on tool operations.

2). CD -- Includes user's manual, DTC lookup software, and etc.

3). OBD2 cable --- Provides power to tool and communicates between tool and vehicle.

4). Serial Cable --- Used to upgrade the scan tool.

5). Carry Case --- A nylon case to store the scan tool when not in use.

2.4 Navigation Characters

Characters used to help navigate the scan tool are.

1). "-- Indicates current selection.

2). "▼" -- A flashing Down Arrow indicates additional information is available on the next screen.

3). "▲" -- A flashing UP Arrow indicates additional information is available on the previous screen.

4). "Pd" -- Identifying a Pending DTC when viewing DTCs.

2.5 Keyboard

No solvents such as alcohol are allowed to clean the keypad or display. Use a mild nonabrasive detergent and a soft cotton cloth.

Do not soak the keypad as the keypad is not waterproof.

2.6 Power

The external power of the scan tool is provided via the vehicle Data Link Connector(DLC). just follow the steps below to turn on the scan tool.

1). Connect the OBD II Cable to scan tool.

2). Find DLC on vehicle.

A plastic DLC cover may be found for some vehicles and you need to remove it before plugging the OBD2 cable.

3). Plug OBD II Cable to the vehicle's DLC.

2.7 Product Setup

The scan tool allows you to make the following adjustments and settings.

- 1). Contrast adjustmen: Adjusts the contrast of the LCD display.
- 2). Display Test: Tests the LCD display.
- 3). Keyboard test:Tests the keyboard.

To enter the setup menu mode

1). From the keyboard: Press and hold the N button for at least 3 seconds until the System Setup. menu shows up. Follow the instructions to make adjustments and settings as described in the following setup options.



2). From the Main Menu: Use the UP/DOWN scroll buttons to select System Setup and then press the Y button. Follow the instructions to make adjustments and settings as described in the following setup options.



Contrast Adjustment

1. From the system setup menu: Use the **UP/DOWN** scroll buttons to select **Contrast** and press the **Y** button.



2). From the Contrast menu: Use the UP/DOWN scroll buttons to decrease or increase the contrast.

Contrast	
Contrast (47%)	
Use ▼ or ▲ to change	



- 3). Press the Y button to save your selection and return to previous menu.
- 4). Press the N button to return to previous menu.

Display Test

The Display Test is used to check the LCD display.

1). From the **System Setup** menu, use the **UP/DOWN** scroll buttons to select **Display Test** and press the **Y** button.



2). Select **Display Test** from the Display test menu and press the **Y** Button.

3). Press the ${\bf Y}$ button again to start test. Look for missing spots in the solid black characters.

Display Test

Press [Y] to test Look for missing spots in characters. Press [N] to return

4). When completed, press the N button to return.

Keyboard Test

The Keyboard Test is used to verify that the keys are functionin Properly.

1). Use the **UP/DOWN** scroll buttons to select **Keyboard Test** from the **System setup** menu,and then press the **Y** button.

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	System Setup	1
	 2) Display Test 3) Keyboard Test 	

2). Press any key to start test. When you press a key, the key name should be observed on the display. If the name does not show up, then the key is not functioning properly.

Keyboard Test

Press any key to Start test to display name. Key:Double [N] to return

3). Double press ${f N}$ to return to the previous menu.

3.Operating Instructions

3.1 VW/AUDI Diagnostics

Reading Codes

CAUTION: Don't connect or disconnect any test equipment with ignition on or engine running.

- I). Turn the ignition off.
- 2). Locate the vehicle's 16-pins Data Link Connector(DLC).
- 3). Plug Into the scan tool cable connector to the vehicle's DLC.
- 4). Turn the ignition on. But do not start the engine.

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5). Press the Y button. The Main Menu will be observed on the Display.

6). Use the **UP/DOWN** scroll buttons to select **VW/AUDI** from the menu and press the **Y** button.



7). Use the **UP/DOWN** scroll buttons to select the system from the **Select System** menu and press the **Y** button.



If the scan tool fails to communicate with the selected Vehicle's ECU(Electronic Control Unit). a "LINK ERROR" message shows up on the display.

 $\sqrt{}$ Verify that the ignition is ON:

 $\sqrt{}$ Check if the scan tool's 0BDII connector is securely connected to the vehicle's DLC;

 $\sqrt{}$ Verify that the module supported;

 $\sqrt{}$ Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and repeat the procedure from step 5.

if the "LINK ERROR" message does not go away, then there might be problems for the scan tool to communicate with the module being tested. The most common cause is that the scanned module is not supported on the vehicle.

The numbers (01.02.15.03.08.etc) in front of the system names refer to the physical addresses assigned to the systems, not the sequence of the systems to be arranged.

