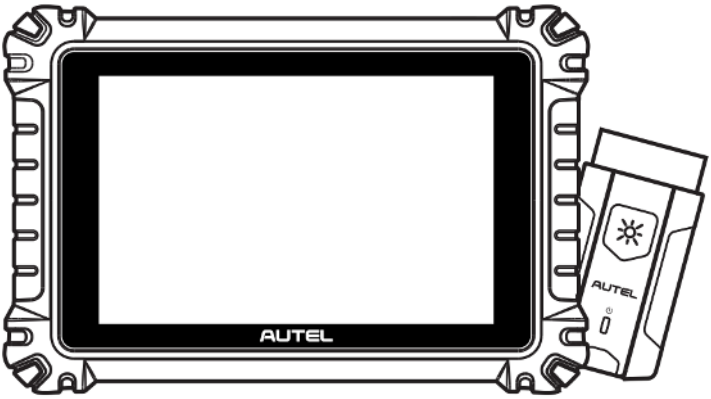
USER MANUAL

AUTEL®

MaxiSys MS906 Pro & MS906 Pro-TS



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IMPORTANT

Before operating or maintaining this unit, please read this manual carefully, paying extra attention to the safety warnings and precautions.

For Services and Support

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For technical assistance in all other markets, please refer to *Technical* Support in this manual.

Safety Information

For your own safety and the safety of others, and to prevent damage to the device and vehicles upon which it is used, it is important that the safety instructions presented throughout this manual be read and understood by all persons operating or coming into contact with the device.

There are various procedures, techniques, tools, and parts for servicing vehicles, as well as in the skill of the person doing the work. Because of the vast number of test applications and variations in the products that can be tested with this equipment, we cannot possibly anticipate or provide advice or safety messages to cover every circumstance. It is the automotive technician's responsibility to be knowledgeable of the system being tested. It is crucial to use proper service methods and test procedures. It is essential to perform tests in an appropriate and acceptable manner that does not endanger your safety, the safety of others in the work area, the device being used, or the vehicle being tested.

Before using the device, always refer to and follow the safety messages and applicable test procedures provided by the manufacturer of the vehicle or equipment being tested. Use the device only as described in this manual. Read, understand, and follow all safety messages and instructions in this manual.

Safety Messages

Safety messages are provided to help prevent personal injury and equipment damage. All safety messages are introduced by a signal word indicating the hazard level.

⚠ DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury to the operator or to bystanders.

⚠ WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury to the operator or to bystanders.

Safety Instructions

The safety messages herein cover situations Autel is aware of. Autel cannot know, evaluate or advise you as to all of the possible hazards. You must be certain that any condition or service procedure encountered does not jeopardize your personal safety.

⚠ DANGER

When an engine is operating, keep the service area WELL VENTILATED or attach a building exhaust removal system to the engine exhaust system. Engines produce carbon monoxide, an odorless, poisonous gas that causes slower reaction time and can lead to serious personal injury or loss of life.

Do Not Turn the Volume Up Too Loud When Using Headphones

Listening at high volumes that over-stimulate the ear for long periods of time may result in loss of hearing.

SAFETY WARNINGS

- 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, for exhaust gases are poisonous.
- Put the transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and make sure the parking brake is engaged.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while testing.
- Be extra cautious when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- Keep a fire extinguisher suitable for gasoline, chemical, and electrical fires nearby.
- Do not connect or disconnect any test equipment while the ignition is on or the engine is running.
- Keep the test equipment dry, clean, free from oil, water or grease. Use a mild detergent on a clean cloth to clean the outside of the equipment as necessary.
- Do not drive the vehicle and operate the test equipment at the same time. Any distraction may cause an accident.
- Refer to the service manual for the vehicle being serviced and adhere to all diagnostic procedures and precautions. Failure to do so may result in personal injury or damage to the test equipment.
- To avoid damaging the test equipment or generating false data, make sure the vehicle battery is fully charged and the connection to the vehicle DLC is clean and secure.
- Do not place the test equipment on the distributor of the vehicle. Strong electro-magnetic interference can damage the equipment.

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1 Using This Manual

This manual contains device usage instructions.

Some illustrations shown in this manual may contain modules and optional equipment that are not included in your system. Contact your sales representative for availability of other modules and optional tools or accessories.

1.1 Conventions

The following conventions are used.

1.1.1 Bold Text

Bold text is used to highlight selectable items such as buttons and menu options.

Example:

- Tap **OK**.

1.1.2 Notes and Important Messages

Notes

A **NOTE** provides helpful information such as additional explanations, tips, and comments.

Important

IMPORTANT indicates a situation that, if not avoided, may result in damage to the test equipment or vehicle.

1.1.3 Hyperlink

Hyperlinks or links that take you to other related articles, procedures, and illustrations are available in electronic documents. Blue italic text indicates a selectable hyperlink and blue underlined text indicates a website link or an email address link.

1.1.4 Illustrations

Illustrations used in this manual are examples; actual testing screens may vary for each vehicle being tested. Carefully observe the menu titles and on-screen instructions to make the right selections.

1.1.5 Procedure

An arrow icon indicates a procedure.

Example:

➢ **To power down the tablet**

1. Press and hold the **Lock**/**Power** button.
2. Tap **Power off**.
3. Tap **OK**.

2 General Introduction

There are two main components to the MaxiSys system:

- MaxiSys System tablet — the central processor and monitor for the system
- Vehicle Communication Interface (VCI) — the device for accessing vehicle data

This manual describes the construction and operation of both the devices and how they work together to deliver diagnostic solutions.

2.1 MaxiSys System tablet

2.1.1 Function Description

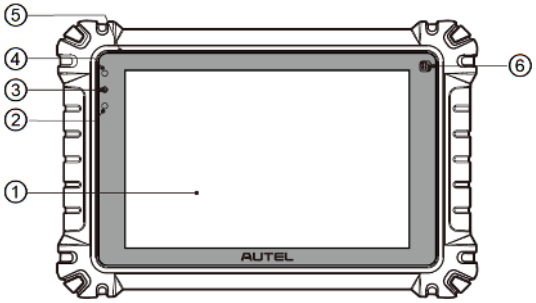


Figure 2-1 Tablet Front View

① 8.0-inch LED Capacitive Touchscreen

② Ambient Light Sensor — detects ambient brightness.

③ Power LED

④ Front Camera

⑤ Microphone

⑥ TPMS Service Symbol — indicates the position of the embedded TPMS antenna (for MS906 Pro-TS only)

The power LED displays different colors in response to the following scenarios:

Green

- Illuminates green when the tablet is charging and the battery level is above 90%.

Yellow

- Illuminates yellow when the tablet is charging and the battery level is below 90%.

Red

- Illuminates red when the tablet is powered on and the battery level is below 15%.

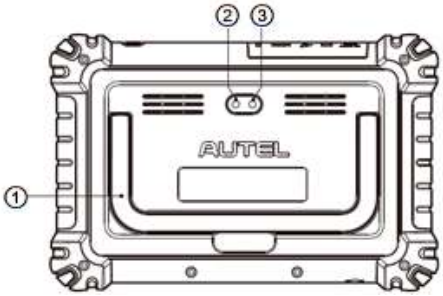


Figure 2-2 Tablet Back View

① Collapsible Stand — extends from the back to allow hands-free viewing of the tablet.

② Rear Camera

③ Camera Flash

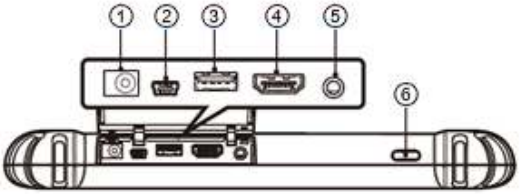


Figure 2-3 Tablet Top View

① DC Power Supply Input Port

② Mini USB OTG Port

③ USB Port

④ HDMI (high-definition multimedia interface) Port

⑤ Headset Jack (3-band 3.5mm)

⑥ **Lock/Power** Button — press and hold to turn on/off the tablet, or tap to lock the screen.

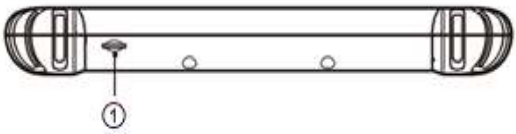


Figure 2-4 Tablet Bottom View

① TF Card Slot

2.1.2 Power Sources

The tablet can receive power from any of the following sources:

- Internal Battery Pack
- AC/DC Power Supply
- Vehicle Power Supply

Internal Battery Pack

The tablet can be powered with the internal rechargeable battery, which if fully charged can provide sufficient power for about 14 hours of continuous operation.

AC/DC Power Supply

The tablet can be powered from a wall socket using the AC/DC power adapter. The AC/DC power supply also charges the internal battery pack.

Vehicle Power Supply

The tablet can be powered from the cigarette lighter or other suitable power port on the vehicle through a direct cable connection. The vehicle power cable connects to the DC power supply port on the top side of the display unit.

2.1.3 Technical Specifications

Table 2-1 Technical Specifications

Item	Description
Operating System	Android 10
Processor	Octa-core processor (2.2 GHz + 1.8 GHz)
Memory	4 GB RAM & 128 GB on-board memory
Display	8.0-inch TFT-LED capacitive touch screen with 1920 x 1200 P resolution

Item	Description
Connectivity	● Wi-Fi (802.11 b/g/n) ● USB: 2.0 ● Mini USB 2.0 ● Bluetooth V2.1+EDR, Class1 ● HDMI ● SD Card (support up to 32 GB)
Camera	● Rear: 16 megapixel, autofocus with flashlight ● Front: 16 megapixel
Sensors	Gravity Accelerometer, Ambient Light Sensor (ALS)
Audio Input/Output	● Input: Microphone ● Output: Single speaker, 3-band 3.5 mm stereo/standard headset jack
Power and Battery	● 11,600 mAh 3.7 V lithium-polymer battery ● Charging via 12 V AC/DC power supply
Input Voltage	12 V (9 to 35 V)
Power Consumption	5 W
Operating Temp.	0 to 50°C (32 to 122°F)
Storage Temp.	–10 to 60°C (14 to 140°F)
Housing	Strong plastic housing with protective rubber boot
Dimensions (W x H x D)	260 mm (10.0″) x 170 mm (6.9″) x 30 mm (1.4″)
Weight	● NW: 0.962 kg (2.12 lb.) (for 906 Pro-TS) ● NW: 0.92 kg (2.03 lb.) (for 906 Pro)
Supported Automotive Protocols	ISO 9142-2, ISO 13400, ISO 14230-2, ISO 15765-4, K-Line, L-Line, Flashing Code, SAE-J1850 VPW, SAE-J1850 PWM, CAN ISO 11898, High speed, Middle speed, Low speed and Single wire CAN, GM UART, UART Echo Byte Protocol, Honda Diag-H Protocol, TP 2.0, TP 1.6, SAE J1939, SAE J1708, Fault-Tolerant CAN, CAN FD

2.2 VCI — Vehicle Communication Interface

The wireless diagnostic interface MaxiVCI V200 is a small vehicle communication interface (VCI) used to connect to a vehicle's DLC and connect wirelessly with the tablet for vehicle data transmission.

2.2.1 Function Description

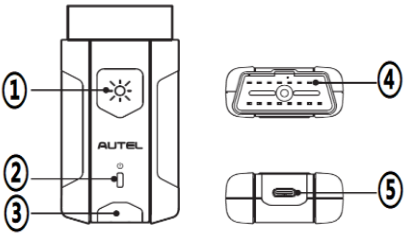


Figure 2-5 MaxiVCI V200 Views

① Flashlight Button

② Power LED

③ Connection LED

④ Vehicle Data Connector (16-Pin) — connects the MaxiVCI V200 to the vehicle's 16-pin DLC directly.

⑤ USB Port — provides the easiest connection between the device and the tablet via a USB cable.

Table 2-2 Power LED Description

LED	Color	Description
Power LED	Yellow	The VCI is powered on and performing self-check.
	Green	The VCI is ready for use.
	Flashing Red	The firmware is updating.

NOTE

The power LED briefly lights yellow each time the device powers on and then lights green when the device is ready.

Table 2-3 Connection LED Description

LED	Color	Description
Connection LED	Green	• **Solid green**: The VCI is connected via USB cable. • **Flashing green**: The VCI is communicating via USB cable.
	Blue	• **Solid blue**: The VCI is connected via Bluetooth. • **Flashing blue**: The VCI is communicating via Bluetooth.

2.2.2 Technical Specifications

Table 2-4 Technical Specifications

Item	Description
Communications	• BLE + EDR • Type-C USB
Wireless Frequency	2.4 GHz
Input Voltage Range	8 V to 30V DC
Supply Current	150 mA @ 12 V DC
Operating Temp.	0 to 50°C (32 to 122°F)
Storage Temp.	–10 to 60°C (14 to 140°F)
Dimensions (L x W x H)	89.89 mm (3.53″) x 46.78 mm (1.84″) x 21 mm (0.82″)
Weight	70.7 g (0.156 lb.)
Built-in Battery	3.7 V lithium battery
Light	White LED

NOTE

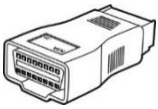
The 3.7 V Lithium Battery is used for LED lighting only.

2.3 Accessory Kit

2.3.1 OBDI Adapters (Optional)

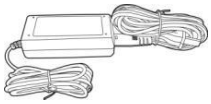
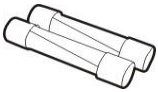
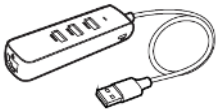
The optional OBDI adapters are for Non-OBDII vehicles. The adapter used depends on the type of vehicle being tested. The most common adapters are shown below.

Table 2-5 Optional OBDI Adapters

	Benz-14		PSA-2
	Chrysler-16		Mazda-17
	BMW-20		Volkswagen/ Audi-2+2
	Nissan-14		Benz-38
	Kia-20		Mitsubishi/ Hyundai-12+16
	Fiat-3		

2.3.2 Other Accessories

Table 2-6 Other Accessories

	**Type-C USB Cable** Connects the tablet to the PC or the VCI unit.
	**AC/DC External Power Adapter** Connects the tablet to the external DC power port for power supply.
	**Cigarette Lighter Adapter** Provides power to the tablet through connection to the vehicle's cigarette lighter receptacle.
	**Spare Fuse x 2** A safety device for the cigarette lighter adapter.
	**USB to Ethernet Adapter** Provides network connection function.

3 Getting Started

Make sure the tablet has sufficient battery level or is connected to the DC power supply (see *Power Sources*).

NOTE

The images and illustrations depicted in this manual may differ from the actual ones.

3.1 Powering Up

Press the **Lock**/**Power** button on the top of the tablet to switch the unit on. Swipe up to unlock and enter the system.

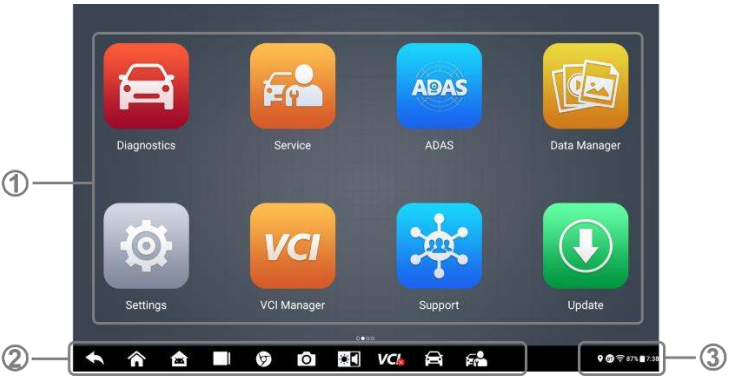


Figure 3-1 MS906 Pro Job Menu

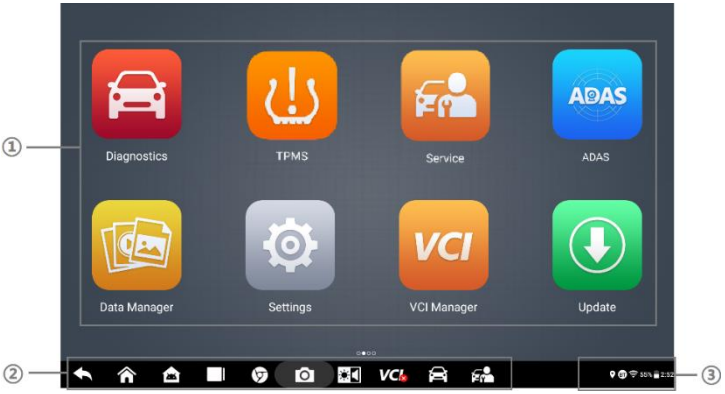


Figure 3-2 MS906 Pro-TS Job Menu

① Application Buttons

② Locator and Navigation Buttons

③ Status Icons

NOTE

- The screen is locked by default when you first turn on the tablet. It is recommended to lock the screen to protect the information in the system and reduce the power consumption.
- Almost all operations on the tablet are controlled through the touch screen. The touch screen navigation is menu driven, which allows you to quickly locate the test procedure, or data that you need, through a series of choices and questions. Detailed descriptions of the menu structures are found in the chapters for the various applications.

3.1.1 Application Buttons

The application buttons configure the MaxiSys for the type of operation or activity to be performed. The table below gives brief descriptions of the available applications.

Tap on the screen to select an application from the Job Menu.

Table 3-1 Application Buttons

Button	Name	Description
	**Diagnostics**	Configures the unit to operate as a diagnostic tool. See *Diagnostics*.
	**TMPS**	Launches the TPMS service program directly. See *TPMS*. (For MS906 Pro-TS)
	**Service**	Accesses special functions menu. See *Service*.
	**ADAS**	Accesses ADAS systems menu. See *ADAS*.
	**Battery Test**	Assesses the battery test menu. See *Battery Test*.
	**Data Manager**	Accesses the organization system for saved data files. See *Data Manager*.

Button	Name	Description
	**Settings**	Allows you to set the MaxiSys system settings, and to view the general information about the tablet. See *Settings*.
	**VCI Manager**	Establishes and manages Bluetooth connection to the VCI device. See *VCI Manager*.
	**Update**	Checks for the latest update available for the MaxiSys system, and performs updating procedures. See *Update*.
	**Support**	Launches the Support platform which synchronizes Autel's on-line service base station with the MaxiSys tablet. See *Support*.
	**Remote Desktop**	Configures your unit to receive remote support using the TeamViewer application program. See *Remote Desktop*.
	**User Feedback**	Allows you to submit questions related to this product. See *User Feedback*.
	**MaxiViewer**	Provides a quick search for supported functions and/or vehicles. See *MaxiViewer*.
	**MaxiVideo**	Configures the unit to operate as a video scope device by connecting to an Imager head cable for close vehicle inspections. See *MaxiVideo*.
	**MaxiScope**	Configures the unit to operate as an automotive oscilloscope to perform electrical and electronic circuit tests and monitor signal activities. See *MaxiScope*.
	**Quick Link**	Provides associated website bookmarks to allow quick access to product update, service, support and other information. See *Quick Link*.

3.1.2 Locator and Navigation Buttons

Operations of locator and navigation buttons at the bottom of the screen are described in the table below.

Table 3-2 Locator and Navigation Buttons

Button	Name	Description
	Locator	Indicates the location of the screen. Swipe the screen left or right to view the previous or next screen.
	Back	Returns to the previous screen.
	Home	Returns to MaxiSys Job Menu.
	Android Home	Returns to Android System's Home screen.
	Recent Apps	Displays a list of applications that are currently working. To open an application, tap on it. To remove an application, swipe it to the side.
	Chrome	Launches the Android built-in browser.
	Camera	Opens the camera with short press; takes and saves screenshot image with long press. The saved files are auto-stored in the Data Manager application for later reviews. See *Data Manager*.
	Display & Sound	Allows you to adjust the brightness of the screen and the volume of the audio output.
	VCI	Opens the VCI Manager application. The green badge at the bottom right corner indicates the tablet is communicating with the VCI device, otherwise a red cross icon displays.
	Diagnostics Shortcut	Returns to the Diagnostics operation interface from other applications.
	TPMS Shortcut	Returns to the TPMS operation interface from other applications. (For MS906 Pro-TS)
	Service Shortcut	Returns to the TPMS service operation interface from other applications.

➢ **To use the camera**

1. Tap the **Camera** button. The camera screen opens.
2. Focus the image to be captured in the view finder.
3. Tap the camera icon on the right side of the screen. The view finder now shows the captured picture and auto-saves the taken photo.
4. Tap the thumbnail image on the top right corner of the screen to view the stored image.
5. Tap the **Back** or **Home** button to exit the camera application.

3.1.3 System Status Icons

By tapping on the bottom right corner, a Shortcuts Panel will be displayed, on which you are allowed to set various system settings of the tablet. Operations of each button on the panel are described in the table below.

NOTE

The shortcuts buttons will be highlighted when enabled and dimmed when disabled.

