

Service Information

Subject: VAS6154(X) Diagnostic Interface Initial Setup Guide

Date: June 18, 2024

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1.0 General Information

This document covers the configuration for the **VAS6154(X)** for operation with ODIS.

This document was created with the two separate connection types in mind: **USB** and **Wireless**. The USB is a plug and play type connection. The wireless connection, however, involves a few more steps. So, you should be familiar with your **dealership's network** as well as having some **basic networking knowledge**. You can do either part independently, depending on your needs. Or have all functions available. Because of the length of the circular, only print the portion(s) that you need.

With a **VAS6154(X)** kit, you should have the components below. Some newer **VAS6154(X)** kits may not have the **Docking Station** and/or **WLAN Module**. These are available (separately) for purchase from the **Special Tools** website. These parts are also interchangeable.

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The ODIS software should be installed and up to date before continuing.

2.0 USB Setup Only (Plug and Play)

1. Connect the **USB Module with cable** to the VAS6154(X)

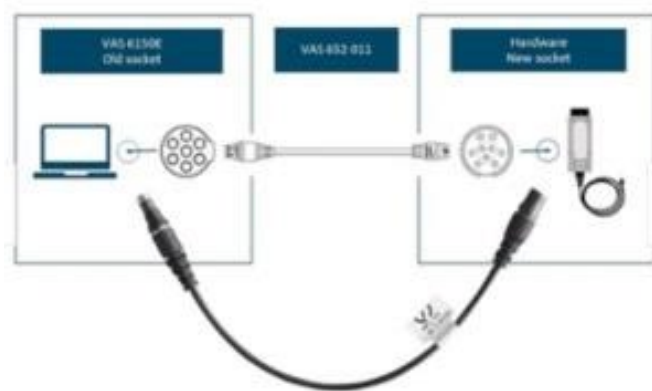


2. Plug the round end of the USB cable into the Fischer port on the diagnostic device:

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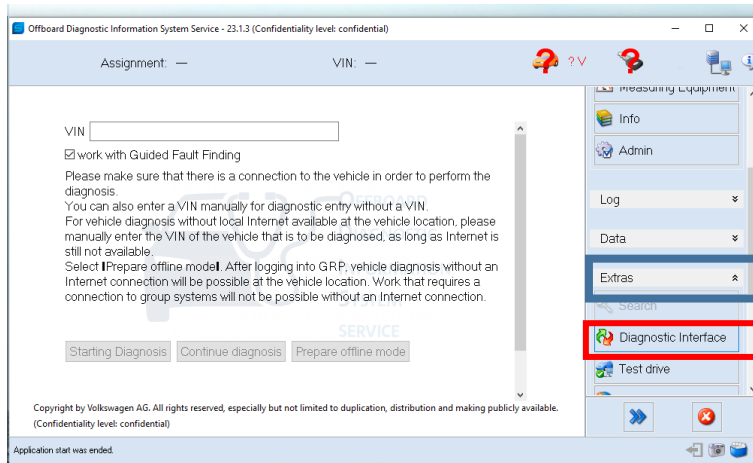
3. If applicable, make sure you have secure connection with the adapter cable. (Showing the VAS652011)



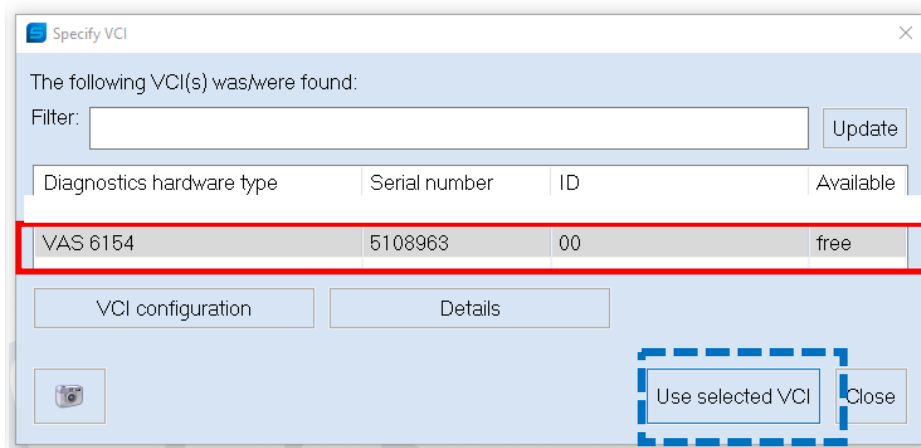
Windows should install the necessary drivers for the VAS6154(X). Device should beep when ready.

4. Launch the ODIS program.
5. Go to Extras>Diagnostic Interface to select the correct VAS6154(X) VCI.

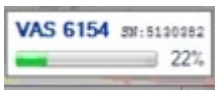
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6. Highlight the correct VCI. (You can choose via serial number)
7. Click on Use selected VCI. Then select Close.



You may see a small window in the lower right hand corner, if the VAS6154(X) needs a firmware update.



- If you do not see your VAS6154(X) interface, check your connections. Make sure the cable pins aren't bent or missing.

(continued)

- Try a different USB/Fischer port.
- Attempt a Factory Reset of the head. (See **Factory Reset Procedure** circular in Elsa2Go>Service References)
- Reboot your computer.
- Insure any firewalls or anti-virus are turned off, or have exceptions for ODIS and the VAS6154(X)

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- You can also reinstall the VAS6154(X) drivers, (**With ODIS closed**) located here:
`C:\Program Files\VW_PDUAPI_OS\VAS6154\VAS6154-Driver-2.xx.xxx` (driver version may vary)

Your VAS6154(X) should have a solid green (Power) and solid blue (Conn) lights lit when connected to the vehicle. You should also show the USB-Car-Key symbol in ODIS



Carefully grasp and pull the cable collar back and unplug the USB cable from the Fischer port of the laptop/tablet when not in use.



3.0 Wireless Setup Functions

3.1 Prerequisites



Person preparing the VAS6154(X) for service has knowledge of networking systems, and specific working knowledge of the dealership LAN / WLAN.