 Select Read Codes from the Select Function menu and press the Y button.



• If there are no Diagnostic Trouble Codes present, the display will indicate NO CODES ARE STORED IN THE MODULE!

• If there are any Diagnostic Trouble Codes present, the DTC number and its definition will show On the LCD display.

• The subcode, the communication protocol, the sequence of The DTC currently being observed and the total number of codes detected will be observed on the upper right hand Corner of the display.

• When a DTC's definition covers more than one display screen, use the **Y** button, as necessary, to view any additional information.

• If the DTC definition is not available, an advisory message prompting you to refer to the vehicle service manual will be observed on the display.

• If more than one DTC is found, use the **UP/DOWN** scroll buttons, as necessary, until all the codes have been shown up.



Erasing Codes

CAUTION:Erasing the Diagnostic Trouble Codes may allow the scan tool to delete not only the codes from the vehicle's on board computer,but also "**Freeze Frame**" data and manufacturer specific enhanced data. Further,the I/M Readiness Monitor Status for all vehicle monitors is reset to Fail status.Do not erase the codes before the system has been checked completely by a technician.

1). If you decide to erase the DTCs,use the **UP/DOWN** scroll buttons to select **Erase Codes** from the **Select Function** menu and press the **Y** button.



If the scan tool is not connected or no communication is established with vehicle yet, then refer to Reading codes from 1 to 7 at Paragraph 3.1.

2). A warning message comes up asking for your confirmation.

Erase Codes

Erase trouble codes! Are you sure?

YES <NO >

3). If you do not want to proceed with erasing the codes,press the **N** button to exit. A message of **"command cancelled"** will show up.

4). If you do wish to proceed to erase the codes, then press the Y Button.

5). If the codes are cleared successfully, an "**ERASE DONE!"** confirmation message will show on the display. Press any button to return to the previous menu.

6). If the codes are not cleared then an **"ERASE FAILURE!"** message will appear. Press the **N** button to return to previous menu.

Viewing ECU Information

1). To view ECU Information.Use the **UP/DOWN** scroll buttons to select **ECU Information** from the **Select Function** menu and press the **Y** button.



If the scan tool is not connected or no communication is established with the vehicle yet, then refer to Reading Codes from 1 to 7 at Paragraph 3.I.



If there is no ECU Information available, a warning message shows on the display.

2). Press the \mathbf{N} button to return to previous menu.

Readiness Test

Important: The Readiness Test function is used to check the Operations of the Emission System on OBD2 / EOBD compliant vehicles. It is an excellent function to use prior go having a vehicle inspected for compliance to an emissions program.

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"**Pass**" --- Indicates that a particular monitor being checked has not completed its diagnostic testing.

"Fail" --- Indicates that a particular monitor being checked has not completed its diagnostic testing or the monitor is not supported on that vehicle.

3). Use the **UP/DOWN** scroll buttons to select Readiness Test from the **Select Function** menu and press the **Y** button.



If the Scan tool is not connected yet, then refer to Reading Codes from 1 to 7 at Paragraph 3.1.

4). Use the **UP/DOWN** scroll buttons, as necessary, to view the status of the following monitors:

- •EGR Sys --- EGR System Monitor
- •O2 Sensor(s) --- O2 Sensors Monitor
- •Catalyst --- Catalyst Monitor
- EVAP Sys --- Evaporative System Monitor
- Heated O2 --- O2 Sensor Heater Monitor
- •Sec Air Inject --- Secondary Air Monitor
- •A/C --- A/C system Monitor
- •Catalytic Conv. --- Catalytic Convertor Monitor

Readiness Test		
EGR Sys	Pass	
Heated O2	Pass	
O2 Sensor(s)	Pass	
A/C	Pass	
Sec.Air Inject	Pass	
EVAP Sys	Fail	

3). Press the N button to return to previous menu.

3.2 OBDII/EOBD Diagnostics

Reading Codes

CAUTION: Don't connect or disconnect any test equipment with ignition on or engine running.

- I). Turn the ignition off.
- 2). Locate the vehicle's 16 pin Data Link connector(DLC).
- 3). Plug into the scan tool cable connector to the vehicle DLC.
- 4). Turn the ignition on. But do not start the engine.
- 5). Press the Y button. The Main Menu will be observed on the Display.
- 6). Use the UP/DOWN scroll buttons to select OBDII/EOBD from the menu.



7). Press the **Y** button. A sequence of messages showing the OBDII/ EOBD protocols will be observed on the display until the vehicle protocols detected.

If the scan tool fails to communicate with the vehicle's ECU (Engine Control Unit), a "LINK ERROR!" message shows up on the display.