Table 3-3 Shortcuts Panel Buttons

Button	Name	Description
	Wi-Fi	Enables/disables Wi-Fi.
	Bluetooth	Enables/disables Bluetooth.
	Battery	Displays battery status.
	Do Not Disturb	Enables/disables Do-not-disturb mode.
	Flashlight	Turns on/off the flashlight.
	Auto Rotate	Enables/disables auto-rotate screen.
	Airplane Mode	Enables/disables Airplane Mode.
	Location	Enables/disables location recording function.
	Logger	Accesses **Log Collection** screen.

3.2 Powering Down

All vehicle communications must be terminated before shutting down the tablet. A warning message displays if you attempt to shut down the tablet while the VCI unit is communicating with the vehicle. Forcing a shut-down while communicating may lead to ECM problems on some vehicles. Exit the Diagnostics application before powering down.

➢ **To power down the tablet**

1. Press and hold the **Lock**/**Power** button.
2. Tap **Power off**.
3. Tap **OK**. The tablet will turn off in a few seconds.

3.2.1 Reboot System

In case of system crash, press and hold the **Lock**/**Power** button to power off the tablet and restart it.

➢ **To reboot the tablet**

1. Press and hold the **Lock**/**Power** button.
2. Tap **Restart**.
3. Tap **OK**. The tablet will turn off and restart.

4 Diagnostics

By establishing a data link to the electronic control systems of the vehicle being serviced through the VCI device, the Diagnostics application allows you to retrieve diagnostic information, view live data parameters, and perform active tests. The Diagnostics application can access the electronic control module (ECM) for various vehicle control systems, such as engine, transmission, antilock brake system (ABS), airbag system (SRS) and more.

4.1 Establishing Vehicle Communication

The Diagnostics operations require connecting the MaxiSys Diagnostic Platform to the vehicle through the VCI device and test adapters (for non-OBDII vehicles). To establish proper vehicle communication to the tablet, you need to perform the following steps:

1. Connect the VCI device to the vehicle's DLC for both communication and power source.
2. Connect the VCI device to the tablet via Bluetooth pairing or USB connection.
3. When these are done, check the VCI navigation button at the bottom bar on the screen, if the button displays a green badge, the MaxiSys Mini diagnostic platform is ready to start vehicle diagnosis.

4.1.1 Vehicle Connection

The method used to connect the VCI device to a vehicle's DLC depends on the vehicle's configuration as follows:

- A vehicle equipped with an On-board Diagnostics Two (OBDII) management system supplies both communication and 12-volt power through a standardized J-1962 DLC.
- A vehicle not equipped with an OBDII management system supplies communication through a DLC connection, and in some cases supplies 12-volt power through the cigarette lighter receptacle or a connection to the vehicle battery.

OBDII Vehicle Connection

This type of connection only requires the VCI device without any additional adapter.

To connect to an OBDII vehicle: Insert the Vehicle Data Connector on the MaxiVCI V200 into the vehicle's DLC, which is generally located under the vehicle dash.

NOTE

If the vehicle's DLC is not located under the dash, refer to the user manual of the vehicle for additional connection information.

Non-OBDII Vehicle Connection

This type of connection requires both the VCI device and a required OBDI adapter for the specific vehicle being serviced.

➢ **To connect to a Non-OBDII Vehicle**

1. Locate the required OBDI adapter and connect its 16-pin jack to the Vehicle Data Connector on the MaxiVCI V200.
2. Connect the attached OBDI adapter to the vehicle's DLC.

NOTE

- Some adapters may have more than one adapter or may have test leads instead of an adapter. Whatever the case, make the proper connection to the vehicle's DLC as required.
- The tablet can be powered from the cigarette lighter adapter when necessary.

➢ **To connect the cigarette lighter adapter**

1. Plug the DC power connector of the cigarette lighter adapter into the DC power supply input port on the tablet.
2. Connect the male connector of the cigarette lighter adapter into the vehicle's cigarette lighter receptacle.

4.1.2 VCI Connection

After the MaxiVCI V200 is properly connected to the vehicle, and the Power LED on the VCI device illuminates solid green or blue, which indicates that the MaxiVCI V200 is ready to establish communication with the tablet.

The Wireless Diagnostic Interface MaxiVCI V200 supports 2 communication methods with the tablet, Bluetooth and USB.

4.1.2.1 *Pairing Up via Bluetooth*

Bluetooth pairing is recommended as the first choice for the communication between the tablet and the VCI device. The working range for Bluetooth communication is about 164 feet (about 50 m); this means you can perform vehicle diagnosis freely around the workshop with greater convenience.

If you use more than one VCI device to connect to the vehicles, you can perform vehicle diagnosis on various vehicles conveniently, by pairing the tablet separately to each of the VCI devices connected to the different vehicles, via Bluetooth, without the need to repeat

the plugging and unplugging procedure, which is unavoidable through traditional wired connection, thus saves you more time and provides more efficiency.

➢ **To pair up the tablet with the MaxiVCI V200 via Bluetooth**

1. If not already done, power up the tablet.
2. Select the **VCI Manager** application from the MaxiSys Job Menu.
3. When the **VCI Manager** application is opened, the tablet automatically starts scanning for available VCI devices around for Bluetooth pairing. The found VCI devices are listed on the right side of the screen.

NOTE

If no VCI device is found, this may indicate that the signal strength of the transmitter is too weak to be detected. In this case, try to get closer to the device, or reposition the VCI device, and remove all possible objects that cause signal interference. When these are done, tap the **Scan** button at the top right corner to start searching again.

4. The device name appeared on the tablet may display as Maxi suffixed with a serial number. Select the required device for pairing.
5. When paring is successfully done, the connection status displayed to the right of the device name is shown as **Connected**.
6. Wait for a few seconds, and the VCI button on the system Navigation Bar at the bottom of the screen shall display a green badge, and the Connection LED on the MaxiVCI V200 illuminates solid blue, indicating the tablet is connected to the VCI device, and is ready to perform vehicle diagnosis.

4.1.2.2 *USB Cable Connection*

The USB cable connection is a simple and quick way to establish communication between the tablet and the MaxiVCI V200. After properly connecting the USB cable from the tablet to the VCI device, the VCI navigation button at the bottom bar of the screen shows a green badge in a few seconds, and the Connection LED on the MaxiVCI V200 illuminates solid green, indicating the connection between the devices is successful. The MaxiSys diagnostic platform is now ready to perform vehicle diagnosis.

NOTE

When both the communication methods are applied at the same time, the MaxiSys system will use the USB communication as the default priority.

4.1.3 No Communication Message

If the tablet is not connected to the VCI device correctly, an “Error” message may display. This indicates that the tablet cannot access to the vehicle control module. In this case, you need to do the following check-ups:

- Check if the VCI device is powered up.

- In case of wireless connection, check if the network is configured correctly, or if the right VCI device has been paired.
- If during the diagnosis process, the communication is suddenly interrupted due to the loss of signal, check if there is any object that causes signal interruption.
- Check if the VCI device is properly positioned.
- Try standing closer to the VCI device to obtain more stable signals, and faster communication speed.
- In case of wired connection, check the cable connection between the tablet and the VCI device.
- Check if the Connection LED on the VCI device is illuminated for Bluetooth or USB.
- Check if the Power LED on the VCI device is flashing red, this may indicate there is a hardware problem with the VCI device, in this case contact for the technical support.

If the VCI device is unable to establish a communication link, a prompt message displays with check instructions. The following conditions are the possible causes:

- The VCI device is unable to establish a communication link with the vehicle.
- You've selected a system for testing that the vehicle is not equipped with.
- There is a loose connection.
- There is a blown vehicle fuse.
- There is a wiring fault on the vehicle or the adapter.
- There is a circuit fault in the adapter.
- Incorrect vehicle identification was entered.

4.2 Getting Started

Prior to first use of the Diagnostics application, make sure the VCI device has been synchronized with the tablet to establish a communication link. See *VCI Manager*.

4.2.1 Vehicle Menu Layout

When the VCI device is properly connected to the vehicle, and paired to the tablet, the platform is ready to start the vehicle diagnosis. Tap the **Diagnostics** application on the MaxiSys Job Menu, the screen then opens the Vehicle Menu.



Figure 4-1 Vehicle Menu Screen

① Top Toolbar Buttons

② Manufacturer Icons

4.2.1.1 *Top toolbar Buttons*

The operations of the Toolbar buttons at the top of the screen are listed and described in the table below.

Table 4-1 Top Toolbar Buttons

Button	Name	Description
	**Home**	Returns to the MaxiSys Job Menu.
	**VID**	Opens a dropdown list; tap **Auto Detect** for auto VIN detection; tap **Manual Input** to enter VIN manually; tap **Scan VIN/License** to scan the VIN code/license numbers by camera.
	**All**	Displays all the vehicle makes in the vehicle menu.
	**Favorites**	Displays user-selected favorite vehicle makes.
	**History**	Displays the stored vehicle history records. This option provides you direct access to the previously tested vehicle recorded during previous test sessions. See *Vehicle History*.
	**America**	Displays the USA vehicle menu.

Button	Name	Description
	**Europe**	Displays the European vehicle menu.
	**Asia**	Displays the Asian vehicle menu.
	**China**	Displays the domestic vehicle menu.
	**Search**	Opens the virtual keyboard, allowing you to manually enter the specific vehicle make required.
	**Cancel**	Exits the search screen, or cancels an operation.

4.2.1.2 *Manufacturer Buttons*

The Manufacturer buttons display the various vehicle logos and the brand names. Select the required manufacturer button after the VCI device is properly connected to the vehicle to start a diagnostic session.

Tapping the small envelop icon beside each vehicle brand name will open a PDF document displaying the function list of the diagnostic software, including the applicable models and functions.

NOTE

The Update icon displayed on the upper right of the vehicle brand name indicates there is available update for the vehicle. Tap this icon to enter the Update application directly.

4.3 Vehicle Identification

The MaxiSys diagnostic system supports five methods for Vehicle Identification.

- Auto VIN Scan
- Manual VIN Input
- Scan VIN/License
- Manual Vehicle Selection
- OBD Direct Entry

4.3.1 Auto VIN Scan

The MaxiSys diagnostic system features the latest VIN-based Auto VIN Scan function to identify vehicles in just one touch, which allows the technician to quickly detect vehicles, scan all the diagnosable ECUs on every vehicle and run diagnostics on the selected system.

➢ **To perform Auto VIN Scan**

1. Tap the **Diagnostics** application from the MaxiSys Job Menu. The Vehicle Menu displays.
2. Tap the **VID** button on the top toolbar.
3. Tap **Auto Detect**. The tester starts VIN scanning on the vehicle's ECU. Confirm the vehicle information and the system will guide you to the Vehicle Diagnostics screen directly.

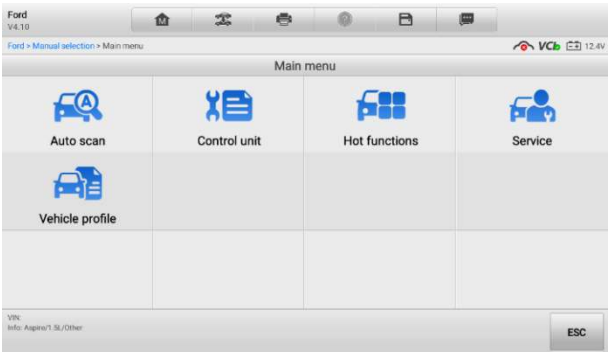


Figure 4-2 Vehicle Diagnostics Screen

In some cases when users have selected the vehicle brand instead of performing Auto VIN Scan in the first place, the system still provides an option for vehicle VIN scan.

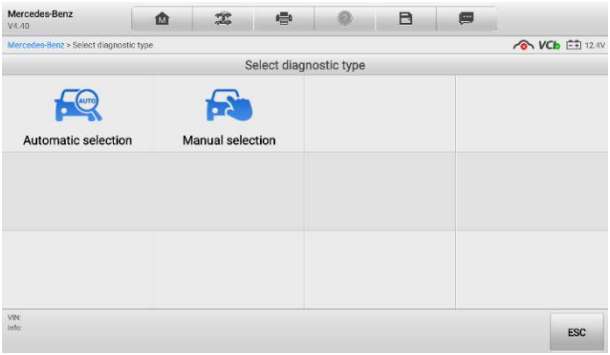


Figure 4-3 Vehicle Selection Screen

Select **Automatic Selection** and the system will proceed to acquire VIN information automatically or allow users to enter the VIN manually.

4.3.2 Manual VIN Input

For some vehicles that do not support the Auto VIN Scan function, the MaxiSys diagnostic system allows you to enter the vehicle VIN manually.

➢ **To perform Manual VIN Input**

1. Tap the **Diagnostics** application from the MaxiSys Job Menu. The Vehicle Menu displays.
2. Tap the **VID** button on the top toolbar.
3. Tap **Manual Input**.
4. Tap the input box and enter the correct VIN.
5. Tap **OK**. The vehicle will be identified in a few seconds, and once the vehicle information is confirmed, the system will guide you to the Vehicle Diagnostics screen directly. (see *Figure 4-2 Vehicle Diagnostics Screen*)
6. Tap the icon to exit the Manual Input dialog box.

4.3.3 Scan VIN/License

Tap **Scan VIN/License** in the dropdown list, the camera will be opened. On the right side of the screen, from top to bottom, three options are available: **Scan Bar Code, Scan VIN,** and **Scan License**.

NOTE

The method of Scan License is supported in some countries and areas. Please manually enter the license numbers if it is not available.

Select one of three options and position the tablet to align the VIN or license number within the scanning window, the result displays in the Recognition Result dialog box after scanned. Tap **OK** to confirm the result, and then the vehicle information confirmation screen will display on the tablet. If all the vehicle information is correct, tap the icon in the middle of the screen to confirm the VIN of the vehicle being tested, tap **OK** to continue.

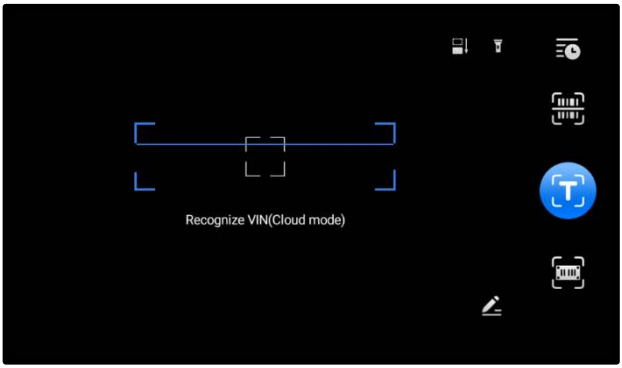


Figure 4-4 Scan VIN/License

If the VIN/License number cannot be scanned, please manually enter the VIN/License number. Tap **OK** to continue. Manually enter the license number and select a vehicle brand in the vehicle information confirmation screen. Tap the icon in the middle of the screen to confirm the VIN of the vehicle being tested, tap **OK** to continue.

4.3.4 Manual Vehicle Selection

When the vehicle's VIN is not automatically retrievable through the vehicle's ECU, or specific VIN is unknown, you can manually select the vehicle.

4.3.4.1 *Step-by-step Vehicle Selection*

This mode of vehicle selection is menu driven; you can simply follow the on-screen prompts and make a series of choices. Each selection you make advances you to the next screen. An **Esc** button at the lower right corner of the screen will bring you back to the previous step. Exact procedures may vary somewhat by various vehicles being serviced.

4.3.5 Alternative Vehicle Identification

Occasionally, you may identify a vehicle that the tester does not recognize; the database does not support, or has some unique characteristics that prevent it from communicating with the tester through the normal channels. In these instances, you are provided with the OBD direct entry, through which you can perform generic OBDII or EOBD tests. See *Generic OBDII Operations* for details.

4.4 Navigation

This section describes how to navigate the Diagnostics interface and select test options.

4.4.1 Diagnostics Screen Layout

The diagnostic screens typically include four sections.

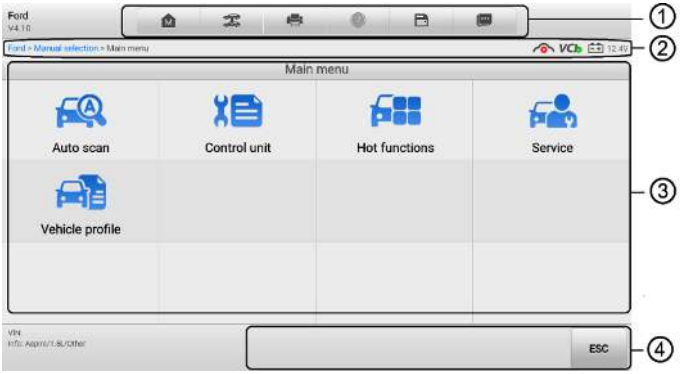


Figure 4-5 Diagnostics Screen

① Diagnostics Toolbar

② Status Information Bar

③ Main Section

④ Function Buttons

4.4.1.1 *Diagnostics Toolbar*

The Diagnostics Toolbar contains a number of buttons that allow you to print or save the displayed data and make other controls. The table below provides a brief description for the operations of the Diagnostics Toolbar buttons.

Table 4-2 Diagnostics Toolbar Buttons

Button	Name	Description
	Home	Returns to the MaxiSys Job Menu.
	Vehicle Swap	Exits the diagnostic session of the currently identified vehicle, and returns to the vehicle menu screen to select another vehicle for testing.

Button	Name	Description
	**Print**	Saves and prints a copy of the displayed data. See *Printing Operation* for additional information.
	**Help**	Provides instructions or tips for operations of various diagnostic functions.
	**Save**	Opens a submenu which provides options for data storage.
	**Data Logging**	Records the communication data and ECU information of the vehicle. The saved data can be reported and sent to the technical center via the internet. You can go to the Support application to follow up the processing progress, see *Data Logging* for detailed information.

➢ **To print data in Diagnostics**

1. Tap the **Diagnostics** application from the MaxiSys Job Menu. The **Print** button on the diagnostic toolbar is available throughout the whole Diagnostics operations.
2. Tap **Print** whenever you want to make a printing. A drop-down menu displays.
   - **Print this page** — prints a screenshot copy of the current screen
   - **Print all data** — prints a PDF copy of all displayed data
3. A temporary file will be created and send to the PC for printing.
4. When the file is transferred successfully, a confirmation message displays.

NOTE

Make sure the tablet is connected to the PC network, either via Wi-Fi or LAN, before printing. For more instructions on printing, see *Printing Operation* for details.

➢ **To submit Data Logging reports in Diagnostics**

1. Tap the **Diagnostics** application from the MaxiSys Job Menu. The **Data Logging** button on the diagnostic toolbar is available throughout the whole Diagnostics operations.
2. Tap the **Data Logging** button to display the error options. Select a specific error

and tap **OK**. A submission form will display to let you fill in the report information.

3. Tap **Send** to submit the report form via the internet. A confirmation message displays when sending is successful.

4.4.1.2 *Status Information Bar*

The Status Information Bar at the top of the Main Section displays the following items:

- **Network Status Icon** — indicates whether a network is connected.
- **VCI Icon** — indicates the communication status between the tablet and the VCI device.
- **Battery Icon** — indicates the battery status of the vehicle.

4.4.1.3 *Main Section*

The Main Section of the screen varies depending on the stage of operations. The Main Section can show vehicle identification selections, the main menu, test data, messages, instructions and other diagnostic information.

4.4.1.4 *Function Buttons*

The displayed Function Buttons at this section of the screen varies depending on the stage of operations. They can be used to navigate, save or clear the diagnostic data, exit scanning as well as make other function controls. The functions of these buttons will be introduced respectively in the following sections of the corresponding test operations.

4.4.2 Screen Messages

Screen messages appear when additional input is needed before proceeding. There are mainly three types of on-screen messages as to their purposes: Confirmation, Warning, and Error.

4.4.2.1 *Confirmation Messages*

This type of messages usually displays as an “Information” screen, which informs you when you are about to perform an action that cannot be reversed or when an action has been initiated and your confirmation is needed to continue.

When a user-response is not required to continue, the message displays briefly before automatically disappearing.

4.4.2.2 *Warning Messages*

This type of messages informs you when completing the selected action may result in an irreversible change or loss of data. The typical example for this is the “Erase Codes” message.

4.4.2.3 *Error Messages*

Error messages inform you when a system or procedural error has occurred. Examples of possible errors include a disconnection or communication interruption due to certain reasons.

4.4.3 Making Selections

The Diagnostics application is a menu driven program that presents a series of choices one at a time. As you select from a menu, the next menu in the series displays. Each selection narrows the focus and leads to the desired test. Use your fingertip or the stylus pen to make menu selections.

4.5 Main Menu

The Diagnostics application allows you to establish a data link to the electronic control system of the vehicle via the VCI device for vehicle diagnosis, and service. You can operate functional tests, retrieve vehicle diagnostic information such as trouble codes, event codes and live data for various vehicle control systems, such as engine, transmission, ABS and more.