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❖	Dealership network performance minimum recommended 25 Mbps (single franchise) / 40 Mbps (dual franchise).
❖	VAS6154(X) must be able to connect to the same Dealership WLAN as the diagnostic device.
❖	Network IP set up for either DHCP or Static IP
❖	WLAN must support WPA2 encryption. (It is not possible to connect to other types or open connections.)
❖	WPA2 Encryption method and applicable key/password/certificate information available
❖	Broadcast services not blocked by a network firewall, anti-virus software or other security measures.
❖	The latest ODIS Service application version installed on the diagnostic device.
❖	Diagnostic device plugged in to power adapter and booted to Windows desktop.
❖	Wireless switch on diagnostic device in ON position, ("Wireless LAN ON" & "802.11a Enabled").
❖	Diagnostic device connects to, and functions without restriction on dealership network.

ATTENTION!

Personnel tasked with preparing VAS6154(X) for workshop service **must have** knowledge of networking systems, and **specific working knowledge of the dealership LAN / WLAN**, as well as any security restriction measures in place that could affect its access and use.

3.2 Wireless Hardware Setup

1. Connect the **double end** of USB-Y cable to available USB ports on diagnostic device **-1-**, and then connect the **single end** to base station **-2-**:



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-1-

2. **Wait** for Windows to locate and automatically install the drivers.
3. Plug the **WLAN Module** into the end of the VAS6154(X)
4. Plug the assembled unit into the base station as illustrated:

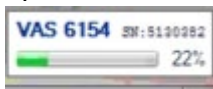


5. Open ODIS
6. ODIS should see the VAS6154(x) while it is in the docking station. This will be evident by the Vehicle and USB icons showing as below. If not shown, leaving the head in the docking station, click on Extras > Diagnostic Interface > Specify VCI > Highlight the head in the next window. (You may need to click UPDATE to refresh the window) Click Use selected VCI.



7.

You may see a small window in the lower right-hand corner, if the VAS6154(X) needs a firmware update.



(continued)



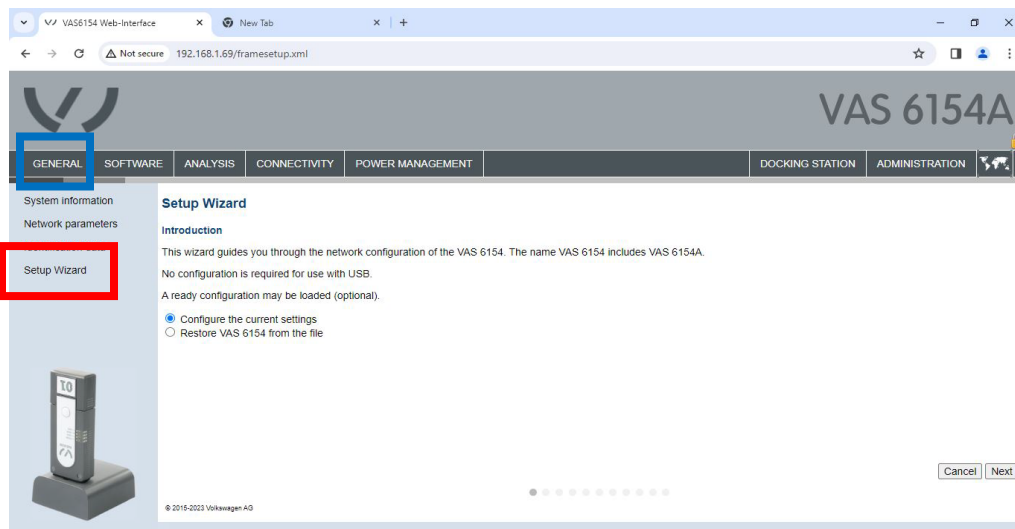
- If you do not see your VAS6154(X) interface, disconnect and reconnect all hardware.
- Attempt a Factory Reset of the head. (See **Factory Reset Procedure** document in Elsa2Go>Service References)
- Reboot your computer.
- Insure any firewalls or anti-virus, etc are turned off, or have exceptions for ODIS and the VAS6154(X).
- You can also reinstall the VAS6154(X) drivers, located here:
C:\ProgramFiles\VW_PDUAPI_OS\VAS6154\VAS6154-Driver-2.xx.xxx (driver version may vary)

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3.3 Setup Wizard WLAN Infrastructure and/or WLAN Access Point (ad-hoc).

1. Open your web browser (Chrome or Edge recommended) and manually enter the following IP address in the browser's address bar: **http://192.168.1.69** (optional: <http://vas6154-dock>)
This opens up the Web Interface page of the VAS6154(X)
2. Select the desired interface language, scroll down and apply the selection by clicking the checkmark.
3. This brings up the main page. Select the **Setup Wizard** option under the **General Tab**.

(continued)



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4. Choose **Configure the current settings** and click **Next**.

Introduction

This wizard guides you through the network configuration of the VAS 6154. The name VAS 6154 includes VAS 6154A.

No configuration is required for use with USB.

A ready configuration may be loaded (optional).

- ☒ Configure the current settings
☐ Restore VAS 6154 from the file

Cancel Next

5. This initial step may take a moment. Please wait and then carefully follow the setup wizard prompts.

After the VAS6154(X) setup is completed, you will be prompted to save the configuration file and complete the setup. Ensure that the **Save File** check box is checked. Click **Complete**.

Save settings

You can save the settings in a file on the PC. The file can be loaded into devices to be configured or to restore this device.

☒ Save file

Cancel Back Complete

You will receive a prompt stating the settings are saved. Click **OK**.

Message from webpage

×



The settings were saved in the VAS 6154. You can now remove the VAS 6154 and use it on the vehicle. Please save the backup file of the setting on the PC.

OK

Select **Save** on the download prompt. Navigate to your device folder and save the configuration file for later use.

Do you want to save **BAK_5124228_20190625_143714.cfg** (2.68 KB) from 192.168.1.69?