 $\sqrt{}$ Verify that the ignition is ON;

 $\sqrt{\rm Check}$ if the scan tool's OBDII connector is securely connected to the vehicle's DLC;

 $\sqrt{}$ Verify that the vehicle is OBDII/EOBD compliant;

 $\sqrt{10}$ Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and repeat the procedure from step 5.

If the **"LINK ERROR"** message does not go away ,then there might be problems for the scan tool to communicate with the vehicle. Contact your local distributor or the manufacturer's customer service department forassistance.

8). After the vehicle protocol is displayed on the screen, press any key or wait about 2 seconds for the OBDII/EOBD Diag menu to come up.

9). Use the **UP/DOWN** scroll buttons to select **Read Codes** from the menu and press the **Y** button.



• If there are no Diagnostic Trouble Codes present, the display will indicate NO CODES ARE STORED IN THE MODULE!

• If there are any Diagnostic Trouble Codes present, the Fault Codes and Pending Codes will be reported on the display.



• The DTC number will appear on the upper left hand corner and its definition will show Oil the body of screen.

• The type of code (Generic or Manufacturer specific), the vehicle protocol, the sequence of the DTC currently being observed. The total number of codes detected and the module ID will be observed on the upper right hand corner of the Display.

• If the code being displayed is a pending code the **Pd** icon will be observed next to the DTC number on the upper right hand corner of the display.

• When a DTC's definition covers more than one display screen use the **Y** button, as necessarY, to view any additional information.

• If the retrieved DTCs contain any manufacturer specific or enhanced codes you will be prompted to refer to the CD DTC library or the vehicle service manual to view the DTC definitions.

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10). If more than are DTC is found, use the **UP/DOWN** scroll buttons, as necessary, until all the codes have been shown up.

Erasing Codes

1). If you decide to erase the DTCs,use the **UP/DWON** scroll buttons to select **Erase Codes** from the **OBDII/EOBD Diag.** menu and press the **Y** button.



• If the scan tool is not connected or no communication is established with the vehicle yet, then refer to Reading Codes from 1 to 8 at Paragraph 3.2.

2). A warning message comes up asking for your confirmation.

Erase Codes

Erase trouble codes! Are you sure?

YES <NO >

3). If you do not want to proceed with erasing the codes,press the **N** button to exit. A message of **"command cancelled"** will show up.

4). If you do wish to proceed to erase the codes, then press the Y button.

5). If the codes are cleared successfully. an **"ERASE DONE!"** confirmation will show on the display. Press any button to return to previous menu.

6). If the codes are not cleared,then an **"ERASE FAILURE!"** message will appear. Press the **N** button to return to previous menu.

3.3 Oil Reset

- 1). Turn the ignition off.
- 2). Locate the vehicle's 16-pin Data Link Connector(DLC).
- 3). Plug into the scan tool cable connector to the vehicle's DLC.
- 4). Turn the ignition on. But do not start the engine.
- 5). Press the Y button. The Main Menu will be observed on the display.
- 6). Use the UP/DOWN scroll buttons to select Oil Reset from the menu,
- Press the Y button, accept the option and to move to the next screen.



7). Do the following to select menu options:

a). Use the **UP/DOWN** scroll buttons to move the cursor (\blacktriangleright) and select an option.

b). Press the ${\boldsymbol{Y}}$ button to accept the option and to move to the next screen

c). Repeat a) and b) to select the necessary options.



8). Follow any on-screen instructions. Optionally, use the ${\bf N}$ button to return to previous screens .

9). If the Service Reset Failed message appears then there might be problems for the scan tool to communicate with the vehicle being tested. Refer to the vehicle service manual for more information.

10). When done, turn off the ignition and disconnect the scan tool.

4. Warranty and Service

4.1 Limited One Year Warranty

The Manufacturer warrants to the original purchaser that this product is free of defects in materials and workmanship for a period of one (1) year from the date of original purchase, subject to the following terms and conditions:

1). If the product fails within the one (1) year period, it will be repaired or replaced, at the manufacturer's option, at no charge with proof of original purchase. The sales receipt may be used for this purpose.

2). This warranty does not apply to damages caused by improper use, accident,flood,lightning,etc.,or if the product was altered or repaired by anyone other than the manufacturer's service team.

3). Manufacturer shall not be liable for any incidental or consequential damages for breach of any written warranty of this unit. This warranty gives you specific legal rights, and you may also have rights which vary from state to state. This warranty is not transferable.

4). All information in this manual is based on the latest information available at the time of publication and no warranty can be made for its accuracy or completeness. Manufacturer reserves the right to make changes at any time without notice.

4.2 Service Procedures

For technical support and information on **Updates** and **Optional Accessories**, please contact your local store or distributor. If it becomes necessary to return the code reader for repair, contact your local distributor for more information.

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