The Vehicle Diagnostics screen (*Figure 4-2 Vehicle Diagnostics Screen*) has 2 main sections:

1. **Diagnosis** — a comprehensive section which includes all available functions: reading, clearing, saving and printing diagnostic information, as well as performing active tests and special functions
2. **Service** — a separate section designed to perform vehicle scheduled service and maintenance, such as to reset the service lights and perform calibration for various systems

After a section is selected and the tablet establishes communication with the vehicle via the VCI device, the corresponding function menu or selection menu displays.

4.6 Diagnosis

There are two options available when accessing the Diagnosis section:

1. **Auto Scan** — starts auto scanning for all the available systems on the vehicle.
2. **Control Unit** — displays a selection menu of all available control units of the vehicle.

4.6.1 Auto Scan

The Auto Scan function performs a comprehensive scanning over all the systems on the vehicle's ECU in order to locate fault systems and retrieve DTCs. The sample operation interface of Auto Scan displays as below.

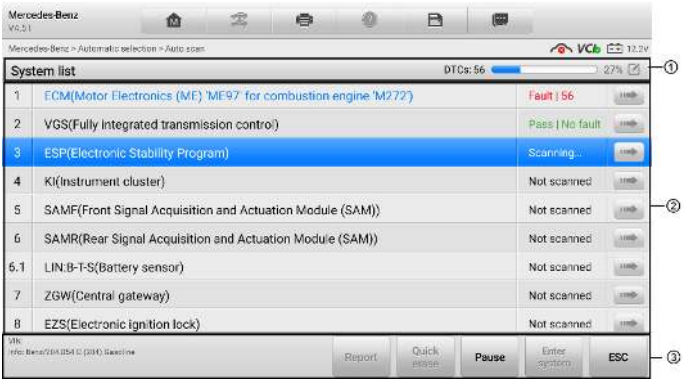


Figure 4-6 Auto Scan Operation Screen

① Navigation Bar

② Main Section

③ Function Buttons

4.6.1.1 *Navigation Bar*

- List Tab — displays the scanned data in list format.
- Progress Bar — indicates the test progress.

4.6.1.2 *Main Section*

- *List Tab*
  - Column 1 — displays the system numbers.
  - Column 2 — displays the scanned systems.
  - Column 3 — displays the diagnostic marks indicating different conditions of the test result:

- **Fault | #**: indicates there is/are detected fault code(s) present; "#" indicates the number of the detected faults.
- **Pass | No fault**: indicates the system has passed the scanning process and no fault has been detected.
- **Not Scanned**: Indicates the system has not been scanned.
- **No Response:** Indicates the system has not received a response.

Tap the  button to the right of the system item, on which you want to perform further diagnosis and other test activities. A Function Menu screen (*Figure 4-7*) shall then display.

4.6.1.3 *Function Buttons*

The table below provides a brief description of the Function Buttons' operations in Auto Scan.

Table 4-3 Function Buttons in Auto Scan

Name	Description
Report	Displays the diagnostic data in the report form.
Quick erase	Deletes codes. A warning message screen will display to inform you of possible data loss when this function is selected.
Pause	Suspends scanning and changes to show the **Continue** button.
Enter system	Enters the ECU system.
ESC	Returns to the previous screen or exit Auto Scan.

4.6.2 Control Unit

This option allows you to manually locate a required control system for testing through a series of choices. You simply follow the menu driven procedure, and make proper selection each time; the program will guide you to the diagnostic function menu after a few choices you have made.

The Function Menu options vary slightly for different vehicles. The function menu may include:

- **ECU information** — displays detailed ECU information. Select to display information screen.
- **Trouble codes** — contains Read Codes and Erase Codes. The former displays detailed DTC information retrieved from the vehicle control module, the latter facilitates you to erase DTCs and other data from the ECU.
- **Live data** — retrieves and displays live data and parameters from the vehicle's ECU.
- **Active test** — provides specific subsystem and component tests. This selection may appear as *Actuators*, *Actuator Test*, or *Function Tests*, etc., and the tests options vary depending on the manufacturer and model.
- **Special functions** — provides component adaptation or variant coding functions for custom configurations, and also allows you to reprogram adaptive values for certain components after making repairs. Depending on the vehicle, this selection may sometimes appear as *Control unit adaptations*, *Special function*, *Variant coding*, *Configuration,* etc.

NOTE

With the diagnostic toolbar on top of the screen throughout the whole diagnostic procedures, you are allowed to make various controls of the diagnostic information at any time, such as printing and saving the displayed data, getting help information, or performing data logging, etc.

➢ **To perform a diagnostic function**

1. Establish communication with the vehicle via the VCI device.
2. Identify the vehicle by selecting from the menu options.
3. Locate the required system for testing by **Auto Scan** or through menu driven selections in **Control Unit**.
4. Select the desired test from the Function Menu.

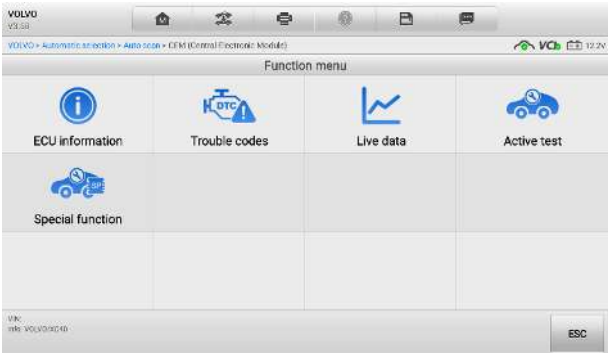


Figure 4-7 Function Menu Screen

4.6.3 ECU Information

This function retrieves and displays the specific information for the tested control unit, including unit type, version numbers and other specifications.

The sample ECU Information screen displays as below.

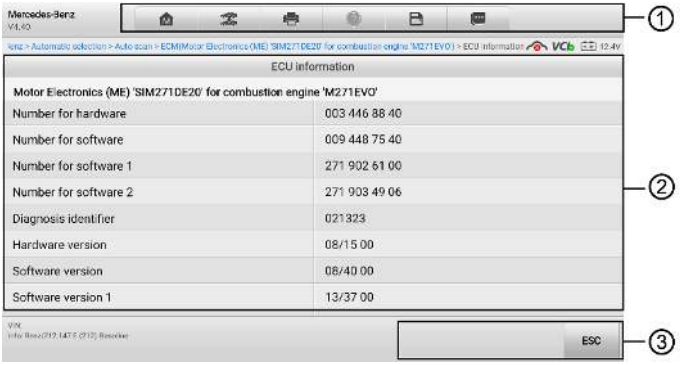


Figure 4-8 ECU Information Screen

① Diagnostics Toolbar Buttons — see *Table 4-2 Diagnostics Toolbar Buttons* for detailed descriptions of the operations for each button.

② Main Section — the left column displays the item names and the right column shows the specifications or descriptions.

③ Function Button — in this case, only an **ESC** button is available. Tap it to exit after viewing.

4.6.4 Trouble Codes

4.6.4.1 *Read Codes*

This function retrieves and displays the DTCs from the vehicle's control system. The Read Codes screen varies for each vehicle being tested. On some vehicles, freeze frame data can also be retrieved for viewing. The sample Read Codes screen displays as below:

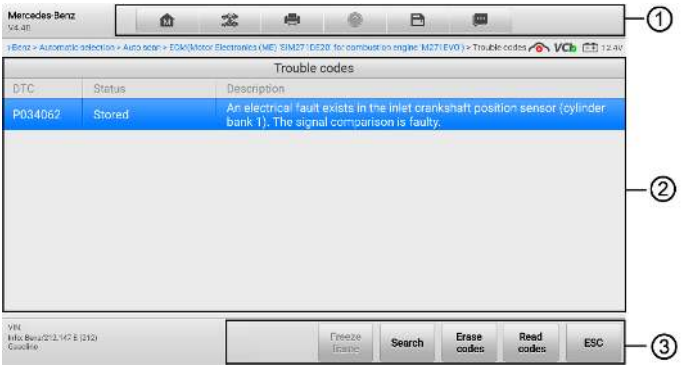


Figure 4-9 Read Codes Screen

① Diagnostics Toolbar Buttons — see *Table 4-2 Diagnostics Toolbar Buttons* for detailed descriptions of the operations for each button.

② Main Section

- Code Column — displays the retrieved codes from the vehicle.
- Status Column — indicates the status of the retrieved codes.
- Description Column — displays detailed descriptions for the retrieved codes.
- Snowflake Icon — only displays when freeze frame data is available for viewing; Selecting this icon will display a data screen, which looks very similar to the Read Codes interface, therefore same operation method may be applied.

③ Function Buttons

Table 4-4 Function Buttons in Trouble Codes

Name	Description
Freeze frame	Displays when freeze frame data is available for viewing; Tap the icon to display data screen. The Freeze Frame interface is similar to that of the Read Codes interface and share similar operations.
Search	Searches the selected DTC for additional information on the Internet.
Erase codes	Erases codes from the ECU. It is recommended that DTCs are read and needed repairs are performed before erasing codes.
Read codes	Retrieves and displays the DTCs from the vehicle control system. The Read Codes screen varies for each vehicle being tested.
ESC	Returns to the previous screen or exit Trouble Code.

4.6.4.2 *Erase Codes*

After reading the retrieved codes from the vehicle and certain repairs have been carried out, you can erase the codes from the vehicle using this function. Before performing this function, make sure the vehicle's ignition key is in the ON (RUN) position with the engine off.

➢ **To erase codes**

1. Tap **Erase Codes** from the Function Button.
2. A warning message displays to inform you of data loss when this function is applied.
   - Tap **Yes** to continue. A confirming screen displays when the operation is successfully done.
   - Tap **No** to exit.
3. Tap **ESC** on the confirming screen to exit Erase Codes.
4. Perform the Read Codes function again to check if the code erasing is successful.

4.6.5 Live Data

When this function is selected, the screen displays the data list for the selected module. The items available for any control module vary from one vehicle to another. The parameters display in the order that they are transmitted by the ECM, so expect variation among vehicles.

Gesture scrolling allows you to quickly move through the data list. Simply swipe the screen up or down to locate the data you want. The figure below shows a typical Live Data screen.

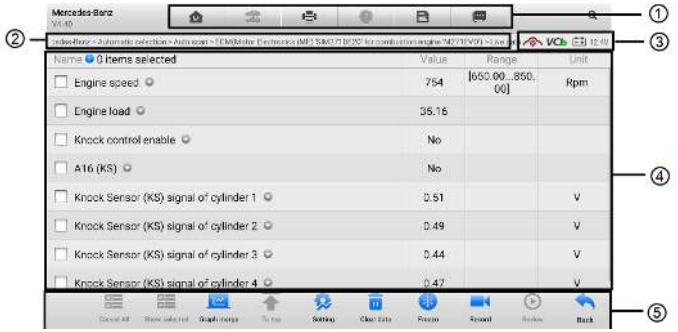


Figure 4-10 Live Data Screen

① Diagnostics Toolbar Buttons — See *Table 4-2 Diagnostics Toolbar Buttons* for detailed descriptions of the operations for each button.

② Current Directory Path

③ Status Information Bar — See *Status Information Bar* for detailed descriptions of the operations for each icon.

④ Main Section

- **Name** column — displays the parameter names.

  1) Check box — tap the check box at the left side of the parameter name to make selection of an item. Taps the check box again to deselect the item.

  2) Drop-down button — tap the drop-down button at the right side of the parameter name opens a submenu, which provides various choices for data display mode.

- **Value** column — displays the values of the parameter items.
- **Range** column — displays the minimum and the maximum value.
- **Unit** column — displays the unit for the parameters.

Display Mode

There are 4 types of display modes available for data viewing, allowing you to view various types of parameters in the most suitable way.

Tap the drop-down button on the right side of the parameter name to open a submenu. A total of 7 buttons will be displayed: The 4 buttons to the left represent different data display modes, plus one **Information** button, active when additional information is available, and one **Unit Change** button, for switching the unit of displayed data, and one **Trigger** button, tap to open the "Trigger Setting" screen.



Figure 4-11 Display Mode Screen

Each parameter item displays the selected mode independently.

- **Analog Gauge Mode** — displays the parameters in form of an analog meter graph
- **Text Mode** — this is the default mode which displays the parameters in texts and shows in list format

NOTE

Reading of status parameters, such as a switch reading, which are mostly in word form, like ON, OFF, ACTIVE, and ABORT, etc., can only be displayed in Text Mode. Whereas reading of value parameters, such as a sensor reading, can be displayed in text mode and other graph modes.

- **Waveform Graph Mode** — displays the parameters in waveform graphs.

When this mode is applied, five control buttons will appear on the right side of the parameter item, allowing you to manipulate the display status.

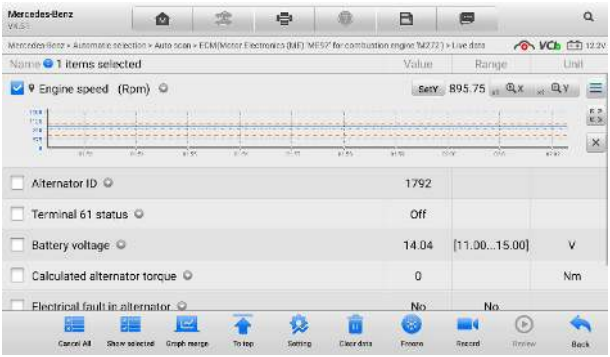


Figure 4-12 Waveform Graph Mode Screen

- **Settings** (**SetY**) — sets the minimum and maximum value of the Y axis.
- **Edit** — edits the waveform color and the line thickness.
- **Scale** — changes the scale values, which are displayed below the waveform graph. There are 4 scales available: x1, x2, x4 and x8.
- **Zoom-in** — displays the selected data graph in full screen.
- **Exit** — exits the waveform graph mode.

- **Full Screen Display** — this option is only available in the waveform graph mode, and mostly used in Graph Merge status for data comparison. There are three control buttons available on the top right side of the screen under this mode.
  - **Edit** — opens an edit window, in which you can set the waveform color and the line thickness displayed for the selected parameter item.
  - **Scale** — changes the scale values, which are displayed below the waveform graph. There are 4 scales available: x1, x2, x4 and x8.
  - **Zoom-out** — exits full screen display.
  - **Exit** — exits the waveform graph mode.

➢ **To edit the waveform color and line thickness in a data graph**

1. Select 1 to 3 parameter items to display in Waveform Graph mode.
2. Tap the **Zoom-in** button on the right to display the data graph in full screen.
3. Tap the **Edit** button, and an edit window displays.
4. Select a parameter item on the left column.
5. Select a desired sample color from the second column.
6. Select a desired sample line thickness from the right column.

7. Repeat step 4-7 to edit the waveform for each parameter item.
8. Tap **Done** to save the setting and exit, or tap **Cancel** to exit without saving.

- **Digital Gauge Mode** — displays the parameters in form of a digital gauge graph.

Trigger Setting

On the trigger setting screen, you can set a standard range by filling in a Minimum value and a Maximum value. When exceeding this range, the trigger function will be executed and the device will automatically record and save the generated data. You can check the saved live data by tapping the "Review" button at the bottom of the screen.

Tap the drop-down button on the right side of the parameter name to open a submenu. The **Trigger** button is the last one in the submenu. Tap to display the Trigger Setting dialog box.



Figure 4-13 Trigger Setting Dialog Box

Two buttons and two input boxes are available in the Trigger Setting dialog box.

- **Trigger** — switches the trigger on and off. The trigger is **ON** by default.
- **Buzzer alarm** — switches the alarm on and off. The alarm function makes a beep sound as an alert when the data reading reaches the preset minimum or maximum point. The buzzer alarm will only sound at the first trigger.
- **MIN** — displays a virtual keyboard to enter the required lower limit value.
- **MAX** — displays a virtual keyboard to enter the required upper limit value.

➢ **To set a trigger**

1. Tap the drop-down button on the right side of the parameter name to open a submenu.
2. Tap the **Trigger** button on the right side of the submenu to open the trigger settings dialog box.
3. Tap the **MIN** input box and enter the required minimum value.
4. Tap the **MAX** input box and enter the required maximum value.
5. Tap **OK** to save the setting and return to the Live Data screen; or tap **Cancel** to exit without saving.

When the trigger is successfully set, a trigger mark displays in front of the parameter name. The mark is gray when it is not triggered, and displays orange when triggered. Moreover, two horizontal lines display on each of the data graphs (when Waveform Graph Mode is applied) to indicate the alarm point. The limit lines are shown in different colors to differentiate them from the parameter waveforms.

⑤ Function Buttons

The operations of all the available function buttons on Live Data screen are described below:

- **Cancel All** — cancels all selected parameter items.
- **Show selected/Show all** — switches between the two options; one displays the selected parameter items, the other displays all the available items.
- **Graph Merge** — merges selected data graphs (for Waveform Graph Mode only). This function is very useful when making comparison between different parameters.

NOTE

This mode supports Graph Merge for 2 to 3 parameter items only, so select no less than 2 or no more than 3 items each time when making graph merge.

To cancel Graph Merge mode, tap the drop-down button on the right side of the parameter name, and select a data display mode.

- **To top** — moves a selected data item to the top of the list.
- **Setting** — sets recording duration. Five options are available: 5 seconds, 15 seconds, 30 seconds, 60 seconds and 90 seconds.

➢ **To set live data record duration**

1. Tap **Setting** button at the bottom of the Live Data screen.
2. Tap the > button to the right of **Recording time after trigger** bar and select a time length.
3. Tap **OK** to save the setting and return to the Live Data Setting screen; or tap the X button at the upper right corner to exit without saving.

4. Tap **Done** at the upper right corner of the Live Data Setting screen to confirm and save the setting, and return to the Live Data screen; or tap **Cancel** to exit without saving.

- **Clear data** — clears all previously retrieved parameter values at a cutting point whenever you choose.
- **Freeze** — displays the retrieved data in freeze mode.
  - **Resume** — exits the freeze data mode and return to normal data display.
  - **Previous frame** — moves to the previous frame in the freeze data.
  - **Play/Pause** — plays/pauses the frozen data.
  - **Next frame** — moves to the next frame in the freeze data.
- **Record** — starts recording the live data of the selected data items. Tap the **Record** button at the bottom of the Live Data screen. A message will display prompting user to select parameters to record. Tap the **Got It** button to confirm. Scroll down and select data to record. Tap the **Record** button to start recording. Tap the **Resume** button to stop recording. The recorded live data can be viewed in the Review section at the bottom of the Live Data screen. The recorded data can also be reviewed in the Data Manager application.
- **Review** — review the recorded data. Tap the **Review** button to display a recording list, and select one item to review.

NOTE

Only the data recorded during the current operation can be reviewed on the Live Data screen. All the historical recorded data can be reviewed in "Review Data" in the Data Manager application.

- **Previous Frame** — switches to the previous frame of recorded data.
- **Next Frame** — switches to the next frame of recorded data.
- **Play/Pause** — plays/pauses the recorded data.
- **Show Selected** — displays the selected parameter items.
- **Graph Merge** — merges selected data graphs.
- **Back** — exits the review, and return to the Live Data screen.

- **Back** — returns you to the previous screen or exit the function.

4.6.6 Active Test

The Active Test function is used to access vehicle-specific subsystem and component tests. Available tests vary depending on the manufacturer, year, and model, and only the available tests display in the menu.

During an active test, the tester outputs commands to the ECU in order to drive the actuators. This test determines the integrity of the system or parts by reading the engine ECU data, or by monitoring the operation of the actuators, such as switching a solenoid, relay, or switch, between two operating states.

Selecting Active Test opens a menu of test options that varies by make and model. Selecting a menu option activates the test. Follow all screen instructions while performing tests. The content and pattern of the on-screen information vary according to the type of test being performed. Some toggle and variable control tests display Active Test Controls at the top of the screen with data stream information below, or vice versa.

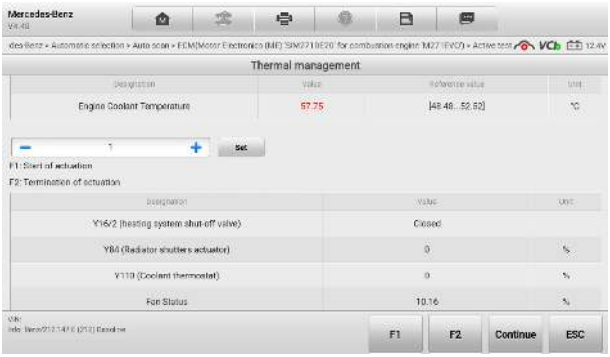


Figure 4-14 Active Test Screen

The function buttons at the lower right corner of the Active Test screen manipulate the test signals. The operational instructions are displayed on the main section of the test screen. Simply follow the on-screen instructions and make appropriate selections to complete the tests. Each time when an operation is successfully executed, message such as “Command Finished”, “Activation Successful”, or something similar displays.

Tap the **ESC** function button to exit the test when finished.

4.6.7 Special Functions

These functions perform various component adaptations, allowing you to recalibrate or configure certain components after making repairs or replacement.