Save

Cancel

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6. You can now plug your VAS 6154(X) into the vehicle.

(continued)

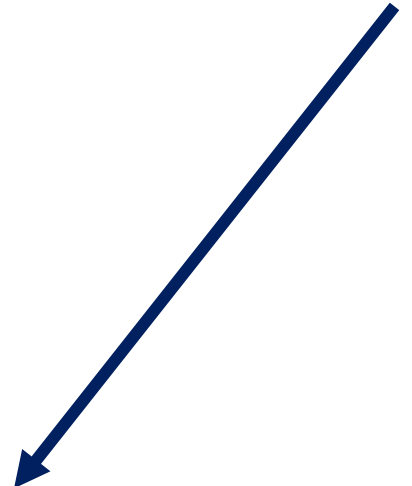
Your VAS6154(X) should have the following LEDs lit when connected to the vehicle. (May take a couple of minutes)

Solid Green=Power

Solid Blue=Conn

Solid Amber=WLAN Infrastructure Mode

You should also see the wireless connection in ODIS as shown below.



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Quick Restore

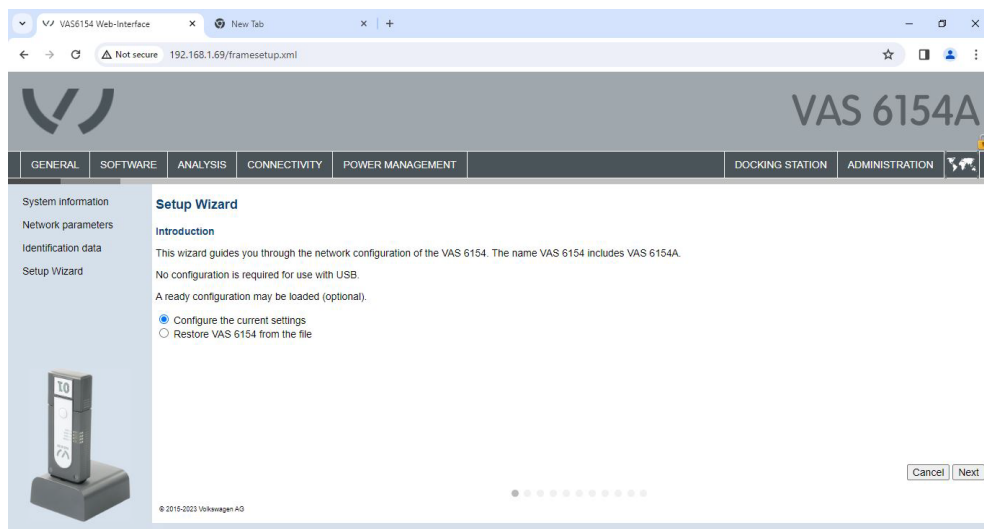
If you need to perform a factory reset on your VAS6154(X) or require a new VAS 6154, the saved configuration file can be reloaded in the web interface.

1. Open your web browser and manually enter the following IP address in the browser's address bar:
http://192.168.1.69 (optional: <http://vas6154-dock>)
2. Select the desired interface language, scroll down, and apply the selection by clicking the checkmark.
3. Select **Restore VAS 6154/6154A from the file**. Navigate to the save location and click **Open**.
4. Follow the prompts as the set-up wizard presents them. Click **next** after verifying each configuration.

3.4 Manual Wireless Setup WLAN Infrastructure and/or WLAN Access Point (ad-hoc)

1. Open your web browser (Chrome or Edge recommended) and manually enter the following IP address in the browser's address bar: **http://192.168.1.69** (optional: <http://vas6154-dock>)
2. Select the desired interface language, scroll down and apply the selection by clicking the checkmark.
3. General – System Information page appears first by default every subsequent time the web interface is accessed:

Service Information

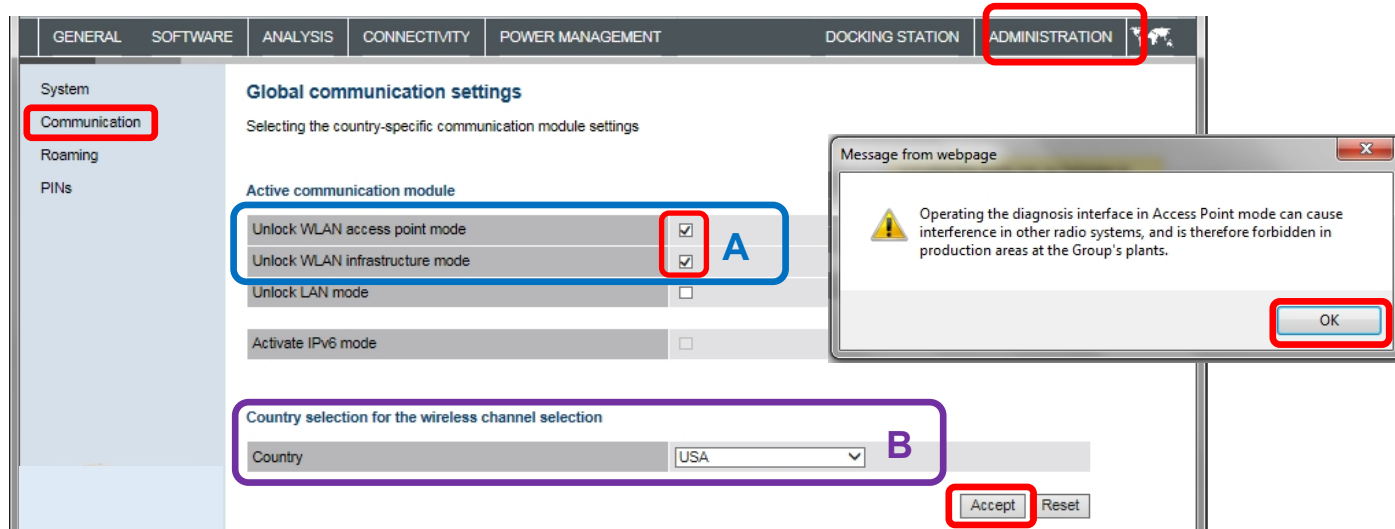


A) Unlock Communication Modes

The communication modes must be unlocked, and the country in which the network operates set.

1. From the web interface: Select the **ADMINISTRATION** main category, and then select the **Communication** subcategory:
2. Check ☒ the **Unlock WLAN access point mode AND Unlock WLAN infrastructure mode** selections **-A-**: (Click **OK** when the Access Point interference message appears.):
3. Select the applicable **wireless channel selection - Country** from the dropdown **-B-**:
4. Select **Accept**, and then **wait a moment** while the parameters are written:

(continued)



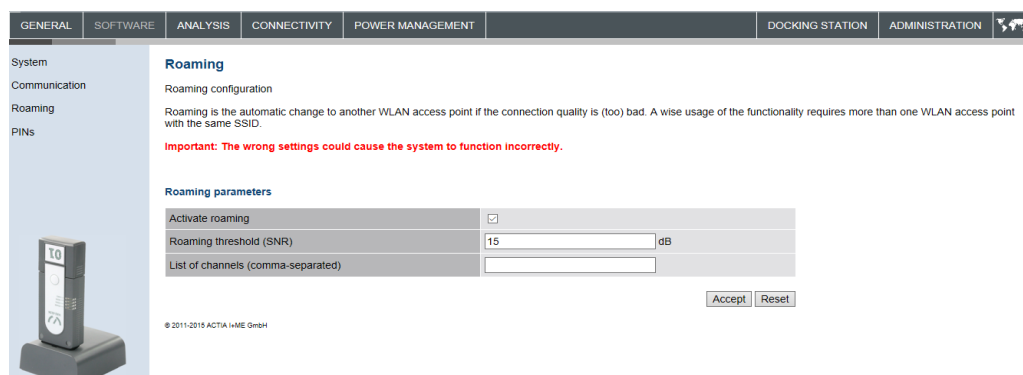
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B) Enable Roaming

Roaming is helpful if you have multiple Wireless Access Points located throughout your dealership that have the same SSID name. It allows the VAS6154 to automatically change to another WLAN access point if the connection quality is poor.

Note: You should verify with your IT specialist if your network is configured in this manner.

1. Select the **Administration** main category then the **Roaming** subcategory.
2. Place a ☒ in the Activate **Roaming Box**.
3. Leave 15 as the default **Roaming threshold (SNR)**.
4. For the **List of channels (comma-separated)**. Leave this entry blank unless you consult with your IT specialist.



The screenshot shows the configuration interface for the VAS6154 device. The top navigation bar includes tabs for GENERAL, SOFTWARE, ANALYSIS, CONNECTIVITY, POWER MANAGEMENT, DOCKING STATION, and ADMINISTRATION. The ADMINISTRATION tab is selected, and the Roaming subcategory is active. The Roaming configuration page includes a description of roaming and a warning: "Important: The wrong settings could cause the system to function incorrectly." The Roaming parameters section contains a table with the following settings:

Roaming parameters	
Activate roaming	☒
Roaming threshold (SNR)	15 dB
List of channels (comma-separated)	

At the bottom of the table are "Accept" and "Reset" buttons. A small image of the VAS6154 device is shown on the left side of the page.

C) Identify WLAN Module

If more than one VAS6154(X) connects to the Dealership WLAN, each must be assigned a **different name and ID number**.

1. Choose and record a **unique name** and **two-digit ID number**.
2. Carefully peel-off the self-adhesive numbers chosen for the **ID Number** and apply them to the **add-on WLAN Module** as illustrated (number shown is example only):



3. Select the **GENERAL** main category, and then select the **Identification data** subcategory:

If the display contains the **WARNING:** text illustrated below, select **Train now:**

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GENERAL SOFTWARE ANALYSIS CONNECTIVITY POWER MANAGEMENT DOCKING STATION ADMINISTRATION

System information
Network parameters
Identification data

Identification data
Identification and configuration of the ID data

Identification data

Serial number 5108742 Hardware revision IR12583E / IR12548F

Identification

Diagnosis interface identification /00 Hostname (optional) VAS6154-5108742

Accept Reset

WARNING: The diagnosis interface cannot be used for diagnostics at this time as the WLAN module has not been trained with it yet! The WLAN module can be paired with the VAS6154 docking station.

Train now

4. Enter the name chosen for the module in the **Diagnostic interface identification** entry field **-A-**:
5. Enter the **Module ID** chosen for the module in the **Diagnostic interface identification** entry field **-B-**:
6. Record the **Hostname** on a piece of paper, **Diagnostic interface identification** entry field **-C-**. It will be required in later.
7. Select **Accept**, and then **wait a moment** while the parameters are written:

(continued)

GENERAL SOFTWARE ANALYSIS CONNECTIVITY POWER MANAGEMENT DOCKING STATION ADMINISTRATION

System information
Network parameters
Identification data

Identification data
Identification and configuration of the ID data

Identification data

Serial number 5103691 Hardware revision IR12583E / IR12548F

Identification

Diagnosis interface identification Xxxxxxx|01| Hostname (optional) VAS6154-5103691

Accept Reset

Note:

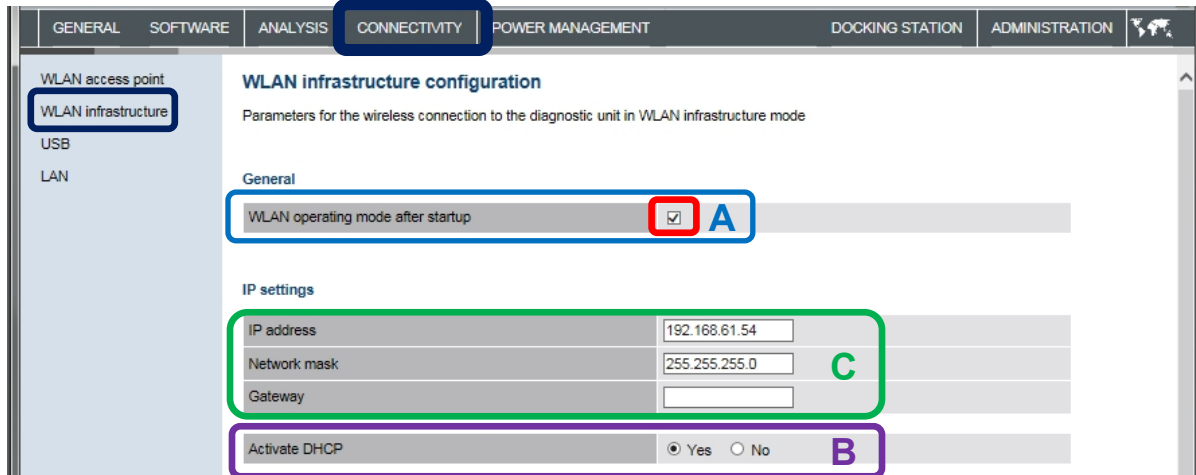
If the dealership WLAN operates in a **Remote Authentication Dial in User Service (RADIUS)** environment, the name chosen for the VAS 6154 should be used as the hostname for the RADIUS certificate.

D) Configure WLAN Infrastructure Connection Parameters

1. Select the **CONNECTIVITY** main category, and then select the **WLAN Infrastructure** subcategory:

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2. Check ☒ the **WLAN operating mode after startup** selection **-A-**:
 - ☐ **If** the dealership WLAN is set up for **DHCP**: Skip to **Step 5** below.
 - ☐ **If the** dealership WLAN is set up for **Static IP**: Continue with Steps 3 & 4 below.
3. **For Static IP Only**: Select **No** to deselect the DHCP default **-B-**:
4. **For Static IP Only**: Enter the **dealership-specific IP address /network mask etc.** information **-C-**:



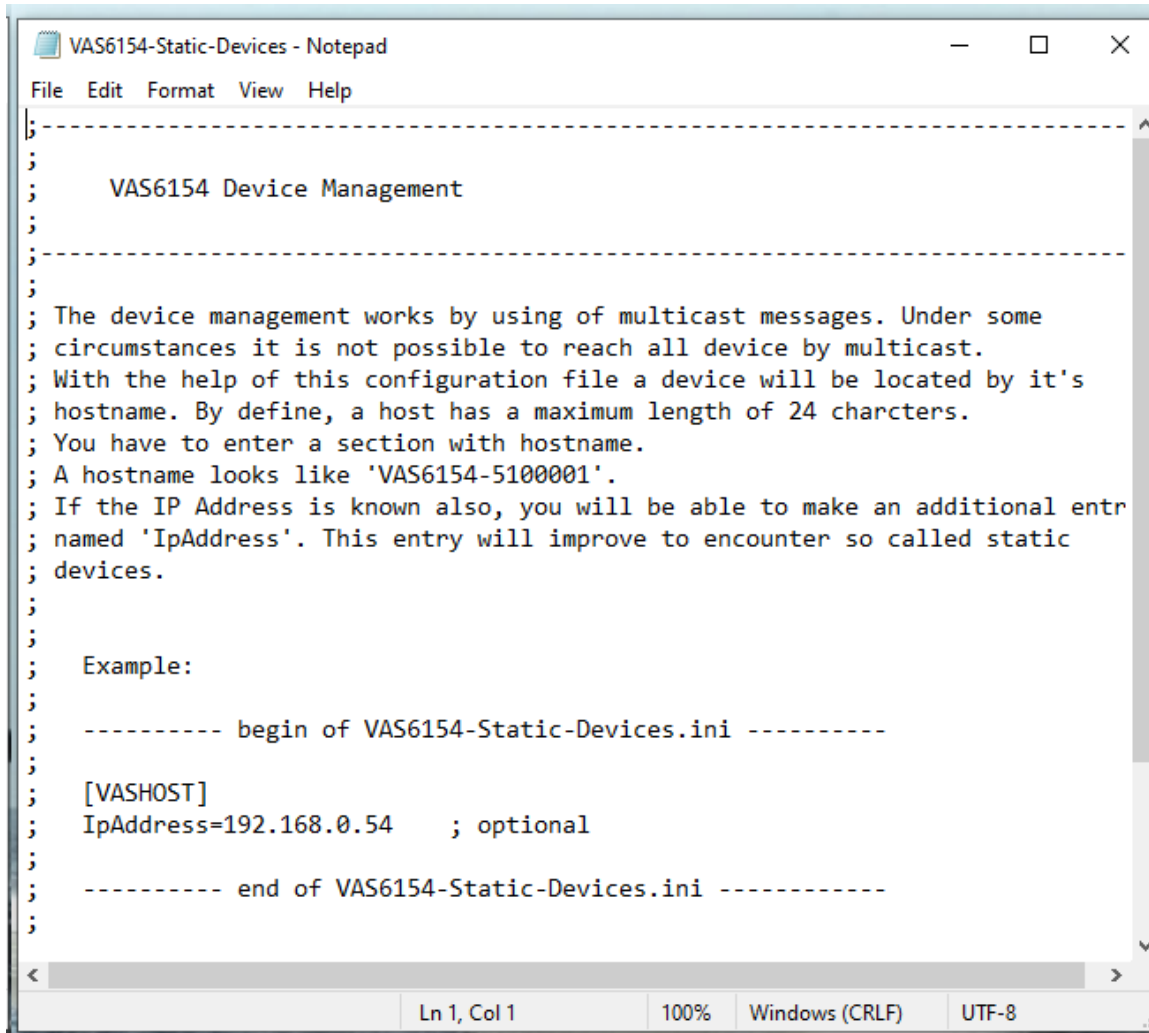
The screenshot shows the 'WLAN infrastructure configuration' window. The 'CONNECTIVITY' tab is active. In the left sidebar, 'WLAN infrastructure' is selected. The main content area has a 'General' section with a checkbox for 'WLAN operating mode after startup' which is checked and labeled 'A'. Below this is the 'IP settings' section, which contains three input fields: 'IP address' (192.168.61.54), 'Network mask' (255.255.255.0), and 'Gateway'. These fields are grouped together and labeled 'C'. At the bottom of the IP settings section, there is a radio button for 'Activate DHCP' set to 'Yes', labeled 'B'.