The main section of the Adaptation Operation screen displays a list of operational and vehicle status information, which mainly consists of four parts:

1. The first part in the top line shows the description of the operation being performed, and the execution status is displayed on the right, such as Completed, Activated, etc.
2. The second part shows the preconditions or requirements for executing the operation being selected.
3. The third part displays the current conditions of the vehicle control module

being learned for comparison to the preconditions suggested by the second part. If the current condition of the control module is out of the suggested limit value, you must adjust the vehicle condition to meet the requirement.

4. The last part displays the instruction of how to use the function button at the lower right corner of the screen to manipulate the teach-in operations.

Read the information carefully and check the vehicle condition accordingly, when you are sure that the vehicle is ready to perform the adaptation, simply follow the instruction provided to make appropriate selections. When the operation is done, an execution status message such as Completed, Finished or Successful, displays.

Tap the **ESC** button to exit the function.

4.7 Service

The Service section is specially designed to provide you with quick access to the vehicle systems for various scheduled service and maintenance performances. The typical service operation screen is a series of menu driven executive commands. By following the on-screen instructions to select appropriate execution options, enter correct values or data, and perform necessary actions, the system will guide you through the complete performance for various service operations.

The most commonly performed service functions include:

- Oil Reset Service
- TPMS Programming Service
- EPB Service
- ABS/SRS Services
- SAS Calibration Service
- DPF Regeneration Service

4.7.1 Function Descriptions

This section describes the main functions for vehicle service:

4.7.1.1 *Oil Reset Service*

This function allows you to perform reset for the Engine Oil Life system, which calculates an optimal oil life change interval depending on the vehicle driving conditions and climate. The Oil Life Reminder must be reset every time the oil is changed, so the system can calculate when the next oil change is required.

4.7.1.2 *Tire Pressure Monitor System (TPMS) Service*

This function allows you to quickly look up the tire sensor IDs from the vehicle's ECU, as well as to perform TPMS programming and reset procedures after tire sensors are replaced.

4.7.1.3 *Electric Parking Brake (EPB) Service*

This function has a multitude of usages to maintain the electronic braking system safely and effectively. The applications include deactivating and activating the brake control system, assisting with brake fluid control, opening and closing brake pads, and setting brakes after disc or pad replacement, etc.

4.7.1.4 *ABS/SRS Services*

This function allows you to perform various bi-directional tests to check the operating conditions of both the Anti-lock Braking System and the Supplemental Restraint System, such as Automated Bleeding, Pump Motor Test, and checking Module information, etc.

4.7.1.5 *Steering Angle Sensor (SAS) Service*

This service function allows you to perform calibration for the Steering Angle Sensor, which permanently stores the current steering wheel position as the straight-ahead position in the steering angle sensor EEPROM. On successful completion of the calibration, the steering angle sensor fault memory is automatically cleared.

4.7.1.6 *DPF Regeneration Service*

The Diesel Particulate Filter service function performs the regeneration procedure which is the DPF cleaning operation to clear the blockage through continuous burning of the particulate matter captured in the DPF filter. If the DPF light on the vehicle comes on and you successfully complete a DPF regeneration cycle, you will notice that the DPF light will automatically turn off.

4.8 Generic OBDII Operations

A fast-access option for OBDII/EOBD vehicle diagnosis is available on the Vehicle Menu screen (see *Figure 4-1 Vehicle Menu Screen*). This option presents a quick way to check for DTCs, isolate the cause of an illuminated malfunction indicator lamp (MIL), check

monitor status prior to emissions certification testing, and perform a number of other services that are emissions-related. The OBD direct access option is also used for testing OBDII/EOBD compliant vehicles that are not included in the database.

Functions of the diagnostics toolbar buttons at the top of the screen are the same as those available for specific vehicle diagnostics. See *Figure 4-2 Sample Vehicle Diagnostics Screen* for details.

4.8.1 General Procedure

➢ **To access the OBDII/EOBD diagnostics functions**

1. Tap the **Diagnostics** application from the MaxiSys Job Menu. The Vehicle Menu displays.
2. Tap the **EOBD** button. There are two options to establish communication with the vehicle.

- **Auto Scan** — when this option is selected the diagnostic tool attempts to establish communication using each protocol in order to determine which one the vehicle is broadcasting on.
- **Protocol** — when this option is selected the screen opens a submenu of various protocols. A communication protocol is a standardized way of data communication between an ECM and a diagnostic tool. Global OBD may use several different communication protocols.

3. Select a specific protocol under the **Protocol** option. Wait for the OBDII Diagnostic Menu to appear.

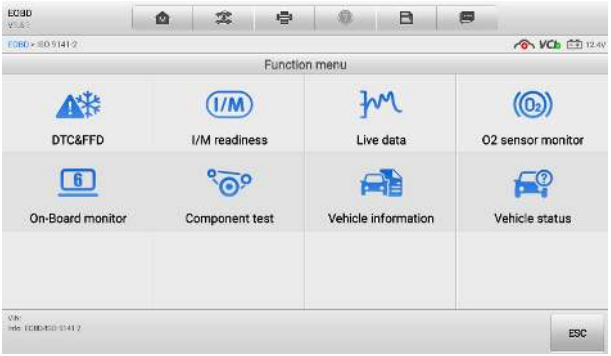


Figure 4-15 OBDII Diagnostic Menu

4. Select a function option to continue.

- **DTC & FFD**
- **I/M readiness**
- **Live data**
- **O2 sensor monitor**
- **On-Board monitor**
- **Component test**
- **Vehicle information**
- **Vehicle status**

NOTE

Some functions are supported only on certain vehicle makes.

4.8.2 Function Descriptions

This section describes the various functions of each diagnostic option:

4.8.2.1 *DTC & FFD*

When this function is selected, the screen displays a list of Stored Codes and Pending Codes. When the Freeze Frame data of certain DTCs are available for viewing, a snowflake button will display on the right side of the DTC item. The Erase Codes function can be applied by tapping the function button at the lower bottom of the screen.

- **Stored Codes**

Stored codes are the current emission related DTCs from the ECM of the vehicle. OBDII /EOBD Codes have a priority according to their emission severity, with higher priority codes overwriting lower priority codes. The priority of the code determines the illumination of the MIL and the codes erase procedure. Manufacturers rank codes differently, so expect to see differences between makes.

- **Pending Codes**

These are codes whose setting conditions were met during the last drive cycle, but need to be met on two or more consecutive drive cycles before the DTC actually sets. The intended use of this service is to assist the service technician after a vehicle repair and after clearing diagnostic information, by reporting test results after a driving cycle.

1) If a test failed during the driving cycle, the DTC associated with that test is reported. If the pending fault does not occur again within 40 to 80 warm-up cycles, the fault is automatically cleared from memory.

2) Test results reported by this service do not necessarily indicate a faulty component or system. If test results indicate another failure after additional driving, then a DTC is set to indicate a faulty component or system, and the MIL is illuminated.

- **Freeze Frame**

In most cases the stored frame is the last DTC that occurred. Certain DTCs, which have a greater impact on vehicle emission, have a higher priority. In these cases, the top prioritized DTC is the one for which the freeze frame records are retained. Freeze frame data includes a "snapshot" of critical parameter values at the time the DTC is set.

- **Erase Codes**

This option is used to clear all emission related diagnostic data such as, DTCs, freeze frame data and manufacturer specific enhanced data from the vehicle's ECM, and reset the I/M Readiness Monitor Status for all vehicle monitors to Not Ready or Not Complete status.

A confirmation screen displays when the clear codes option is selected to prevent accidental loss of data. Select **Yes** on the confirmation screen to continue or **No** to exit.

4.8.2.2 *I/M Readiness*

This function is used to check the readiness of the monitoring system. It is an excellent function to use prior to having a vehicle inspected for compliance to a state emissions program. Selecting I/M Readiness opens a submenu with two choices:

- **Since DTCs Cleared** — displays the status of monitors since the last time the DTCs are erased.
- **This Driving Cycle** — displays the status of monitors since the beginning of the current drive cycle.

4.8.2.3 *Live Data*

This function displays the real time PID data from ECU. Displayed data includes analog inputs and outputs, digital inputs and outputs, and system status information broadcast on the vehicle data stream.

Live data can be displayed in various modes, see *Live Data* for detailed information.

4.8.2.4 *O2 Sensor Monitor*

This option allows retrieval and viewing of O2 sensor monitor test results for the most recently performed tests from the vehicle's on-board computer.

The O2 Sensor Monitor test function is not supported by vehicles which communicate using a controller area network (CAN). For O2 Sensor Monitor tests results of CAN-equipped vehicles, refer to *On-Board Monitor*.

4.8.2.5 *On-Board Monitor*

This option allows you to view the results of On-Board Monitor tests. The tests are useful after servicing or after erasing a vehicle's control module memory.

4.8.2.6 *Component Test*

This service enables bi-directional control of the ECM so that the diagnostic tool is able to transmit control commands to operate the vehicle systems. This function is useful in determining whether the ECM responds to a command well.

4.8.2.7 *Vehicle Information*

The option displays the vehicle identification number (VIN), the calibration identification, and the calibration verification number (CVN), and other information of the vehicle.

4.8.2.8 *Vehicle Status*

This item is used to check the current condition of the vehicle, including communication protocols of OBDII modules, retrieved codes amount, status of the Malfunction Indicator Light (MIL), and other additional information.

4.9 Exiting Diagnostics

The Diagnostics application remains open as long as there is an active communication with the vehicle. You must exit the diagnostics operation interface to stop all communications with the vehicle before closing the Diagnostics application.

NOTE

Damage to the vehicle electronic control module (ECM) may occur if communication is disrupted. Make sure all connections, such as USB cable and wireless connection, are properly connected at all times during testing. Exit all tests before disconnecting the test connection or powering down the tool.

➢ **To exit the Diagnostics application**

1. From an active diagnostic screen, tap the **Back** or **ESC** function button to exit a diagnostic session step-by-step; Or
2. Tap the **Vehicle Swap** button on the diagnostics toolbar to return to the Vehicle Menu screen.
3. From the Vehicle Menu screen, tap the **Home** button on the top toolbar; or tap the **Back** button on the navigation bar at the bottom of the screen. Or
4. Tap the **Home** button on the diagnostics toolbar to exit the application directly and go back to the MaxiSys Job Menu.

Now, the Diagnostics application is no longer communicating with the vehicle and it is safe to open other MaxiSys applications, or exit the MaxiSys Diagnostic System and return to the Home screen.

5 TPMS

The TPMS application is used to check the TPMS sensor conditions, program the MX-Sensor, perform the TPMS Relearn procedure and basic TPMS diagnostic functions.

NOTE

The TPMS service operation is available for MS906 Pro-TS only.

5.1 Navigation

Tap **TPMS** from the MaxiSys Job Menu, the Vehicle Menu displays. Select the specific vehicle to perform TPMS service.



Figure 5-1 Vehicle Menu Screen

A TPMS icon displays on the Manufacturer button indicating the TPMS service is available. Detailed description of the buttons, see *Vehicle Menu Layout*.

After selecting the vehicle brand, the TPMS button on the system Navigation bar at the bottom of the screen shall display a green badge.

5.1.1 TPMS Service Screen Layout

The screens in TPMS service application typically include four sections.

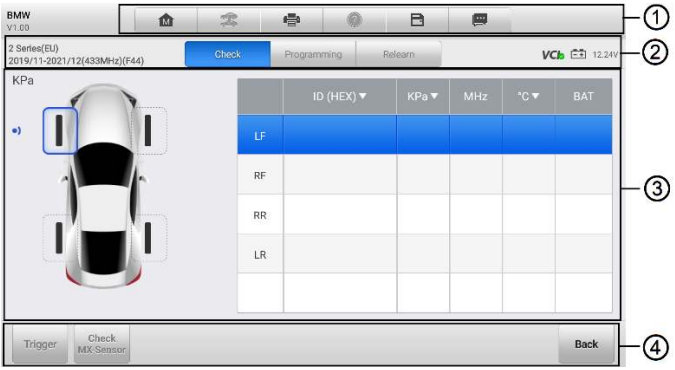


Figure 5-2 TPMS Service Menu Screen

① Top Toolbar Buttons

② Navigation Tab

③ Main Section

④ Function Buttons

5.1.1.1 *Top Toolbar Buttons*

The top toolbar contains a number of buttons that allow you to print or save the displayed data and make other controls. For more information, see *Table 4-2 Diagnostics Toolbar Buttons*.

5.1.1.2 *Navigation Tab*

The navigation tab at the top of the Main Section screen contains the following items:

- Check tab — displays the triggered sensor data.
- Programming tab — displays the triggered/retrieved sensor IDs and new programmed sensor IDs.
- Relearn tab — displays the OEM sensor manufacturer and part number, sensor frequency and relearn procedures.

5.1.1.3 *Main Section*

The main section of the screen varies depending on the stage of operations. The main section can show the TPMS sensor conditions, such as sensor ID, pressure, temperature and battery status, and the specific relearn procedures.

5.1.1.4 *Function Buttons*

The displayed function buttons at this section of the screen varies depending on the stage of operations. They can be used to trigger the TPMS sensor, create sensor IDs, program MX-Sensor, read and clear codes, return to the previous screen or exit the function. The functions of these buttons will be introduced respectively in the following sections.

5.2 Check Operations

The sensor check function allows activating of TPMS sensor to view sensor data such as sensor ID, tire pressure, tire temperature, sensor battery, sensor position, and sensor frequency. It also sends the sensor data to vehicle's ECU to let the ECU learn the positions of sensors whenever wheels are rotated or sensors are replaced.



Figure 5-3 Check Function Screen

5.2.1 Main Section

Column 1 — displays the wheel positions.

Column 2 — displays sensor IDs.

Column 3 — displays the tire pressure.

Column 4 — displays the sensor frequency.

Column 5 — displays the tire temperature.

Column 6 — displays the sensor battery condition.

NOTE

You can choose a unit on the table header according to your preference.

➢ **To check TPMS sensor**

1. Tap the **Check** tab.
2. Tap the desired wheel position on the vehicle thumbnail. Hold the tablet with its top right corner (with the TPMS service symbol) close to the tire sidewall near the valve stem, and then press the **Trigger** button.
3. The tablet will send low frequency signal to trigger the sensor.

NOTE

The tablet will perform TPMS check in a sequence of FL (front left), FR (front right), RR (rear right), RL (rear left) and SP (spare, if any).

4. The sensor data of the selected wheel will display on the table of the screen once the sensor is successfully activated and decoded.
5. Tap **Back** to exit.

NOTE

Wheel with a feedback icon, red or green vertical rectangle, indicates sensor trigger has been finished. For details, see *Table 5-1 Possible results for triggering*.

Table 5-1 Possible results for triggering

Icon	Results	Description
(Green)	Successful Sensor Read	TPMS sensor is successfully activated and decoded. The table on the right side of the screen displays the sensor information.
(Red)	Failed Sensor Read	• If the search period expires and no sensor is activated or decoded, the sensor may be mounted incorrectly or cannot function. The table on the right side of the screen displays “Failed”. • If a sensor with a duplicate ID has been read, the screen displays a message “Sensor ID duplicated”. In this case, repeat the test procedure.

NOTE

With Ford sensors, the tablet should be held 180 degree away from the stem. Please refer to the user manual from the vehicle maker.

5.3 Programming Operations

The programming function is used to program the sensor data to the MX-Sensor and replace the faulty senor (poor battery life or malfunction). The MS906 Pro-TS is easy to use with a proven efficiency and guaranteed accurate results.

There are four options available when programming MX-Sensor using the tablet: Copy by Activation, Copy by OBD, Auto Create, and Manual Create.



Figure 5-4 Programming Function Screen

Main Section

- Column 1 — displays wheel positions.
- Column 2 — displays the new created sensor IDs.
- Column 3 — displays the retrieved sensor IDs by activation or by OBD.

NOTE

Programming function will only work with Autel's MX-Sensor. Currently, there are two models available: Clamp-in Sensor and Snap-in Sensor, both with two types, one in orange color with 433 MHz frequency, and one in dark gray color with 315 MHz frequency. The Clamp-in Sensor is taken as an example in this manual. Please choose the proper MX-Sensor when programming.

5.3.1 Copy by Activation

This function allows user to bypass OBDII and automatically write in the retrieved original sensor data to the MX-Sensor. It is used after the original sensor is triggered.



Figure 5-5 Copy by Activation Function Main Screen

➢ **To copy by activation**

1. After performing the Check function (see *Check Operations*), trigger marks with sensor IDs will appear on the table in the Programming screen.
2. Select the corresponding wheel, and then tap **Copy by Activation** button.
3. Place the MX-Sensor near the top right of the tablet and tap **OK** to start programming the retrieved sensor ID to the MX-Sensor.



Figure 5-6 Copy by Activation Function Screen

4. The programed sensor ID will appear on Column 2.

5.3.2 Copy by OBD

This function allows users to write the saved sensor information into MX-Sensor after performing **Read IDs from Vehicle** in **Relearn** function.



Figure 5-7 Copy by OBD Function Main Screen

➢ **To copy by OBD**

1. After performing **Read IDs from Vehicle** in **Relearn** function, OBD marks with the sensor IDs will appear on the table in Programming screen.
2. Select the specific wheel on the screen, and then tap **Copy by OBD** button.
3. Place the proper MX-Sensor near the top right of the tablet, and tap **OK** to start programming the saved sensor information to the MX-Sensor.
4. The programmed sensor ID will appear on Column 2 of the table.

NOTE

If you have performed both **Check** and **Read IDs from Vehicle** functions, you can select either **Copy by Activation** or **Copy by OBD** to program the retrieved sensor ID to the MX-Sensor.

5.3.3 Auto Create

This function is designed to program the MX-Sensor by applying random IDs created according to the vehicle, when it is unable to obtain the original sensor ID.

➢ **To Auto Create**

1. Tap Programming tab.
2. Select the specific wheel on the screen.
3. Tap the **Auto Create** function button on the screen.
4. A message with sensor ID will prompt. Place the proper MX-Sensor near the top right of the tablet and tap **OK** to write the new created sensor ID into the MX-Sensor.

5. After programming is finished, the new programmed MX-Sensor ID will display on Column 2 of the table.

NOTE

For some models, it is necessary to perform Relearn procedure after installing the new MX-Sensor programmed by the way of Auto Create.

5.3.4 Copy by Input

This function allows you to manually enter sensor IDs. You can enter a random ID or the original sensor ID.

NOTE

Do not enter the same ID for different sensors.

➢ **To Copy by Input**

1. Tap the **Programming** tab.
2. Select the specific wheel on the screen.
3. Tap **Copy by Input** button.
4. Enter the characters in the prompted screen. Tap **OK** to finish and save the sensor ID, or **No** to exit.

NOTE

Sensors from different manufacturers may have different ID character length limits. The tablet will automatically recognize character length of the OEM sensor ID, and prevent further input into the textbox when the limit is reached.

5. Place the proper MX-Sensor near the top right of the tablet and tap **OK** to start programming.

NOTE

For some models, if a random ID is entered, please perform Relearn function after programming is finished; if the original sensor ID is entered, there is no need to perform Relearn function.

5.4 Relearn Operations

This function allows quick access to the vehicle's ECU, performing TPMS diagnostics, reading IDs from vehicle, writing IDs to the vehicle and reading/ clearing codes of tire pressure monitoring system.

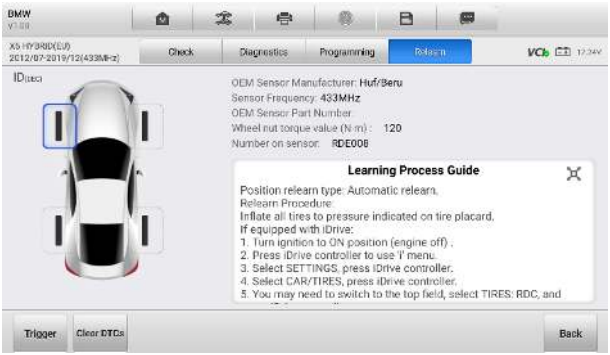


Figure 5-8 Relearn Function Main Screen

The OEM sensor information and specification, and relearn procedure for each vehicle will display on the right side of the screen. Please read the relearn procedure carefully before performing the relearn function.

➢ **To perform TPMS Relearn function**

1. Establish the communication with the vehicle via the MaxiVCI V200. Power on the tablet.
2. Turn the ignition on but do not start the engine.
3. Tap **Relearn** tab on the screen and select the specific function to continue. Details are explained in the following sections.

5.4.1 OBDII Relearn

This function allows writing the sensor IDs to the TPMS ECU without performing other procedures.

NOTE

Make sure all sensors are checked before performing the OBDII Relearn function.

➢ **To perform OBDII Relearn function**

1. Tap **OBDII Relearn** to write IDs to the vehicle directly without performing further procedures.
2. A message will appear when the sensor IDs are successfully written.

5.4.2 Read IDs from vehicle

This function will read sensor IDs from the vehicle directly.

➢ **To read IDs from vehicle**

1. Tap **Read IDs from vehicle** in the Relearn screen.
2. The tablet will display the sensor IDs and positions for you to view. Tap **OK** to save data for future review, or **Back** to exit.