4.- Continued. Static IP .ini file setup.

If you are setting up your VAS6154(X) with a static IP Address. You will need to also configure the .ini Static IP Address notepad.

- a) From your Windows program menu, look for the VW_D_PDU_API_OS folder and select the VAS6154-Static-Devices.ini option.
- b) The VAS6154-Static-Devices – Notepad will open. Expand the notepad to see the whole page.

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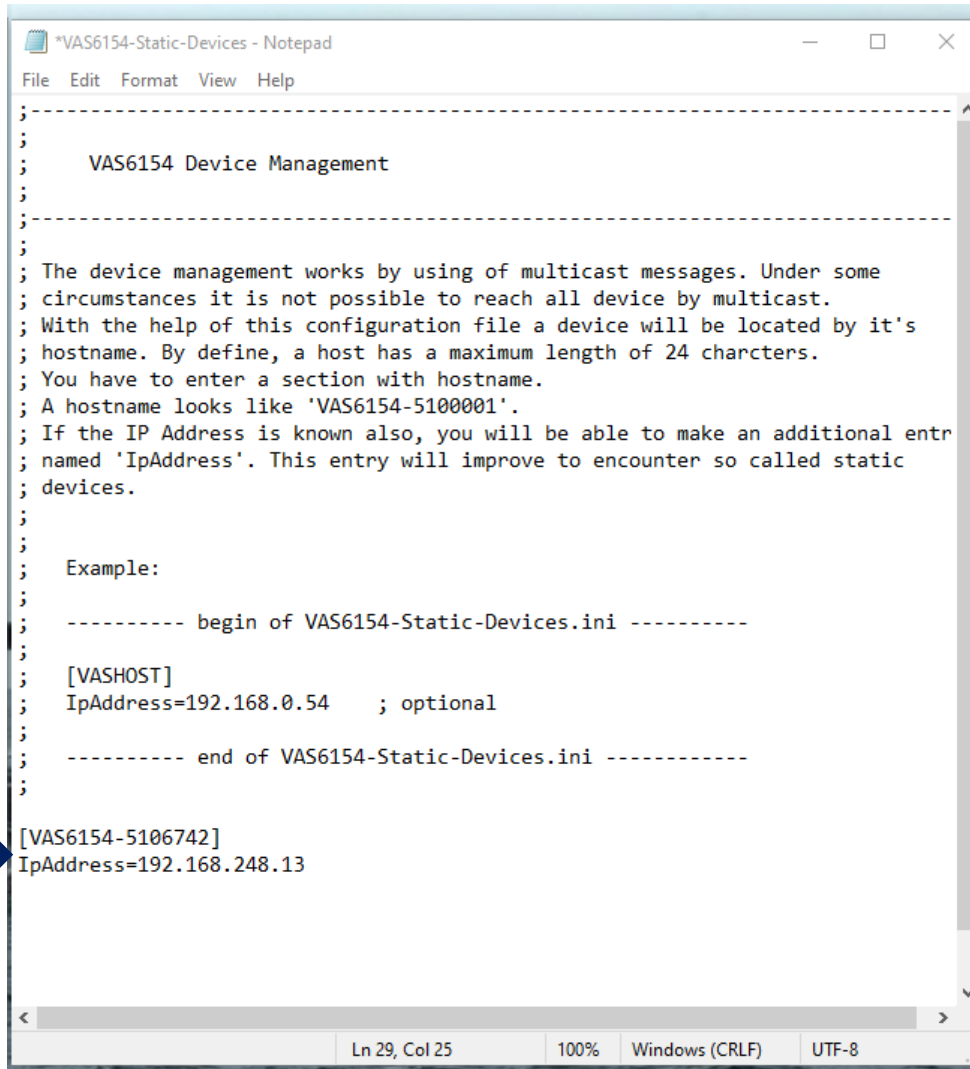


```
File Edit Format View Help
;-----
;
;   VAS6154 Device Management
;
;-----
;
; The device management works by using of multicast messages. Under some
; circumstances it is not possible to reach all device by multicast.
; With the help of this configuration file a device will be located by it's
; hostname. By define, a host has a maximum length of 24 charcters.
; You have to enter a section with hostname.
; A hostname looks like 'VAS6154-5100001'.
; If the IP Address is known also, you will be able to make an additional entr
; named 'IpAddress'. This entry will improve to encounter so called static
; devices.
;
;
; Example:
;
; ----- begin of VAS6154-Static-Devices.ini -----
;
; [VASHOST]
; IpAddress=192.168.0.54    ; optional
;
; ----- end of VAS6154-Static-Devices.ini -----
;
;
Ln 1, Col 1    100%    Windows (CRLF)    UTF-8
```

(continued)

c) At the bottom of the notepad, you should put the Host Name of the VAS6154(X), and the Static IP Address assigned to it, as such. Please note there is no semi-colon in front of the Host Name and IP Address.

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```
*VAS6154-Static-Devices - Notepad
File Edit Format View Help

;
;
;   VAS6154 Device Management
;
;-----
;
; The device management works by using of multicast messages. Under some
; circumstances it is not possible to reach all device by multicast.
; With the help of this configuration file a device will be located by it's
; hostname. By define, a host has a maximum length of 24 charcters.
; You have to enter a section with hostname.
; A hostname looks like 'VAS6154-5100001'.
; If the IP Address is known also, you will be able to make an additional entr
; named 'IpAddress'. This entry will improve to encounter so called static
; devices.
;
;
; Example:
;
; ----- begin of VAS6154-Static-Devices.ini -----
;
; [VASHOST]
; IpAddress=192.168.0.54    ; optional
;
; ----- end of VAS6154-Static-Devices.ini -----
;
;
; [VAS6154-5106742]
; IpAddress=192.168.248.13
;
;
Ln 29, Col 25    100%    Windows (CRLF)    UTF-8
```

The Host Name and Static IP Addresses shown here are examples only. You will have specific information for your dealership. Also please ensure there is no further information beneath the Host Name and IP Address.

 **Save and close the notepad when finished.**

5. If necessary, **scroll down the window** to reveal the selection - entry fields illustrated below:

Note:

- The default encryption method is **WPA2 (CCMP+TKIP/PSK)**, and its configuration is described below.
- **If the network is set up for WPA2 (EAP-TLS/Radius)**, activate this method in the web interface and enter the required information.

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6. Precisely, enter the **Dealership WLAN SSID** (network name).
7. Enter the **WPA2 encryption key for the Dealership WLAN**.
8. Select **Accept**, and then **wait a moment** while the parameters are written:

WLAN infrastructure settings

SSID: --YOUR_NETWORK_SSID--

Available radio networks: [Dropdown] [Scan]

Frequency band: ☐ 2.4GHz / 5GHz ☒ 2.4GHz ☐ 5GHz

Encryption: ☒ WPA2 (CCMP+TKIP/PSK)

Key (only for CCMP+TKIP/PSK): [Masked Key] ☐ Display

Encryption: ☐ WPA2 (EAP-TLS/Radius)

Certificate installed: ☐ (Valid until:)

Certificate authority: [Text Field]

Upload certificate: [Text Field] Password PKCS12: [Text Field] [Browse...]

[Accept] [Reset]

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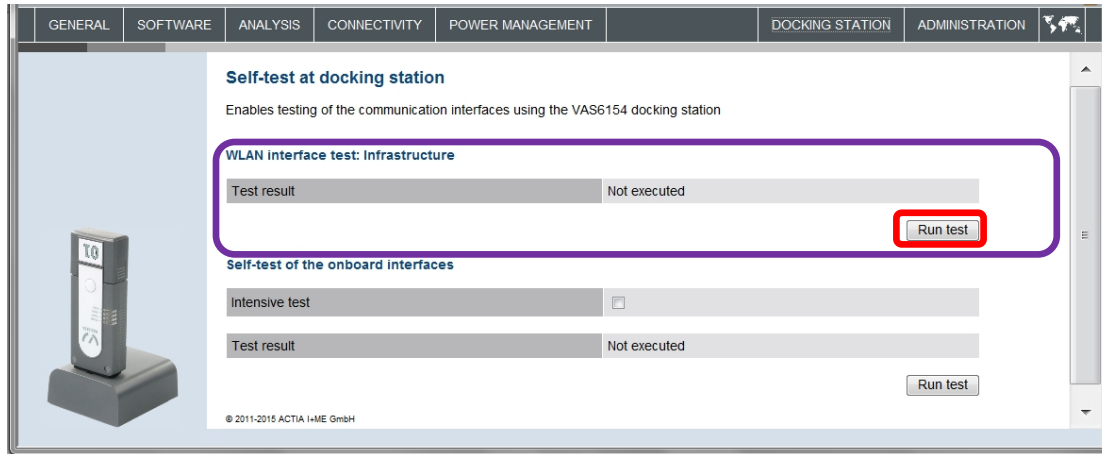
E) Perform WLAN Infrastructure Self-Test (Docking Station Test)

Confirm successful VAS6154(X) WLAN Infrastructure setup and function on the configured dealership WLAN by performing a self-test as follows:

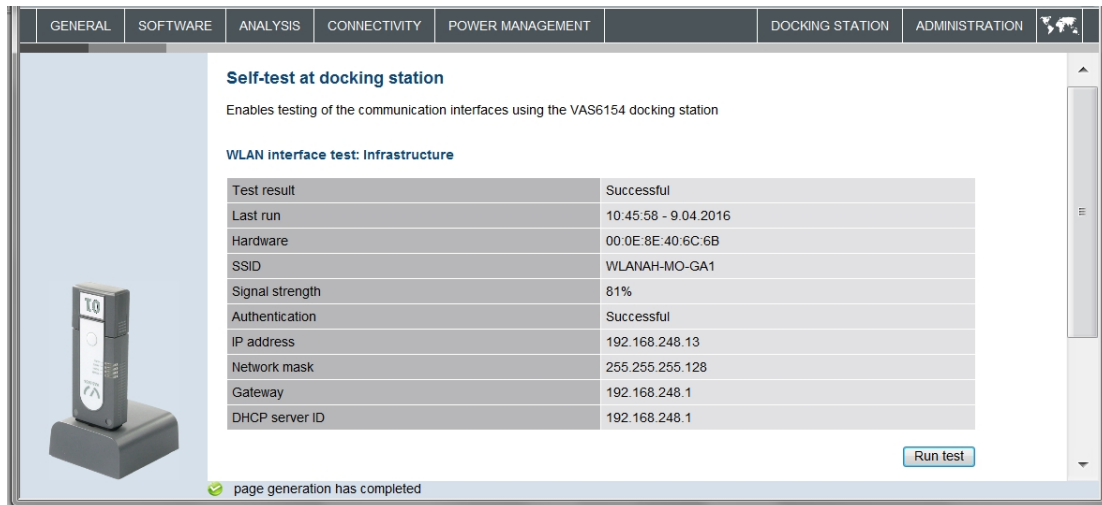
1. Select the **DOCKING STATION** main category: Retry selection if no connection is made initially.
2. From the **WLAN interface test: Infrastructure** subcategory, click **Run test:**



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The approx. 90-second test checks the network broadcast functions of the VAS6154(X) on the WLAN.



If the self-test is unsuccessful, re-check your information and run the test again.

3. Close the web browser displaying the VAS 6154/6154A web interface.
4. Disconnect the equipment and plug your VAS6154(X) into the vehicle.

Your VAS6154(X) should have the following LEDs lit when connected to the vehicle.