5.4.3 Read DTC

➢ **To read DTCs**

1. Tap **Read DTC** button from the **Relearn** screen.
2. A data list of TPMS DTCs retrieved from the vehicle's ECU will show up.

For more information about read codes, see *Read Codes*.

5.4.4 Clear DTC

➢ **To clear DTCs**

1. Tap **Clear DTC** from the **Relearn** screen.
2. The tablet will show a warning message for you to confirm. Tap **Yes** to continue, or **No** to exit.
3. If the erase command is sent successfully, the confirming screen will display. Tap **ESC** on the confirming screen to exit Clear DTC.
4. Run **Read DTC** again to ensure the operation is successful.

For more information about DTC erasing, see *Erase Codes*.

6 Service

The Service application is specially designed to provide quick access to the vehicle systems for various scheduled service and maintenance tasks. The typical service operation screen is a series of menu driven executive commands. Follow on-screen instructions to select appropriate execution options, enter correct values or data, and perform necessary actions. The application will display detailed instructions to complete selected service operations.

After entering each special function, the screen will display two application choices: **Diagnosis** and **Hot Functions**. The **Diagnosis** enables the reading and clearing of codes which is sometimes necessary after completing certain special functions. **Hot Functions** consists of sub functions of the selected special function.

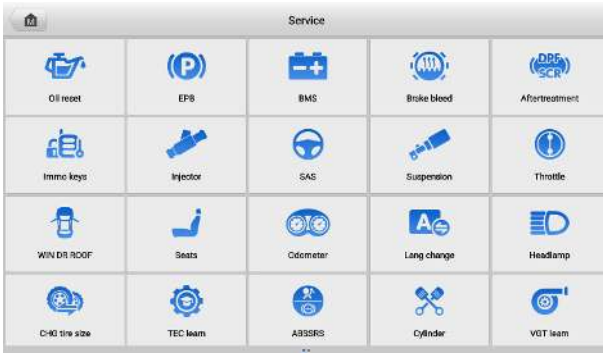


Figure 6-1 Service Menu

Several most commonly used services are described in this chapter.

6.1 Oil Reset

Perform reset for the Engine Oil Life system, which calculates an optimal oil life change interval depending on the vehicle driving conditions and climate. The Oil Life Reminder must be reset each time the oil is changed, so the system can calculate when the next oil change is required.

NOTE

1. Always reset the engine oil life to 100% after every oil change.
2. All required work must be carried out before the service indicators are reset. Failure to do so may result in incorrect service values and cause DTCs to be stored by the relevant control module.
3. For some vehicles, the scan tool can reset additional service lights such as maintenance cycle and service interval. On BMW vehicles for example, service resets include engine oil, spark plugs, front/rear brakes, coolant, particle filter, brake fluid, micro filter, vehicle inspection, exhaust emission inspection and vehicle checks.

6.2 Electric Parking Brake (EPB)

This function has a multitude of usages to maintain the electronic braking system safely and effectively. The applications include deactivating and activating the brake control system, assisting with brake fluid control, opening and closing brake pads, and setting brakes after disc or pad replacement.

6.2.1 EPB Safety

It can be dangerous to perform Electric Parking Brake (EPB) system maintenance, so before you begin the service work, please keep these rules in mind.

- ✓ Ensure that you are fully familiar with the braking system and its operation before commencing any work.
- ✓ The EPB control system may be required to be deactivated before carrying out any maintenance/diagnostic work on the brake system. This can be done from the tool menu.
- ✓ Only perform maintenance work when the vehicle is stationary and on level ground.
- ✓ Ensure that the EPB control system is reactivated after the maintenance work has been completed.

NOTE

Autel accepts no responsibility for any accident or injury arising from the maintenance of the Electric Parking Brake system.

6.3 Tire Pressure Monitoring System (TPMS)

This function allows you to quickly look up the tire sensor IDs from the vehicle's ECU, as well as to perform TPMS replacement and reset procedures after tire sensors are replaced.

6.4 Battery Management System (BMS)

The Battery Management System (BMS) allows the tool to evaluate the battery charge state, monitor the close-circuit current, register the battery replacement, activate the rest state of the vehicle, and charge the battery via the diagnostic socket.

NOTE

- This function is not supported by all vehicles.
- The sub functions and actual test screens of the BMS may vary by vehicle, please follow the on-screen instructions to make correct option selection.

The vehicle may use either a sealed lead-acid battery or an AGM (Absorbed Glass Mat) battery. Lead acid battery contains liquid sulphuric acid and can spill when overturned. AGM battery (known as VRLA battery, valve regulated lead acid) also contains sulphuric acid, but the acid is contained in glass mats between terminal plates.

It is recommended that the replacement aftermarket battery has the same specifications, such as capacity and type, as the exiting battery. If the original battery is replaced with a different type of battery (e.g. a lead-acid battery is replaced with an AGM battery) or a battery with a different capacity (mAh), the vehicle may require reprogramming of the new battery type, in addition to, performing the battery reset. Consult the vehicle manual for additional vehicle-specific information.

6.5 Immobilizer (IMMO) Keys

An immobilizer is an anti-theft mechanism that prevents an automobile's engine from starting unless the correct ignition key or other device is present. This device prevents thieves from starting the car by a method known as hot wiring. Most new vehicles have an immobilizer as standard equipment. An important advantage of this system is that it doesn't require the car owner to activate it; it operates automatically. An immobilizer is considered as providing much more effective anti-theft protection than an audible alarm alone; many auto insurance companies offer lower rates for vehicles that are equipped with an immobilizer.

As an anti-theft device, an immobilizer disables one of the systems needed to start a car's engine, usually the fuel supply or the ignition. This is accomplished by radio frequency identification between a transponder in the ignition key and a device called a radio frequency reader in the steering column. When the key is placed in the ignition, the

transponder sends a signal with a unique identification code to the reader, which relays it to a receiver in the vehicle's computer control module. If the code is correct, the computer allows the fuel supply and ignition systems to operate and start the car. If the code is incorrect or absent, the computer disables the system, and the car will be unable to start until the correct key is placed in the ignition.

The IMMO Keys service can disable a lost vehicle key and program the replacement key fob. One or more replacement key fobs can be programmed.

6.6 Steering Angle Sensor (SAS)

The SAS Calibration permanently stores the current steering wheel position as the straight-ahead position in the steering angle sensor EEPROM. Therefore, the front wheels and the steering wheel must be set exactly to the straight-ahead position before calibration. In addition, the vehicle identification number (VIN) is also read from the instrument cluster and stored permanently in the steering angle sensor EEPROM. On successful completion of calibration, the steering angle sensor fault memory is automatically cleared.

Calibration must always be carried out after the following operations:

- Steering wheel replacement
- Steering angle sensor replacement
- Any maintenance that involves opening the connector hub from the steering angle sensor to the column
- Any maintenance or repair work on the steering linkage, steering gear or other related mechanism
- Wheel alignment or wheel track adjustment
- Accident repairs where damage to the steering angle sensor or assembly, or any part of the steering system may have occurred

NOTE

1. Autel accepts no responsibility for any accident or injury arising from servicing the SAS system. When interpreting DTCs retrieved from the vehicle, always follow the manufacturer's recommendation for repair.
2. All software screens shown in this manual are examples, actual test screens may vary by the vehicle. Pay attention to the menu titles and onscreen instructions to make correct option selections.
3. Before starting procedure, make sure vehicle has an ESC button. Look for button on dash.

7 ADAS

Advanced Driver Assistance Systems (ADAS) is an array of vehicle systems that aid the driver either through passive alerts or by active control of the vehicle to drive safer and with greater awareness and precision.

Cameras, sensors, ultrasound, radar and LIDAR are some of the systems used to capture the driving environment data, including travelling or static vehicles position, pedestrian location, road sign, driving lane and intersection detection, road (curves) and driving conditions (poor visibility or evening driving), use that information to instruct the vehicle to take its predetermined action. Cameras, sensors and sensing systems are typically located in front and rear bumpers, windshield, front grill and side and rear view mirrors.

Autel ADAS Calibration Tool provides comprehensive and precise ADAS calibration.

1. Covers many vehicle makes, including Benz, BMW, Audi, Volkswagen, Porsche, Infiniti, Lexus, GM, Ford, Volvo, Toyota, Nissan, Honda, Hyundai, and Kia.
2. Supports the calibration of multiple driver assistant systems, including Adaptive. Cruise Control (ACC), Night Vision System (NVS), Lane Departure Warning (LDW), Blind Spot Detection (BSD), Around View Monitoring (AVM), Rear Collision Warning (RCW) and Heads-up Displays (HUD).
3. Supplies graphic illustrations and step-by-step instructions.
4. Provides demos to guide the technician through the calibration.



Figure 7-1 ADAS Introduction Screen

8 Battery Test

The MaxiBAS BT506 is a battery and electrical system analysis tool that uses Adaptive Conductance, an advanced battery analysis method to produce a more accurate examination of the battery's cold cranking ability and reserve capacity, which is vital to determining a battery's true health. The MaxiBAS BT506 enables technicians to view the health status of the vehicle's battery and electrical system. Together with the MaxiBAS BT506, this application can complete battery & starting and charging system tests and display the test results.

8.1 MaxiBAS BT506 Tester

8.1.1 Function Description

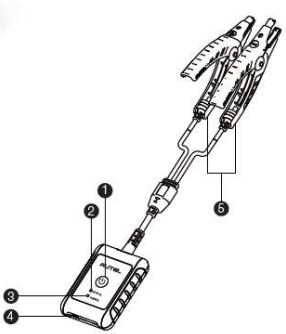


Figure 8-1 MaxiBAS BT506 Tester

① Power Button

② Status LED

③ Power LED

④ USB Port

⑤ Battery Clamp Cable

Table 8-1 LED Description

LED	Color	Description
Status LED	Flashing Green	The tester is communicating via USB cable.
	Flashing Blue	The tester is communicating via Bluetooth.
	Flashing Red	Battery clamps are connected to the wrong battery terminals.
Power LED	Solid Green	The tester is powered on and the battery is sufficiently charged.
	Flashing Green	The tester is charging. (Becomes solid green when battery is fully charged.)
	Solid Red	The device is in boot mode.
	Flashing Red	The battery level is low. Please charge.

8.1.2 Power Sources

The MaxiBAS BT506 tester can receive power from the following sources:

- Internal Battery Pack
- AC/DC Power Supply

IMPORTANT

Do not charge the battery when the temperature is below 0°C (32°F) or above 45°C (113°F).

Internal Battery Pack

The MaxiBAS BT506 tester can be powered with the internal rechargeable battery.

AC/DC Power Supply — Using Power Adapter

The MaxiBAS BT506 tester can be powered from an electrical outlet using the AC/DC power adapter. The AC/DC power supply also charges the internal battery pack.

8.1.3 Technical Specifications

Table 8-2 Technical specifications

Item	Description
Connectivity	• USB 2.0, Type C • Bluetooth 4.2
Input Voltage	5 V DC
Working Current	< 150 mA at 12 V DC
Internal Battery	3.7 V/800 mAh Lithium-ion Polymer battery
CCA Range	100 to 2000 A
Voltage Range	1.5 to 16 V
Working Temperature	–10° C to 50° C (14° F to 122° F)
Storage Temperature	–20° C to 60° C (–4° F to 140° F)
Dimension (L x W x H)	107 mm (4.21'') x 75 mm (2.95") x 26 mm (1.02") (clamp cable not included)
Weight	320 g (0.7 lb.)

8.2 Test Preparation

8.2.1 Inspecting the Battery

Before starting a test, inspect the battery for:

- Cracking, buckling or leaking (If you see any of these defects, replace the battery.)
- Corroded, loose or damaged cables and connections (Repair or replace 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.)

8.2.2 Establishing Communication

➢ **To connect MaxiBAS BT506 with MS906 Pro/MS906 Pro-TS**

1. Turn on both MaxiBAS BT506 and MS906 Pro/MS906 Pro-TS.
2. Tap the **VCI Manager** application on the MaxiSys Job Menu of the MS906 Pro/MS906 Pro-TS, and then select **BAS BT**.
3. Tap **Scan** at the upper right corner of the tablet's screen.
4. The device name may display as Maxi suffixed with a serial number. Select the appropriate device for pairing.

5. When paired successfully, the connection status displays the device name with the message **Paired**.
6. Once paired, the VCI button on the upper right corner of the screen will display a green check and the Connection LED on the MaxiBAS BT506 illuminates blue. This signifies that the tablet is connected to the MaxiBAS BT506, and is ready to for use.

8.2.3 Connecting to a Battery

➢ **To connect to a battery**

1. Press and hold the **Lock**/**Power** button to turn on the MaxiBAS BT506 tester.
2. Connect the red clamp to the positive (+) terminal and the black clamp to the negative (–) terminal of the battery.

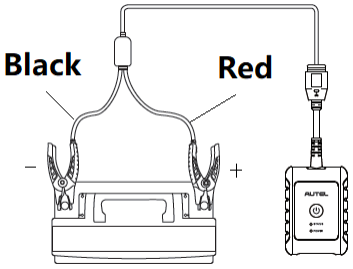


Figure 8-2 Connecting to a Battery

The black clamp is installed with an infrared sensor near the clamp mouth that tests the battery temperature. The battery temperature will appear on the Battery Test Result screen or in the Battery Test Report.

8.3 In-vehicle Test

In-vehicle Test is used for testing batteries that are installed in a vehicle. An in-vehicle test includes battery test, starter test, and generator test. These tests help determine the health status of the battery, the starter, and the generator, respectively.

IMPORTANT

Before using the diagnostic functions, download the desired vehicle software on the **Update** screen.

NOTE

The complete in-vehicle test includes battery test, starter test and generator test, in sequence.

8.3.1 Battery Test

➢ **To perform the in-vehicle battery test**

1. Tap the **Battery Test** application on the MaxiSys Job Menu. The **Battery Test** screen displays.



Figure 8-3 Battery Test Screen

2. Tap **In-vehicle Test**.
3. (Optional) Establish communications between the VCI and vehicle by following the on-screen instructions on the **OBD connect** screen.

NOTE

OBD connect is recommended and is used for automatically obtain battery type and location.

4. Confirm the vehicle information. The Vehicle information screen automatically displays when vehicle communication is established. A **Battery location** button will pop up from the bottom of the screen.

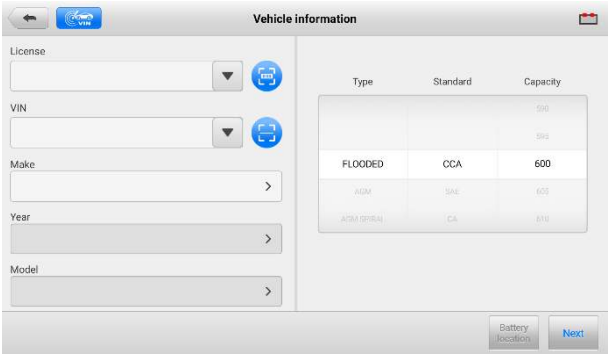


Figure 8-4 Vehicle Information Screen

NOTE

In the Settings application, the Battery Test option allows you to change the requirement for entering the VIN information. If the setting is enabled, supplying the VIN is no longer mandatory.

Table 8-3 Upper Toolbar Buttons

Button	Name	Description
	Back	Returns to the previous screen.
	VIN Scan	Opens a dropdown list; tap **Auto Detect** for auto VIN detection; tap **Manual Input** to enter VIN manually.
	Battery Connection	Displays the battery connection status. The number on the icon indicates the real-time voltage of the tested battery.

5. Tap **Next** and access the Battery tab. Perform required operations before the battery test based on the on-screen instructions. And tap the **Start Testing** button.

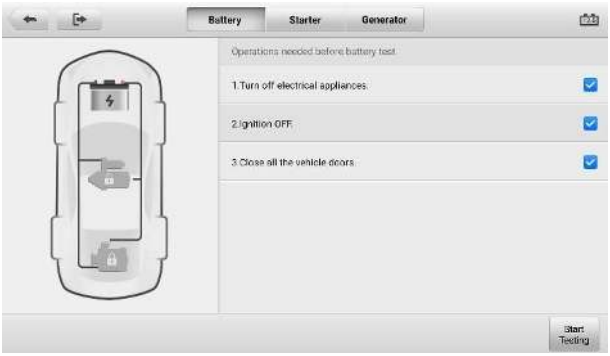


Figure 8-5 Battery Test Screen

6. Wait for the battery test to complete and view the test results.



Figure 8-6 Battery Test Results Screen

Possible in-vehicle test results are as follows:

- Good Battery
- Good & Recharge
- Charge & Retest
- Replace Battery
- Bad Cell

8.3.2 Starter Test

➢ **To perform the starter test**

1. Tap **Continue**. Perform required operations before the battery test based on the on-screen instructions. And tap the **Start Testing** button.

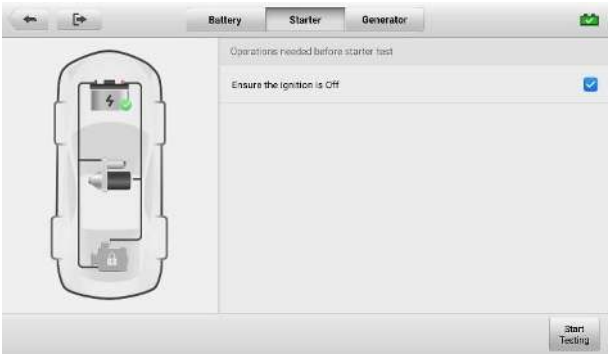


Figure 8-7 Starter Test Screen

2. Turn the vehicle ignition to **ON** when the following screen displays.
3. Wait for the test to complete and view the test results.

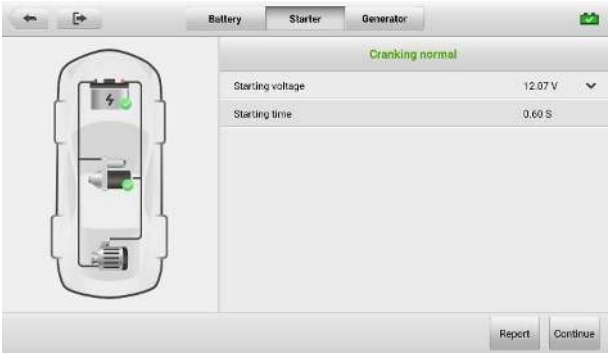


Figure 8-8 Starter Test Result Screen

Possible starter test results are as follows:

- Cranking Normal
- Current Too Low
- Voltage Too Low
- Not Started

8.3.3 Generator Test

➢ **To perform the generator test**

1. Tap **Continue**. Perform required operations based on the on-screen instructions.

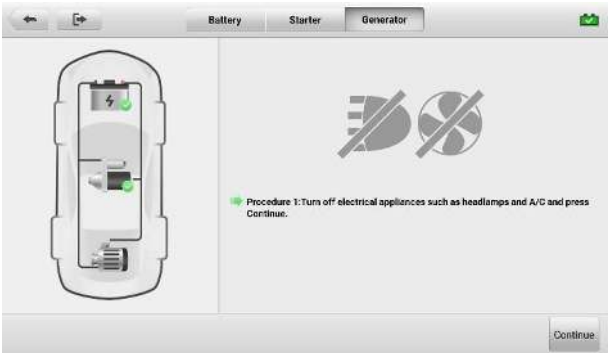


Figure 8-9 Generator Test Screen

2. Tap **Continue** and view the test results.

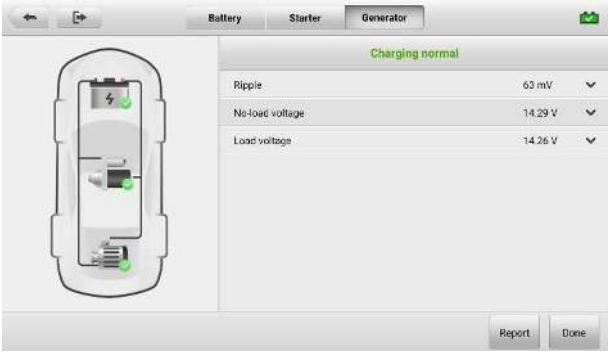


Figure 8-10 Generator Test Result Screen

Possible generator test results are as follows:

- Charging Normal
- Output Too Low
- Output Too High
- Ripple Too Large
- No Output

8.4 Out-vehicle Test

Out-vehicle test is used to test the condition of batteries that are not connected to a vehicle. This function aims to check the health status of the battery only. The battery types and standards able to be tested are as follows.

Types: FLOODED, AGM, AGM SPIRAL, EFB, and GEL

Standards: CCA, SAE, CA, EN, IEC, DIN, JIS and MCA

8.4.1 Battery Test

➢ **To perform the out-vehicle battery test**

1. Tap the **Battery Test** application on the MaxiSys Job Menu. The Battery Test screen displays (see *Figure 8-3 Battery Test Screen*).
2. Tap **Out-vehicle Test**.
3. Check the battery information and tap **Start Testing**.

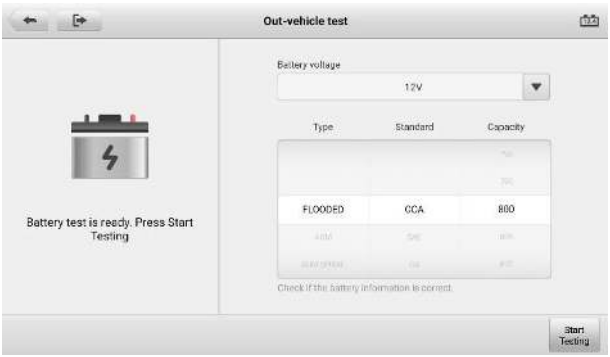


Figure 8-11 Out-vehicle Test Screen

4. Wait for the battery test to complete and view the test results.



Figure 8-12 Out-vehicle Test Result Screen

Possible out-vehicle test results are as follows:

- Good Battery
- Good & Recharge
- Charge & Retest
- Replace Battery
- Bad Cell

9 Data Manager

The Data Manager application allows you to store, print, and review the saved files, manage the workshop information, customer information records and keep vehicle history records.

Tapping the Data Manager application opens the file system menu. There are nine main functions available.

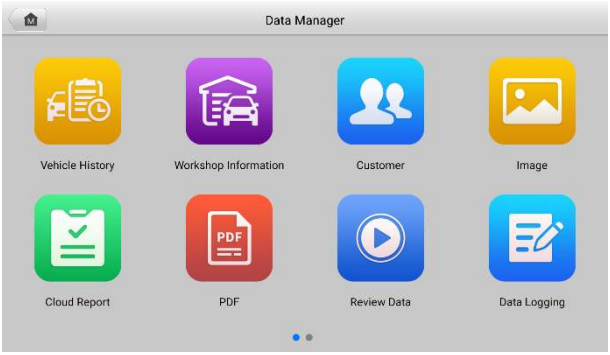


Figure 9-1 Data Manager Main Screen

The table below briefly describes each of the function buttons in the Data Manager application.

Table 9-1 Buttons in Data Manager

Button	Name	Description
	Vehicle History	Review the diagnostic history record.
	Workshop Information	Edit the information of workshops.
	Customer	Create a new customer account file.
	Image	Review the screenshots.
	Cloud Report	View the saved reports and share cloud reports.
	PDF	Review the diagnostic reports.
	Review Data	Review the recorded data.

Button	Name	Description
	Uninstall Apps	Uninstall applications.
	Data Logging	Review the communication data and ECU information of the vehicle. The saved data can be reported and sent to the technical center via the internet.

9.1 Vehicle History

This function stores records of vehicle history, including vehicle information and the retrieved DTCs from previous diagnostic sessions. Test information is summarized and displayed in an easy-to-read table listing. The Vehicle History also provides direct access to the previously tested vehicle and allows you to directly restart a diagnostic session without needing to perform auto or manual vehicle selection.

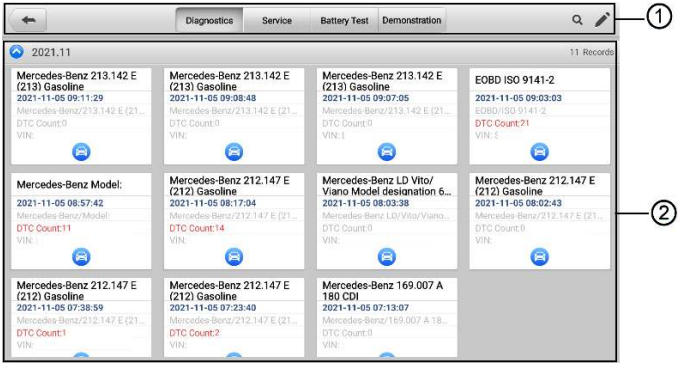


Figure 9-2 Vehicle History Screen

① Top Toolbar Buttons — displays navigation and application controls.

② Main Section — displays all the vehicle history records.

➢ **To activate a test session for the recorded vehicle**

1. Tap **Data Manager** on the MaxiSys Job Menu.
2. Tap **Vehicle History** to open the screen. Tap the **Diagnostics** or **Service** tab to select diagnostic test records or service test records.
3. Tap **Diagnostics** icon at the bottom of the thumbnail of a vehicle record item.
4. The Diagnostics screen of the vehicle displays and a new diagnostic session is activated, see *Diagnostics* for detailed instructions on vehicle diagnostic operations. Or,
5. Select a vehicle thumbnail. A historical test record screen displays. Review the

recorded information of the vehicle, and tap the **Diagnostics** button on the upper right corner to continue diagnostics.

9.1.1 Historical Test Record

The historical test record is a detailed data form of the tested vehicle, which includes general vehicle information, service record, customer information, and the diagnostic trouble codes retrieved from the previous test sessions. Technician notes will also display if present.

NOTE

The MaxiSys tablet must establish connection to the VCI device to restart test sessions on the previously tested vehicles.



Figure 9-3 Historical Test Record Sheet

➢ **To edit the Historical Test record**

1. Tap **Data Manager** on the MaxiSys Job Menu.
2. Tap **Vehicle History**.
3. Select the specific vehicle history record thumbnail from the main section. The Historical Test screen will display.
4. Tap **Edit** (a pen icon) to start editing.
5. Tap each item to enter information or attach files or images.

NOTE

The vehicle VIN, license number and customer account information are correlated by default. Vehicle records will automatically be correlated using this vehicle and customer identification.

6. Tap **Add to customer** to correlate the historical test record sheet to an existing customer account, or add a new associated account to be correlated with the vehicle record. See *Customer* for more information.
7. Tap **Done** to save the updated record, or tap **Cancel** to exit without saving.

9.2 Workshop Information

The Workshop Information screen allows you to enter, edit, and save the detailed workshop information, such as shop name, address, phone number and other remarks, which, when printing vehicle diagnostic reports and other associated test file, will display as the header of the printed documents.

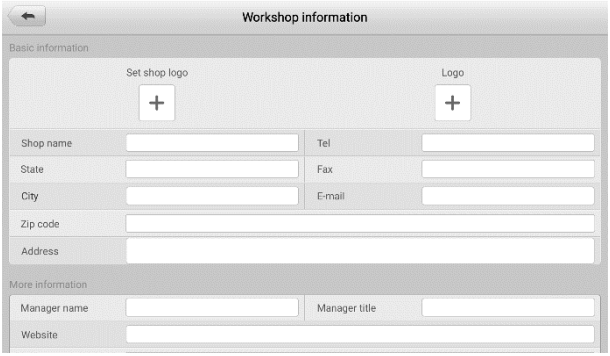


Figure 9-4 Workshop Information Sheet

➢ **To edit the Workshop Information sheet**

1. Tap the **Data Manager** application on the MaxiSys Job Menu.
2. Tap **Workshop Information**.
3. Tap on each field to fill in the appropriate information.
4. Tap **Back** to save the updated workshop information record.

9.3 Customer

The Customer function allows you to create and edit customer accounts. It helps you to save and organize all customer information accounts that are correlated with the associated vehicle history records.

➢ **To create a customer account**

1. Tap the **Data Manager** application on the MaxiSys Job Menu.
2. Tap **Customer**.
3. Tap the **Add a customer** button. An empty information form displays, tap each field to fill in the appropriate information.

NOTE

The items that must be filled are indicated as required fields.

4. Some customers may have more than one vehicle for service; you can always add new vehicle information to the account. Tap **Add new vehicle information**, and then fill in the vehicle information. Tap the ⊗ button to delete the

information.

5. Tap **Complete** to save the account, or tap **Cancel** to exit without saving.

➢ **To edit a customer account**

1. Tap **Data Manager** on the MaxiSys Job Menu.
2. Tap **Customer**.
3. Select a customer account by tapping the corresponding name card. A Customer Information record displays.
4. Tap **Edit** on the top toolbar to start editing.
5. Tap on the field to edit or amend information, and enter updated information.
6. Tap **Complete** to save the updated information, or tap **Cancel** to exit without saving.

➢ **To delete a customer account**

1. Tap **Data Manager** on the MaxiSys Job Menu.
2. Tap **Customer**.
3. Tap **Delete** on the right of a customer account. A reminder message displays.
4. Tap **OK** to confirm the command, and the account is deleted. Tap **Cancel** to cancel the request.

9.4 Image

The Image section is a PNG database containing all captured screenshots.

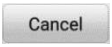


Figure 9-5 Image Database Screen

① Toolbar Buttons — used to edit, print and delete the image files. See *Table 9-2 Toolbar Buttons in PNG Database* for detailed information.

② Main Section — displays the stored images.

Table 9-2 Toolbar Buttons in PNG Database

Button	Name	Description
	**Back**	Returns to the previous screen.
	**Search**	Displays the **Search** column, allows you to quickly searches the image by entering the time of the screenshot
	**Edit**	Displays the editing toolbar to select, delete, print, or email the image(s).
	**Cancel**	Closes the editing toolbar or cancels file search.
	**Print**	Prints the selected image.
	**Delete**	Deletes the selected image.
	**E-mail**	Sends the selected image to an email.

➢ **To edit/delete image(s)**

1. Tap **Data Manager** from the MaxiSys Job Menu.
2. Tap **Image** to access the PNG database.
3. Tap **Edit** on the top right corner of the screen. The editing screen displays.
4. Select the image(s) you want to edit.
5. Tap **Delete** to delete the selected images or delete all images. Tap **Print** to select to print the selected image(s) or send the selected image(s) to an email.

9.5 Cloud Report

This section displays the saved reports, which can be transferred to the Autel cloud platform once a stable network connection is established. These reports can then be viewed or shared with others.

9.6 PDF

The PDF files designated for local viewing are displayed in this section. Enter the PDF database and select a file to access the saved information.

This section uses the standard Adobe Reader application for file viewing and editing. Please refer to the associated Adobe Reader manual for more detailed instructions.

9.7 Review Data

The Review Data section allows you to play back the recorded data frames of live data streams.

On the Review Data main screen, select a record file to play back.

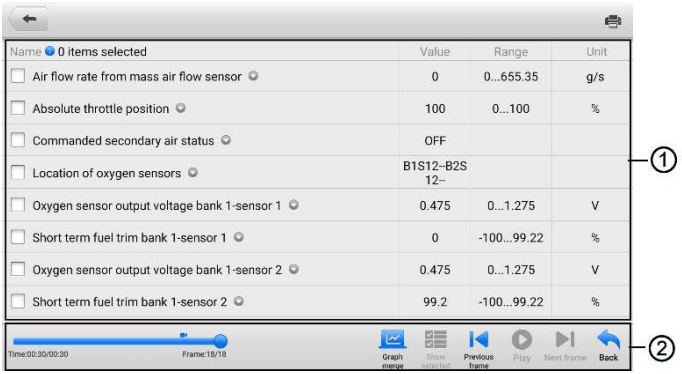


Figure 9-6 Data Playback Screen

① Main Section — displays the recorded data frames.

② Navigation Toolbar — allows you to manipulate data playback.

Use the Navigation Toolbar buttons to play back the record data from frame to frame.

Tap **Back** to exit data playback.

9.8 Uninstall Apps

This section allows you to manage the software applications installed on the MaxiSys Diagnostics System. Selecting this section opens a managing screen, on which you can check all the available vehicle diagnostic applications.

Select the vehicle software you want to delete by tapping on the car brand icon, the selected item will display a blue check mark at the upper right corner. Tap the **Delete** button on the top bar to delete the software from the system database.

9.9 Data Logging

The Data Logging section allows you to launch Support platform directly to view all records of all feedback or not feedback (saved) data loggings on the diagnostic system. For more details, see *Data Logging*.

10 Settings

Access the Settings menu to adjust default setting and view information about the MaxiSys system. The following options are available for the MaxiSys system settings:

- **Unit**
- **Language**
- **Printing settings**
- **Scan report**
- **Auto update**
- **ADAS settings**
- **TPMS market** (for MS906 Pro-TS)
- **TPS Prog. Setting** (for MS906 Pro-TS)
- **Vehicle list**
- **AutoVID setup**
- **System settings**
- **About**

10.1 Operations

This section describes the operation procedures for the settings.

10.1.1 Unit

This option allows you to adjust the measurement unit for the diagnostic system.

➢ **To adjust the unit setting**

1. Tap **Settings** on the MaxiSys Job Menu.
2. Tap **Unit** on the left column.
3. Select the appropriate measurement unit. A check mark will display to the right of the selected unit.
4. Tap the **Home** button on the top left corner to return to the MaxiSys Job Menu. Or select another setting option for the system setup.

10.1.2 Language

This option allows you to adjust the display language for the MaxiSys system.

➢ **To adjust the language setting**

1. Tap **Settings** on the MaxiSys Job Menu.
2. Tap **Language** on the left column.
3. Select the desired language. A check mark will display to the right of the selected language.
4. Tap the **Home** icon on the top left corner to return to the MaxiSys Job Menu, or select another setting option for the system setup.

10.1.3 Printing Settings

Printing Setting

This option allows you to print from the tablet to a network printer via network.

➢ **To setup the printer connection**

1. Tap **Settings** on the MaxiSys Job Menu.
2. Tap **Printing settings** on the left column.
3. Tap **Print via network** to enable the printing function, which enables the tablet to send files to the printer through the PC via Wi-Fi or Ethernet connection.
4. Tap the **Home** icon on the top left corner to return to the MaxiSys Job Menu, or select another setting option for the system setup.

Printing Operations

➢ **To install the MaxiSys Printer driver program**

1. Download **Maxi PC Suite** from www.autel.com > ***Support*** > ***Downloads*** > ***Autel Update Tools***, and install to your PC.
2. Double click the **setup.exe** file**.**
3. Select the installation language and the wizard will load momentarily.
4. Follow the instructions on the screen and click **Next** to continue.
5. Click **Install**. The printer driver program will be installed onto the PC.
6. Click **Finish** to complete the installation.

NOTE

The MaxiSys Printer runs automatically after the installation.

This section describes how to receive file from the MaxiSys tablet and print the file using the PC.

NOTE

- Make sure the tablet is connected to the PC network, either via Wi-Fi or LAN, before printing.
- Make sure the PC installed with the Printing Services program is connected to a printer.

➢ **To print a file using the PC**

1. Run the **PC Link** program on the PC.
2. Click **Test Print** to make sure the printer is working successfully.
3. Tap the **Print** button on the toolbar of the tablet. A test file will be sent to the PC.
    - If the **Auto Print** option in the MaxiSys Printer is selected, the MaxiSys Printer will print the received file automatically.
    - If the **Auto Print** option is not selected, click **Open PDF File** to view files. Select the file(s) to print and click **Print**.

10.1.4 Scan Report

This option allows you to select additional images (up to 5) to generate the diagnosis history before repair. The repair diagnosis report function will automatically incorporate the diagnostics details before repair into the diagnosis history after repair to form a Repair Diagnosis Report.

10.1.5 Auto Update

This option allows you to set the specific time for automatically updating software. There are three update options: **OS Update**, **MaxiSys Update** and **Vehicle Update**.

Tap the **ON/OFF** button to enable/disable the Auto Update function. The button displays blue if Auto Update is enabled and displays gray if the Auto Update is disabled. Set the time of the day for updating. If the update time is set, the selected software will be automatically updated at configured time.

10.1.6 ADAS Settings

➢ **To activate the MaxiSys ADAS Calibration**

1. Check whether the registered MaxiSys has active updates.
2. Tap **Settings** on the MaxiSys Job Menu.
3. Tap **ADAS settings** on the left column.
4. Scan the QR code on the ADAS frame to bind, or manually enter frame serial number when QR code is not available.

5. Enter the validation code from the ADAS Calibration Card.
6. The system will be reset and the main screen will display once registration has been completed.

10.1.7 TPMS Market

This option allows you to set the TPMS market region. The available options are **Europe Market**, **North America Market**, **Korea Market**, **Japan Market**, and **Australia Market**. A check mark will display to the right of the selected item.

10.1.8 TPS Prog. Setting

This option allows you to set the TPS program pressure limit. The available options are **Prog. Pressure ≤ 69Kpa/10PSI** and **No Prog. Pressure Limit.** A check mark will display to the right of the selected item.

10.1.9 Vehicle List

This option allows you to sort the vehicles either by alphabetic order or by frequency of use.

➢ **To adjust the vehicle list setting**

1. Tap **Settings** on the MaxiSys Job Menu.
2. Tap **Vehicle list** on the left column.
3. Select the desired sort type. A check mark will display to the right of the selected item.
4. Tap the **Home** icon on the top left corner to return to the MaxiSys Job Menu, or select another setting option for the system setup.

10.1.10 AutoVID Setup

This option allows you to enable/disable the automatic vehicle VIN reading function. When this function is active, the tablet will read the vehicle VIN via the communication methods you enabled after the VCI is connected to the vehicle.

10.1.11 System Settings

This function provides you with direct access to the Android system setting interface, where you can adjust various system settings for the Android system platform, regarding wireless and networks settings, various device settings such as sound and display, as well as system security settings, and check related information about the Android system. Refer to Android documentation for additional information.

10.1.12 About

The About function provides information of the MaxiSys diagnostic device including the product name, version, hardware, and serial number.

➢ **To check the MaxiSys product information in About**

1. Tap the **Settings** application on the MaxiSys Job Menu.
2. Tap the **About** option on the left column. The product information screen displays on the right.
3. Tap the **Home** icon on the top left corner to return to the MaxiSys Job Menu, or select another setting option for the system setup.

11 VCI Manager

This application allows you to pair up the tablet with the VCI device, check the communication status, and update the VCI software and TPMS service firmware.

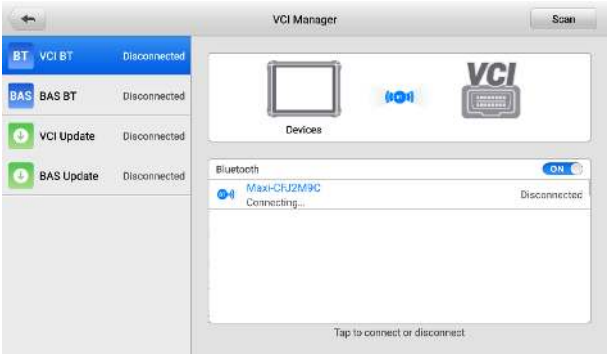


Figure 11-1 VCI Manager Screen

① Connection mode — there are four connection modes available for selection. The connection state is displayed alongside.

- **VCI BT** — when paired to a VCI via Bluetooth, the connection state displays as **Connected**; otherwise it displays as **Disconnected**.
- **BAS BT** — when paired to a BAS via Bluetooth, the connection state displays as **Connected**; otherwise it displays as **Disconnected**.
- **VCI Update** — updates VCI firmware via internet through the MaxiSys tablet networking using USB connection.
- **BAS Update** — updates BAS firmware via internet through the MaxiSys tablet networking using USB connection.

② Bluetooth settings — displays the type and a partial serial number for all of the devices available for pairing. Tap the desired device to start pairing. The Bluetooth status icon displayed to the left of the device name indicates the received signal strength.

12 Update

The Update application allows you to download the latest released software. The updates can improve the MaxiSys applications' capabilities, typically by adding new tests, new models, or enhanced applications to the database.

The tablet automatically searches for available updates for all of the MaxiSys software when it is connected to the internet. Any updates that are found can be downloaded and installed on the device.

NOTE

Make sure the tablet is registered before activating the Update application.

Product Registration

➢ **To register the diagnostic device**

1. Visit the website: http://pro.autel.com.
2. If you have an Autel account, log in and skip to Step 7.
3. If you are a new member to Autel, click **Register** to create your Autel ID.
4. Enter your personal information. Fields marked with an asterisk (*) are mandatory.
5. After all the mandatory information is entered, read the **Autel User Service Agreement** and **Autel Privacy Policy**, then check the box to accept the terms and click **Register**.
6. Once your account is successfully registered, you will be redirected to the Product Registration screen. If not, click the button on the screen.
7. Your product serial number and password are required to enter. To find your serial number and password on the tablet: go to **Settings** > **About**.
8. Enter your tablet's serial number and password.
9. Enter the CAPTCHA code and click **Submit** to complete your product registration.

Software Update

➢ **To update the software**

1. Power up the tablet, and ensure that it is connected to a power source and has a steady Internet connection.
2. Tap the **Update** application button from the MaxiSys Job Menu. The Update application screen displays.
3. On the Update screen, tap the **Get** button to update the specific item(s) or tap the **Update All** button to update all available items.
4. Tap **More** to view the details of all the available updates. You can also tap the **Get** or **Update All** button for update.
5. During the update, tap the icon to suspend the updating process. Tap the icon to resume the update and the process will continue from the pause point.
6. When the updating process is completed, the software will be installed automatically. The new version will replace the older version.

NOTE

For the account management, proceed to the Member Center tab.