Solid Green=Power

Solid Blue=Conn

Solid Amber=WLAN Infrastructure Mode

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You should also see the wireless connection in ODIS as shown below.



F) (Optional) Configure WLAN Direct Connection Parameters (Meant for road tests)

Go to the Connectivity Tab and select the WLAN access point tab.

Check ☒ the WLAN operating mode after startup box.



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GENERAL SOFTWARE ANALYSIS CONNECTIVITY POWER MANAGEMENT DOCKING STATION ADMINISTRATION

WLAN access point

WLAN infrastructure

USB

LAN

WLAN access point configuration (direct connection)

Parameters for the wireless connection to the diagnostic unit in WLAN access point mode

General

WLAN operating mode after startup

IP settings

IP address 192.168.61.54

Network mask 255.255.255.0

Diagnostic unit settings

IP address range 192.168.61.240 ... 192.168.61.248

Activate DHCP server ☒ Yes ☐ No

WLAN access point settings

SSID VAS6154_5108742

Encryption ☒ WPA2 ☐ WEP128

Key (if encryption is enabled) PSK_VAS6154_5108742

Channel 8

SSID visible ☒

Accept Reset

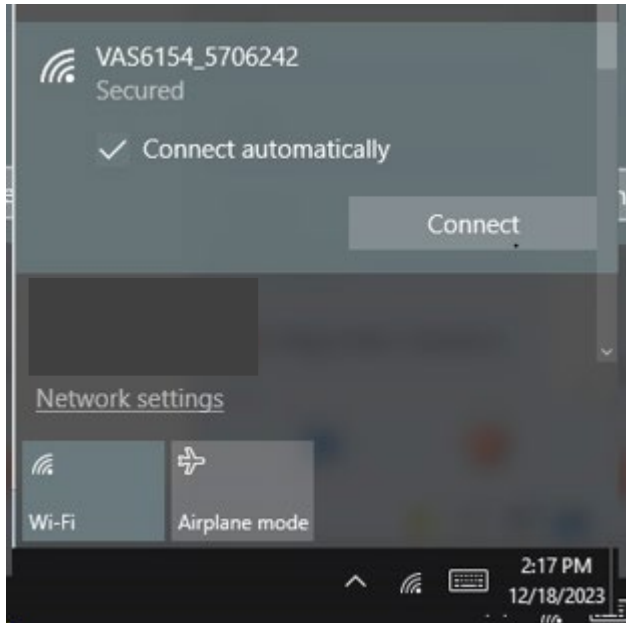
Please take note of the SSID and the Encryption Key as it will be needed to complete the set up.

1. Click Accept to save the changes.

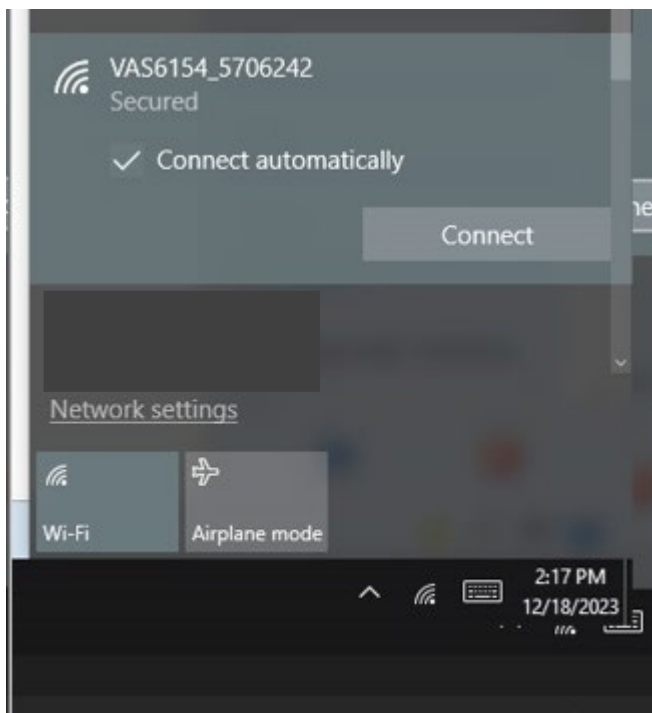
(continued)

2. Plug your VAS6154(X) into the vehicle.
3. Go to your wireless networks (system tray) and look for the associated SSID in your list of available networks. It may take a little time to show. (Your SSID will have a different serial number)

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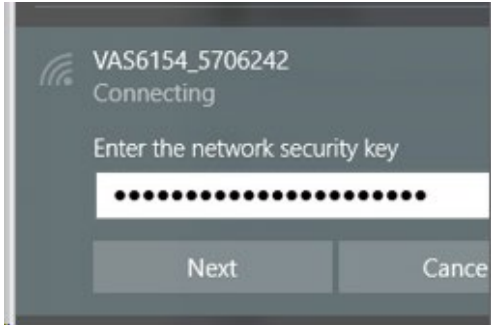


4. Select the VAS6154(X) SSID



5. Enter the key recorded earlier.

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6. You will be connected directly to the VAS6154(X) directly.

Please note, you will not have internet access with this mode.

When connected to the vehicle, you should have the following LEDs lit in WLAN Access Point (Ad-Hoc) mode.

Solid Green=Power

Solid Blue=Conn

No Amber lit.



ODIS will have the following display. Connected to the head, but with no Internet access.



3.5 Switching Wireless Modes (Optional)

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When connected to the vehicle, you can quickly push the button on the head to switch communications modes from **WLAN Access Point** to **WLAN Infrastructure**, or vice-versa. This is useful when going to from road tests and back to the shop.

**You must setup the head for Access Point usage beforehand.*

When in WLAN Infrastructure Mode, you will have this display in ODIS.



And this is the head when connected to the vehicle. (**Notice, Amber LED lit**)



When you push the button on the head, the device will beep once, which will put it into WLAN Access Point mode.

(continued)

Head now connected in Access Point mode (**Notice, Amber LED is *not* lit.**)

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ODIS will show this display when connected.



Please note, you will not have internet access with this mode.

Please contact Diagnostic Tester Software Support by phone at 888-896-1298 or email softwaresupport@vw.com with any questions or concerns.