13 Support

This application launches the Support platform which synchronizes Autel's online service base station with the MaxiSys tablet. Connected to Autel's service channel and online communities, the Support application provides the quickest way for problem solutions, allowing you to send help requests to obtain direct service and support.

13.1 Support Screen Layout

The main section of the Support screen is divided into two sections. The narrow column on the left is the main menu; selecting one subject from the main menu displays the corresponding function interface on the right.

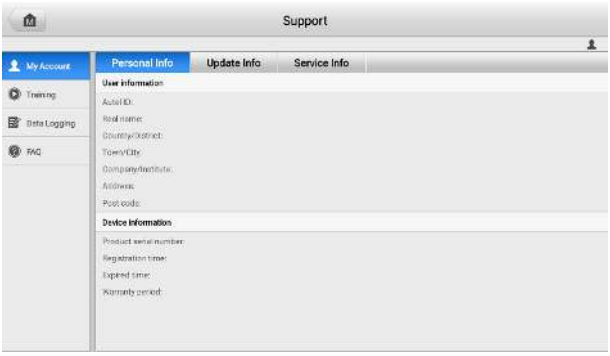


Figure 13-1 Support Application Screen

13.1.1 My Account

The My Account screen displays the comprehensive information of the user and the product, which is synchronized with the on-line registered account, including Personal Info, Update Info, and Service Info.

13.1.1.1 *Personal Info*

The User information and Device information columns are both included on the Personal Info tab.

- **User Information** — displays detailed information of your registered on-line Autel account, such as your Autel ID, Real name, Country/District, Town/City, Company/Institute, Address, and Post code.
- **Device Information** — displays the registered product information, including the Product serial number, Registration time, Expired time, and Warranty period.

13.1.1.2 *Update Info*

The Update Info tab displays a detailed record list of the product's software update history, including the product serial number, software version or name, and the update time.

13.1.1.3 *Service Info*

The Service Info tab displays a detailed record list of the device's service history information. Every time the device has been sent back to Autel for repair, the device's serial number and other information, including Service date, Type of faults, and Repair content, will be recorded and updated to the associated online product account, which will be synchronized to the Service Info tab.

13.1.2 Training

The Training screen provides quick links to Autel's online video accounts. Select a video channel by the language to see all the available online tutorial videos from Autel for various technical supports, such as product usage techniques and vehicle diagnostics practice, etc., may be available for your interests.

13.1.3 Data Logging

The Data Logging screen keeps records of all **Feedback** (submitted), **No feedback** (saved) or **History** (up to the latest 20 test records) data loggings on the diagnostic system. The support personnel receive and process the submitted reports through the Support platform, and send back problem solutions within 48 hours to the corresponding Data Logging session, on which you are also allowed to have a direct conversation with the support personnel.

➢ **To make a reply in a Data Logging session**

1. Tap **Feedback** to view a list of submitted data loggings.
2. Select a specific item to view the latest update of the processing progress.
3. Tap the text field at the bottom of the screen, and enter the texts. Or tap the **Audio** button to record a voice message, or **Camera** button to take a picture.
4. Tap **Send** to deliver your message to the technical center.

13.1.4 FAQ

The FAQ tab provides you comprehensive and abundant references for all kinds of questions frequently asked and answered about the use of Autel's online member account, and shopping and payment procedures.

- **Account** — displays questions and answers about the use of Autel's online user account.

- **Shopping** & **Payment** — displays questions and answers about online product purchase and payment methods or procedures.

14 Remote Desktop

The Remote Desktop application launches the TeamViewer QuickSupport program, which is a simple, fast and secure remote control interface. You can use the application to receive ad-hoc remote support from Autel's support technicians by allowing them to control your MaxiSys tablet on their PC via the TeamViewer software.

14.1 Operations

If you think of a TeamViewer connection as a phone call, the TeamViewer ID would be the phone number under which all TeamViewer Clients can be reached separately. PCs and mobile devices that run TeamViewer are identified by a globally unique ID. The first time the Remote Desktop application is launched, this ID is generated automatically based on the hardware characteristics and will not change later on.

Make sure the tablet is connected to the Internet before launching the Remote Desktop application, so that the tablet is accessible to receive remote support from the third party.

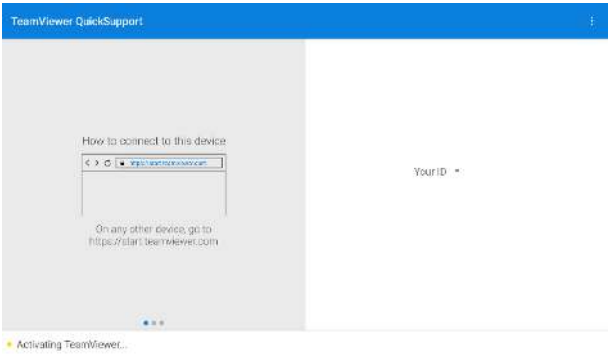


Figure 14-1 Remote Desktop Screen

➢ **To receive remote support from a technician**

1. Power on the tablet.
2. Tap the **Remote Desktop** application on the MaxiSys Job Menu. The **TeamViewer QuickSupport** screen displays and the device ID is generated and shown.
3. The technician must install the Remote Control software to their PC by downloading the TeamViewer full version program online (see http://www.teamviewer.com), and then launch the software.
4. Provide your device ID to the technician, and wait for the technician to send you a remote control request.

5. A popup dialog box displays to ask for your confirmation to allow remote control on your device.
6. Tap **Allow** to accept, or tap **Deny** to reject.

Refer to the associated TeamViewer documents for additional information.

15 User Feedback

The User Feedback application allows you to submit questions related to this product.

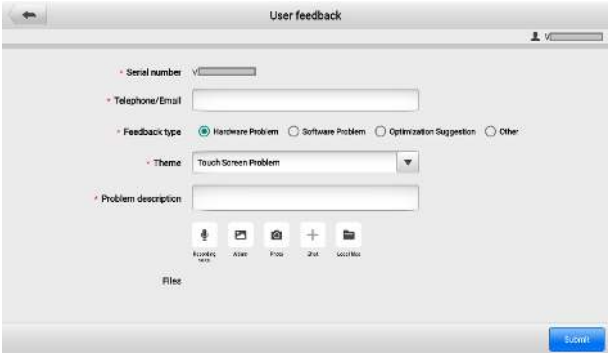


Figure 15-1 User Feedback Screen

➢ **To send new user feedback:**

1. Tap **User Feedback** on the MaxiSys Job Menu. The device information is automatically synchronized.
2. Set **Telephone/Email**, **Feedback type**, **Theme**, and **Problem description**. You can also attach voice recordings, photos, screenshots, images or PDF files to the form. To help us resolve the issue more efficiently, we recommend you complete the form with as many details as possible.
3. Tap **Submit** to send the completed form to Autel's online service center. The submitted feedback will be carefully read and handled by our service personnel.

16 MaxiViewer

The MaxiViewer application allows you to search the functions supported by our tools and the version information. There are two ways of searching, either by searching the product and the vehicle or searching the functions.

➢ **To search by product and vehicle**

1. Tap **MaxiViewer** on the MaxiSys Job Menu. The **Function Viewer** screen displays.
2. Select a product from the **Product type** drop-down list.
3. Select vehicle brand, model, and year.

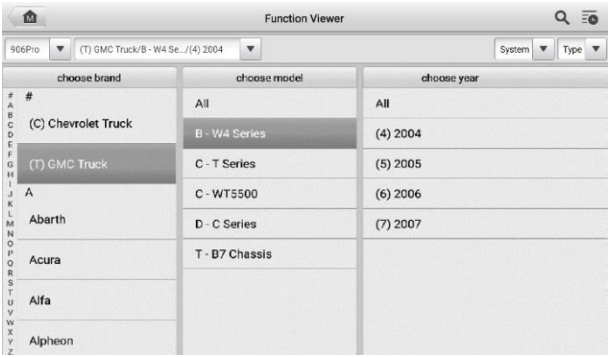


Figure 16-1 Function Viewer Screen 1

4. All functions supported by the selected product for the desired vehicle are displayed with vehicle's system, type, function, sub function, and version.

➢ **To search by functions**

1. Tap **MaxiViewer** on the MaxiSys Job Menu. The **Function Viewer** screen displays.
2. Select a product from the **Product type** drop-down list.
3. Tap the **Search** icon. Enter the desired function in the search box. The screen will display all vehicles that support this function, along with information such as the vehicles' year, system, capacity, type, function, sub-function, and version.

NOTE

Fuzzy search is supported.

17 MaxiVideo

The MaxiVideo application configures the MaxiSys Diagnostics Device to operate as a digital video scope by simply connecting the tablet to a MaxiVideo Camera. This function allows you to examine difficult-to-reach areas normally hidden from sight, with the ability to record digital still images and videos, which offers you an economical solution to inspect machinery, facilities, and infrastructure in a safe and quick way.

NOTE

1. The MaxiVideo Camera and its fittings are additional accessories, and need to be purchased separately. Both sizes (8.5 mm and 5.5 mm) of the imager head are optional and available for purchase.
2. This function is compatible with the MaxiVideo Camera in models MV105S, MV108S, MV105, and MV108.
3. Connect the tablet with MaxiVideo Camera using the USB cable. For detailed operation instructions, please refer to the Quick Reference Guide for the MaxiVideo Camera.

18 MaxiScope

The Maxiscope application configures the MaxiSys Diagnostic Device to operate as an automotive oscilloscope when working in combination with the MaxiScope module. This function provides all the features needed for performing electrical and electronic circuit tests as well as monitoring signal activities on any modern vehicles, which shows you what is really going on with a vehicle's electrical system.

18.1 Safety Information

Follow these instructions to reduce the risk of injury from electric shock and prevent equipment damage.

A. Maximum input ranges

Observe all terminal ratings and warnings marked on the product.

⚠ DANGER

- To prevent electric shock, operate within the safe input range for the scope.
- To prevent electric shock, take all necessary safety precautions when working on equipment where voltages above the specified input range may be present. Contact with voltages outside of the specified measuring range presents a risk of electric shock.
- To prevent injury or death, the oscilloscope must not be directly connected to the mains (line power). To measure mains voltages, use a differential isolating probe specifically rated for mains use.

⚠ WARNING

Operation outside of the safe input range is likely to cause permanent damage to the oscilloscope and other connected equipment.

B. Grounding

⚠ DANGER

- The scope's ground connection through the USB cable is for measurement purposes only. The oscilloscope does not have a protective safety ground.
- Do not connect the ground input (chassis) to any electrical power source. To prevent personal injury or death, use a voltmeter to check that there is no significant AC or DC voltage between the oscilloscope ground and the point to which you intend to connect it.

⚠ WARNING

- Applying a voltage to the ground input is likely to cause permanent damage to the oscilloscope, the attached computer, and other equipment.
- To prevent measurement errors caused by poor grounding, always use the high-quality USB cable supplied with the oscilloscope.

C. External connections

⚠ DANGER

To prevent injury or death, use only the power cord and adaptor supplied with the product.

D. Environment

⚠ DANGER

To prevent injury or death, do not use in wet or damp conditions, or around explosive gas or vapor.

⚠ WARNING

To prevent damage, always use and store your oscilloscope in appropriate environments. For detailed information on temperature and humidity specifications for both the storage and usage of the oscilloscope, see *Safety Information*.

E. Product Maintenance

The product contains no user-serviceable parts. Repair, servicing and calibration require specialized test equipment and must only be performed by Autel Tech Support or an approved service provider.

⚠ DANGER

To prevent injury or death, do not use the product if it appears to be damaged in any way, and stop use immediately if you are concerned by any abnormal operations.

⚠ WARNING

- Do not tamper with or disassemble the oscilloscope, connectors or accessories. Internal damage will affect performance.
- Do not block any of the instrument's air vents, as overheating will cause damage to the oscilloscope.
- When cleaning the oscilloscope, use wet soft cloth with mild detergent in water. Do not allow water to enter the oscilloscope casing, as this will cause damage to the electronics inside.

18.2 Glossary

- **AC/DC Control**

Each channel can be set to either AC coupling or DC coupling. With DC coupling, the voltage displayed on-screen is equal to the true voltage of the signal with respect to ground. With AC coupling, any DC component of the signal is filtered out, leaving only the variations in the signal for the AC component.

- **Aliasing**

When the signal frequency gets higher than half the scope's maximum sampling rate and exceeds the limit, a distorted waveform appears. This distortion is called aliasing.

- **Analog Bandwidth**

All oscilloscopes have an upper limit to the range of frequencies at which they can measure accurately. The analog bandwidth of an oscilloscope is defined as the frequency at which a displayed sine wave has half the power of the input sine wave (about 71% of the amplitude).

- **Block Mode**

A sampling mode in which the computer prompts the oscilloscope to collect a block of data into its internal memory before stopping the oscilloscope and transferring the whole block into computer memory. This mode of operation is effective when the input signal being sampled is high frequency.

- **Buffer Size/Cache Size**

This term indicates the size of the oscilloscope's buffer memory. The buffer memory is used by the oscilloscope to temporarily store data. This helps to compensate for the differences in data transfer rate from one device to another.

- **Sampling Rate**

This term is used to define the number of samples per second captured by the oscilloscope. The faster the sampling rate of the scope, the more frequently it measures the signal voltage, and so the more detailed will be the trace that appears on the scope screen.

- **Streaming Mode**

This term indicates a sampling mode in which the oscilloscope samples data and returns it to the computer in an unbroken stream. This mode of operation is effective when the input signal being sampled is at low frequency.

- **Time Base**

The time base controls the time interval across the scope display.

- **Voltage Range**

The voltage range is the range between the maximum and minimum voltages that can be accurately captured by the oscilloscope.

- **Sinusoidal Waveform**

This term describes the waveform characteristics typically found in circuits with large inductance and capacitance, and often referred to as an AC signal. The waveform alternates either side of 0 volts or may rise and fall creating a regular sinusoidal shape:

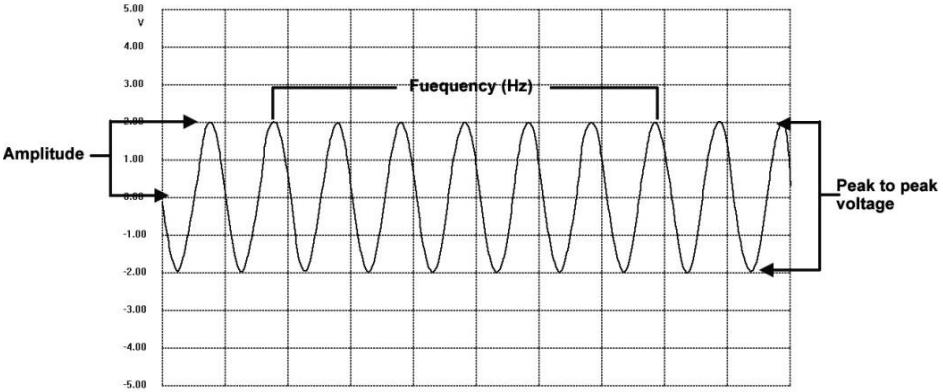


Figure 18-1 Sinusoidal Waveform

- **Amplitude**

This term indicates the maximum voltage generated from the zero volts line of the oscilloscope.

- **Frequency**

This term describes the number of signal occurrences per second. Frequency is measured in Hz (hertz).

- **Square Waveform**

This term describes the waveform characteristics normally generated by signals switching between clearly defined voltage levels, such as a Hal effect sensor signal may create by switching a voltage to ground. A typical digital square waveform is shown below:

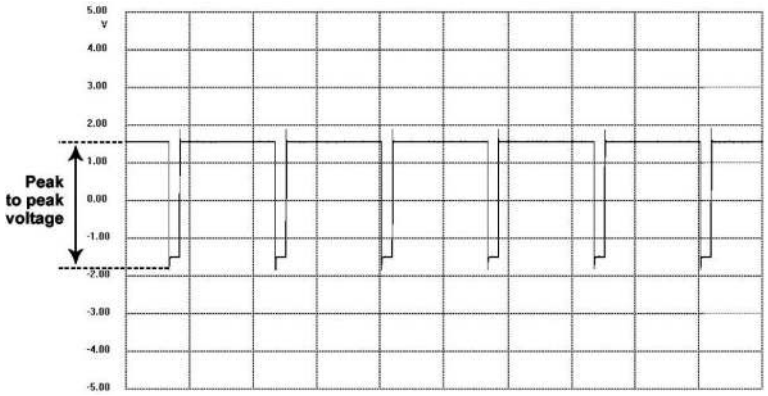


Figure 18-2 Square Waveform

- **Peak to peak voltage**

This term indicates the difference in voltage between the minimum and maximum voltages occurring in the waveform.

18.2.1 MaxiScope Module

The MaxiScope Automotive Oscilloscope tool kit is optional and available for purchase along with the MaxiSys package. There are 2 versions (basic and advanced versions) available.

The MaxiScope tool kit comes standard with:

- MaxiScope Module
- USB Cable
- Other probe accessories

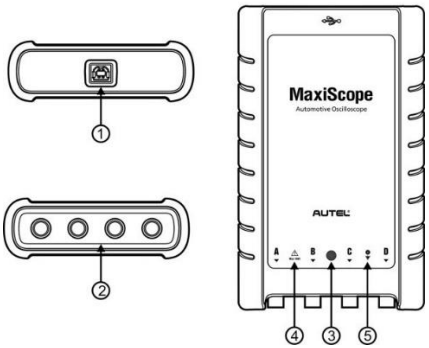


Figure 18-3 MaxiScope Front, Rear, and Top View

① USB Port

② Input Channel A/B/C/D

③ LED Indicator Light — lights up when powered on, blinks when communicating, and shimmers when error occurs.

④ Warning Triangle — indicates potential safety hazard that exists on the indicated connections, and appropriate precautions should be taken. Make sure you read through the Safety Information before use.

⑤ Equipotential Symbol — indicates the outer shells of the indicated BNC connectors are all at the same potential. Therefore, necessary precautions should be taken to avoid applying a potential through the return connections of the indicated BNC terminals, as this may result in a large current flow, causing damage to the product and the connected equipment.

18.2.2 Power Source

The MaxiScope MP408 Scope Module is powered directly by the USB port of the connected PC, no batteries or power leads are required, making it suitable for both workshop-based and mobile automotive diagnostics.

Table 18-1 Technical Specifications

Items	Description
Vertical resolution	12 bits
Channels	4
Bandwidth	20 MHz
Accuracy	Voltage: 1%; Time: 50 ppm
Sensitivity	10 mV/div to 20 V/div
Input Ranges (full scale)	±50 mV to ±100V in 11 ranges
Input Impedance	1 MΩ in parallel with 22pF
Input Type	Single-ended, BNC connector
Input Coupling	Software selectable AC/DC
Overload Protection	±200 V on single input

Items	Description
Maximum Sampling Rate (Single Shot)	● 1 or 2 channels in use: 80 MS/s* ● 3 or 4 channels in use: 20 MS/s
Buffer Memory	32 M samples shared among active channels
Waveform Buffer	Up to 1000 waveforms
Timebase Ranges	100 ns/div to 1000 s/div
Advanced Features	Math channels, Measurements
Triggers	**Description**
Source	Any input channel
Basic Triggers	Auto, Normal, Single, None
Advanced Triggers	Rising edge, Falling edge
Environmental	**Description**
Operating Temperature Range **Storage Temperature Range** **Storage Humidity Range**	0 to 50°C (15 to 40°C for quoted accuracy) –20 to 60°C 5 to 95%RH, Non-condensing
Physical Characteristics	**Description**
Dimensions (Protection rubber case included)	190 mm X 115 mm X 38 mm
Weight	< 0.5 kg
General	**Description**
PC Interface	USB 2.0 – cable supplied
Power Requirements	Powered from USB port
Compliance	FCC (EMC), CE (EMC and LVD), RoHS
Warranty	1 year

NOTE

Reduced to 20 MS/s if channels A and B, or C and D are enabled.

18.3 Screen Layout and Operations

The MaxiScope application works as a signal processing program that displays the shape of electrical signals on-screen with a live graph showing voltage against time. The grid on the screen shows divisions of voltage and time to enable measurements to be made.

Units of voltage per division are shown down the side of the scope screen while units of time per division are shown along the bottom. The graph is referred to as a waveform and the scope repeatedly draws the trace across the screen from left to right.

Before performing the MaxiScope application, the MaxiScope Module must be connected to the tablet. Apply appropriate probe accessories supplied with the MaxiScope tool kit for use in various tests.

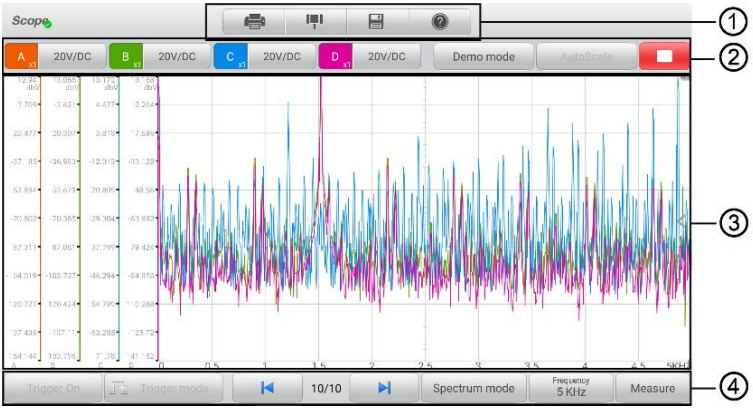


Figure 18-4 Oscilloscope Application Screen Layout

① Top Toolbar — used for configurations of various settings and operations of the scope.

② Function Buttons on the top — used for configurations of channel activation, measurement scale and trigger settings.

③ Measurement Grid — displays measurements of voltage against time.

④ Function Buttons at the bottom — used for configurations of trigger, time base, and measurement parameter display settings.

18.3.1 Top Toolbar

The top toolbar contains various function buttons with options for operations and configurations of the MaxiScope, the operations of which are described in the table below:

Table 18-2 Toolbar Buttons

Button	Name	Descriptions
	**Print**	Saves and prints a copy of the displayed data.
	**Tool**	Tapping this button opens a settings window with options to configure various measurement tools for reference and assessment of data analysis: ● Tap **Select a Math Channel** to select a match channel. ● Tap **Select a Probe** to select a predefined probe. ● Tap **Cache Setting** to set the cache.
	**Save**	Tapping this button opens a submenu, on which 5 options will display, allowing you to save, record, and play back the waveform data. ● Tap **Save current page** to take a screenshot image. ● Tap **Record data** to save the current waveform data. ● Tap **Save Ref** to save a copy of an existing signal waveform as reference. ● Tap **Review data** allows selecting and reviewing the previously stored waveform recordings. ● Tap **Recall Ref** to retrieve the saved reference waveforms. All saved images are stored in the Data Manager application for later reviews. See *Image*.
	**Help**	Provides instructions or tips for operations of various functions.

- **Math Channel**

A math channel is a virtual channel generated by mathematical function of the input channel. It can be displayed in a scope in the same way as an input signal, and like an input signal, it has its own measure axis, scaling, and color. The MaxiScope module has a set of built-in math channels for the most important functions, including “A+B” (the sum of channels A and B) and “A-B” (the difference between channels A and B).

➢ **To use a math channel**

1. Tap the **Tool** button in the Top Menu.
2. Tap the **Select a Math Channel** option on the left column.
3. Tap the desired option on the right column to enable the math channel in the channel list.

4. The Math Channel displays on the **MaxiScope** screen.

- **Probe**

A probe is any transducer, measuring device or other accessory that you connect to an input channel of your MaxiScope module.

- **Reference Waveform**

A Reference Waveform is a copy of an existing signal waveform saved as a reference. It can be retrieved to display as a comparative reference to examine a live signal. Up to 4 reference waveforms can be saved.



Figure 18-5 Reference Waveform Save Window

➢ **To create a Reference Waveform**

1. Tap the **Tool** button in the Top Menu.
2. Select **Save Ref.** in the dropdown menu.
3. Select the channel, to which the desired waveform belongs.
4. Name the reference waveform by selecting R1, R2, R3 or R4 in the pop-up window.
5. Tap the **Yes** icon to save, or **No** icon to cancel.

- **Recall Reference**

The saved reference waveforms can be retrieved by tapping Recall Ref in the dropdown menu of the Tool button.

➢ **To recall reference waveforms**

1. Tap **Tool** button on the Top Menu.
2. Select **Recall Ref** in the dropdown menu and a pop-up window will display. Available reference waveform items are highlighted in blue.
3. Select the desired reference waveform by ticking the check box alongside.
4. Tap **Yes** and the selected reference waveform will appear on the scope screen.



Figure 18-6 Recall Reference Waveform Window

18.3.2 Function Buttons

This group of buttons is used for configurations of channel activation, measurement scale, and trigger settings. The operations of which are described below:

- **Channel Control Buttons A/B/C/D** — tapping each button allows you to activate or deactivate the corresponding channel; long pressing the button opens a window, which allows you to select and configure appropriate probes for specific tests.

The Channel Control Buttons are displayed in different colors as follows:

A. Red

B. Green

C. Blue

D. Pink

- **AC/DC Coupling and Voltage Scale Buttons** — tapping this button opens a dropdown menu, on which you can select AC or DC measurements and adjust voltage measurement scales.

The **Auto voltage scale** option enables the scope to adjust the voltage scale automatically to capture the signal.

- **AutoScale** — tapping this button enables automatic set-up of the voltage scale and time base for the signals received.
- **Start/Stop** — tapping this button turns on/off the scope.
- **Single** — tapping this button activates the Single trigger mode when the trigger is on. The Single trigger mode configures the trigger to occur once when the scope captures the first signal waveform by the preset trigger point.

18.3.3 Measurement Grid

The 2 control features — Voltage per division and Time per division — enable the users to adjust the scope settings to suit the particular test measurement.

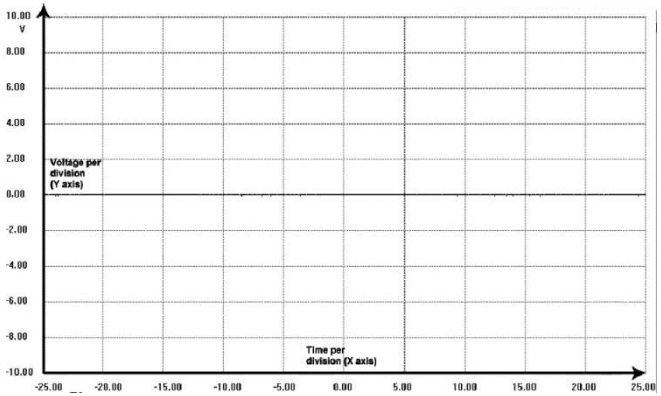


Figure 18-7 Measurement Grid

- **Voltage per division** — shown down the left side of the screen, referred to as the Y-axis
- **Time per division** — shown along the bottom of the screen, referred to as the X-axis

Multiple Scope Channels

The MaxiScope software features multiple channel display which enables more than one waveform to be displayed at the same time. It is useful for making comparisons among different signals. The voltage per division for each channel is adjusted individually while the time base per division is the same for all channels.

➢ **To adjust the voltage scale**

1. Tap the specific Y-axis of the corresponding channel to enable scale adjustment. The selected Y-axis is highlighted with thicker dividing line.
2. Adjust the voltage scale of the selected channel with the typical two-finger zoom gestures.
3. The 0 volts is hinted with a pointer reference line. Slide the pointer line up and down to move and view different areas of the scale.
4. Tap once on the screen area outside of the Y-axis to finish the voltage scale adjustment.

➢ **To adjust the time base scale**

1. Unselect the Y-axis if it's activated.
2. Use two fingers to adjust the time base with the typical zoom gestures on the measurement grid area.

18.3.4 Measurement Rulers

The Measurement Rulers allow the voltage and time duration of a waveform to be measured precisely. There are 2 kinds of measurement rulers: the vertical **Time Ruler** and the horizontal **Voltage Ruler**.

Tap the **Ruler Activator** on the bottom-right corner of the measurement grid and drag it across the screen to the desired position. A **Time Ruler** is generated.

The **Voltage Ruler** can be generated in the similar way by tapping the **Ruler Activator** on the top-left corner and dragging it downwards.

When **Measurement Rulers** are generated, a **Ruler Table** showing time and voltage values for the corresponding channels will be displayed. The **Delta** icon refers to the absolute difference between the values of the 2 rulers, which can be locked by tapping the **Lock** icon.

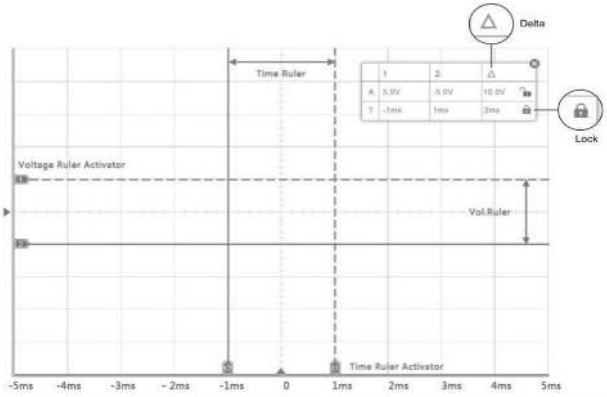


Figure 18-8 Measurement Rulers Display

18.3.5 Function Buttons

This group of buttons includes trigger setting buttons allowing you to set trigger source and trigger mode, a **Time base** button for adjustment, and a **Measurement** button with options for various measurement types.

- **Trigger On/Off** — taps to turn on/off the trigger. The button displays as **Trigger Off** when it is activated, and vice versa.

Once the trigger is activated, a voltage scale reference line and a time base reference line

will be displayed on the measurement grid. The cross point of the 2 lines indicates the trigger point, allowing users to adjust its position by moving each of the 2 lines.

- **Trigger Source** — assigns the trigger to a specific channel
- **Trigger Slope** — sets trigger to occur by rising or falling voltage edges
- **Trigger Mode** — configures the trigger mode:

A. **Normal Mode** — configures the trigger to occur every time when the captured signal waveform reaches the trigger point, so the scope starts to draw the waveform when the signal reaches the trigger point.

B. **Auto Mode** — configures the trigger to occur every time when the scope captures the signal waveforms by the preset trigger point. The scope continues to draw the waveforms even when the signal is not in the trigger point range.

- **Main Time Base** — allows users to select an appropriate time per division. The time per division (10 divisions) is displayed along the bottom of the screen. The time base adjustment affects all of the active scope channels at once.
- **Measure** — allows users to select various types of measurement parameters to be displayed at the right side of the screen for reference.

A maximum of 5 items are allowed to be selected each time.

➢ **To set a specific trigger point**

1. Tap the **Trigger On** button to activate the trigger.
2. Configures the specific trigger source, the trigger slope, and the trigger mode according to the test demand.
3. Tap and slide the voltage scale reference line up or down to the desired voltage point. The voltage info is displayed in a small reference box.
4. Tap and slide the time base reference line left or right to the desired point.
5. Tap **Start** button on the top-right side of the screen to activate the scope

18.4 Troubleshooting

If the MaxiScope is not communicating with the tablet, you need to do the followings:

- Check if the MaxiScope is properly connected to the tablet through the supplied USB cable.
- If the MaxiScope is already connected to the tablet, but the communication between the devices has failed, tap the **Scope Icon** on the top-right side of the screen to reset the USB connection.

IMPORTANT

All vehicle communications must be terminated before resetting the USB connection to avoid damage to the devices and the vehicle. The Internet connection may be aborted during USB reset.

- If the communication between the MaxiScope and the tablet still fails after USB reset, restart the tablet and reconnect the MaxiScope.

18.5 MaxiScope Firmware Update

The operating software of the MaxiScope is continuously being developed, and the update package can be downloaded free from the MaxiScope product webpage on Autel's website: http://www.autel.com.

19 Quick Link

The Quick Link application provides you with convenient access to Autel's official website and many other well-known sites in automotive service, which offers you abundant information and resources, such as technical help, knowledge base, forums, training, and expertise consultations.

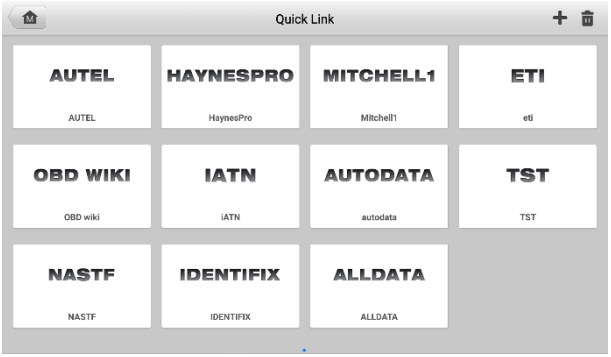


Figure 19-1 ***Quick Link Screen***

➢ **To access a quick link**

1. Tap **Quick Link** on the MaxiSys Job Menu. The **Quick Link** screen displays.
2. Select a website thumbnail from the main section. The browser is launched and the selected website is opened.
3. Now you can start exploring the website.

➢ **To manage the quick links**

1. Tap **Quick Link** on the MaxiSys Job Menu. The Quick Link application screen displays.
2. Tap the + icon on the upper-right corner to add websites. Tap the 🗑 icon to delete websites.

20 Maintenance and Service

To ensure that the MaxiSys diagnostic tablet and the combined VCI unit perform at their optimum level, we advise that the product maintenance instructions covered in this section is read and followed.

20.1 Maintenance Instructions

The following shows how to maintain your devices, together with precautions to take.

- Use a soft cloth and alcohol or a mild window cleaner to clean the touch screen of the tablet.
- Do not use any abrasive cleansers, detergent, or automotive chemicals to the tablet.
- Maintain the devices in dry conditions and keep them within normal operating temperatures.
- Dry your hands before using the tablet. The touch screen of the tablet may not work if the touch screen is moist, or if you tap the touch screen with wet hands.
- Do not store the devices in humid, dusty or dirty areas.
- Check the housing, wiring, and connectors for dirt and damage before and after each use.
- At the end of each work day, wipe the device housing, wiring, and connectors clean with a damp cloth.
- Do not attempt to disassemble your tablet or the VCI unit.
- Do not drop or cause severe impact to the devices.
- Use only authorized battery chargers and accessories. Any malfunction or damage caused by the use of unauthorized battery charger and accessories will void the limited product warranty.
- Ensure that the battery charger does not come in contact with conductive objects.
- Do not use the tablet beside microwave ovens, cordless phones and some medical or scientific instruments to prevent signal interference.

20.2 Troubleshooting Checklist

A. When the tablet does not work properly:

- Make sure the tablet has been registered online.

- Make sure the system software and diagnostic application software are properly updated.
- Make sure the tablet is connected to the Internet.
- Check all cables, connections, and indicators to see if the signal is being received.

B. When battery life is shorter than usual:

- This may happen when you are in an area with low signal strength. Turn off your device if is not in use.

C. When you cannot turn on the tablet:

- Make sure the tablet is connected to a power source or the battery is charged.

D. When you are unable to charge the tablet:

- Your charger maybe out of order. Contact your nearest dealer.
- You may be attempting to use the device in an overly hot/cold temperature. Try changing the charging environment.
- Your device may have not been connected to the charger properly. Check the connector.

NOTE

If your problems persist, please contact Autel's technical support personnel or your local selling agent.

20.3 About Battery Usage

Your tablet is powered by a built-in Lithium-ion Polymer battery. This means that, unlike other forms of battery technology, you can recharge your battery while some charge remains without reducing your tablet's autonomy due to the "battery memory effect" inherent in those technologies.

DANGER

The built-in Lithium-ion Polymer battery is factory replaceable only; incorrect replacement or tampering with the battery pack may cause an explosion.

- Do not use a damaged battery charger.
- Do not disassemble or open crush, bend or deform, puncture or shred.
- Do not modify or remanufacture, attempt to insert foreign objects into the battery, expose to fire, explosion or other hazard.
- Make sure to use the charger and USB cables only that come together in the package. If you use the other charger and USB cables, you might incur malfunction or failure of the device.
- Only use the charging device that has been qualified with device per the standard. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage, or other hazard.
- Avoid dropping the tablet. If the tablet is dropped, especially on a hard surface, and the user suspects damage, take it to a service center for inspection.
- The closer you are to your network's base station, the longer your tablet usage time because less battery power is consumed for the connection.
- The battery recharging time varies depending on the remaining battery capacity.
- Battery life inevitably shortens over time.
- Since over charging may shorten battery life, remove the tablet from its charger once it is fully charged. Unplug the charger, once charging is complete.
- Leaving the tablet in hot or cold places, especially inside a car in summer or winter, may reduce the capacity and life of the battery. Always keep the battery within normal temperatures.

20.4 Service Procedures

This section introduces information for technical support, repair service, and application for replacement or optional parts.

20.4.1 Technical Support

If you have any question or problem on product operations, please contact us.

Autel China Headquarters

- **Phone:** +86 (0755) 8614-7779 (Monday-Friday, 9AM-6PM Beijing Time)
- **Email:** support@autel.com
- **Address:** Floor 2, Caihong Keji Building, 36 Hi-tech North Six Road, Songpingshan Community, Xili Sub-district, Nanshan District, Shenzhen City, China
- **Web:** www.autel.com

Autel North America

- **Phone:** 1-855-288-3587 (Monday-Friday, 9AM-6PM Eastern Time)
- **Email:** ussupport@autel.com
- **Address:** 36 Harbor Park Drive, Port Washington, New York, USA 11050
- **Web:** www.autel.com/us

Autel Europe

- **Phone:** +49(0)89 540299608 (Monday-Friday, 9AM-6PM Berlin Time)
- **Email:** support.eu@autel.com
- **Address:** Landsberger Str. 408, 81241 München, Germany
- **Web:** www.autel.eu

Autel APAC

Japan:

- **Phone:** +81-045-548-6282
- **Email:** support.jp@autel.com
- **Address:** 6th Floor, Ari-nadoribiru 3-7-7, Shinyokohama, Kohoku-ku, Yokohama-shi, Kanagawa-ken, 222-0033 Japan
- **Web:** www.autel.com/jp

Australia:

- **Email:** ausupport@autel.com
- **Address:** Unit 5, 25 Veronica Street, Capalaba

Autel IMEA

- **Phone:** +971 585 002709 (in UAE)
- **Email:** imea-support@autel.com
- **Address:** 906-17, Preatoni Tower (Cluster L), Jumeirah Lakes Tower, DMCC, Dubai, UAE
- **Web:** www.autel.com

Autel Latin America

Mexico:

- **Phone:** +52 33 1001 7880 (Spanish in Mexico)
- **Email:** latsupport@autel.com
- **Address:** Avenida Americas 1905, 6B, Colonia Aldrete, Guadalajara, Jalisco, Mexico

Brazil:

- **Email:** brsupport@autel.com
- **Address:** Avenida José de Souza Campos n° 900, sala 32 Nova Campinas Campinas – SP, Brazil
- **Web:** www.autel.com/br

20.4.2 Repair Service

If it becomes necessary to return your device for repair, please download the repair service form from www.autel.com, and fill in the form. The following information must be included:

- Contact name
- Return address
- Telephone number
- Product name
- Complete description of the problem
- Proof-of-purchase for warranty repairs
- Preferred method of payment for non-warranty repairs

NOTE

For non-warranty repairs, payment can be made with Visa, Master Card, or with approved credit terms.

Send the device to your local agent, or to the below address:

Floor 2, Caihong Keji Building, 36 Hi-tech North Six Road, Songpingshan Community, Xili Sub-district, Nanshan District, Shenzhen City, China

20.4.3 Other Services

You can purchase the optional accessories directly from Autel's authorized tool suppliers, and/or your local distributor or agent.

Your purchase order should include the following information:

- Contact information
- Product or part name
- Item description
- Purchase quantity

21 Compliance Information

21.1 FCC Compliance

FCC ID: WQ8-MS906PRO2121 (for MS906 Pro)

FCC ID: WQ8- MS906TS2121 (for MS906 Pro-TS)

This device complies with Part 15 of the FCC rules and Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.

– Increase the separation between the equipment and receiver.

– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

– Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

21.2 RF WARNING STATEMENT

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

21.3 CE Compliance

RED Directive 2014/53/EU

21.4 RoHS Compliance

This device is declared to be in compliance with the European RoHS Directive 2011/65/EU.

22 Warranty

12-Month Limited Warranty

Autel Intelligent Technology Corp., Ltd. (the Company) warrants to the original retail purchaser of this MaxiSys Diagnostic Device, that should this product or any part thereof during normal consumer usage and conditions, be proven defective in material or workmanship that results in product failure within twelve (12) months period from the date of delivery, such defect(s) will be repaired, or replaced (with new or rebuilt parts) with Proof of Purchase, at the Company's option, without charge for parts or labor directly related to the defect(s).

NOTE

If the warranty period is inconsistent with local laws and regulations, please comply with the relevant local laws and regulations.

The Company shall not be liable for any incidental or consequential damages arising from the use, misuse, or mounting of the device. Some states do not allow limitation on how long an implied warranty lasts, so the above limitations may not apply to you.

This warranty does not apply to:

a) Products subjected to abnormal use or conditions, accident, mishandling, neglect, unauthorized alteration, misuse, improper installation or repair or improper storage;

b) Products whose mechanical serial number or electronic serial number has been removed, altered or defaced;

c) Damage from exposure to excessive temperatures or extreme environmental conditions;

d) Damage resulting from connection to, or use of any accessory or other product not approved or authorized by the Company;

e) Defects in appearance, cosmetic, decorative or structural items such as framing and non-operative parts.

f) Products damaged from external causes such as fire, dirt, sand, battery leakage, blown fuse, theft or improper usage of any electrical source.

IMPORTANT

All contents of the product may be deleted during the process of repair. You should create a back-up copy of any contents of your product before delivering the product for warranty service.


AUTEL