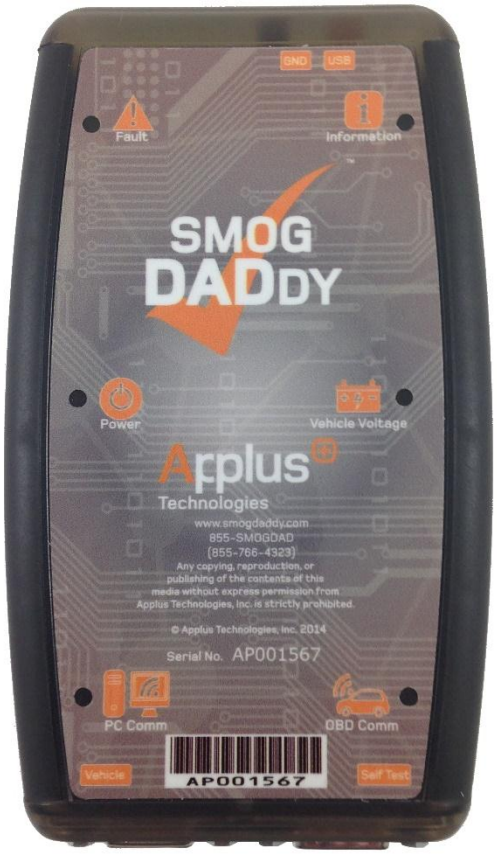
Applus Technologies

Smog DADdy™ User Guide



Version 8.2

Smog DADdy™ User Guide

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Introduction

Smog DADdy is a new generation On-Board Diagnostic (OBDII) Data Acquisition Device (DAD) used for vehicle emissions testing. It complies with the State of California Bureau of Automotive Repair (BAR) smog checking requirements and seamlessly integrates with its OBD Inspection System software (OIS).

About this Guide

This User Guide introduces you to Smog DADdy features and explains how to use it for vehicle emissions testing. It also provides instructions for installing BAR-OIS software on a computer.

Document Conventions

This User Guide uses the following conventions to help you distinguish the actions required by you when using SmogDADdy and installing BAR-OIS software.

Convention	Description
Bold	Initiates a software command when clicking on the bold type face word. Example: Click on **Self-Test** to run a Self-Test.
‘ ’	Signifies the title of a newly displayed software window. Example: The ‘California BAR-OIS Setup’ window will appear.
“ ”	Emphasizes a word or words you should see. Example: When the Self-Test is over, the status line will read “Completed”.
Italics	Indicates a set of choices from which you must choose one. Example: Select *Applus* for the DAD vendor.
Courier New Font	Identifies text you must type. Example: Type your `Com Port number` into the field .

System Requirements

If you have not purchased the Applus Smog DADdy turnkey system, you will need a computer with the following specifications to accommodate the BAR-OIS system requirements.

- Windows 7 32-bit, Service Pack 1 (SP1 or later) Windows 8, 8.1, 8.64-bit
- Internet Explorer 9 (or later) Web Browser
- Internet connectivity (DSL, cable, satellite or dial-up)
- A 2.0 USB port
- Bluetooth (For wireless DAD version)

Safety Information

Safety Instructions

This User Guide is intended to provide technical guidance on the installation, operation, and maintenance of Smog DADdy ("device"). Do not attempt to install or operate this product without having completely read and understood the information presented. If you have questions, please contact Bosch Customer Service.

MISUSE OF PRODUCT MAY CAUSE PERSONAL INJURY, DAMAGE TO EQUIPMENT, OR VOIDING OF THE MANUFACTURERS WARRANTY.

NOTE: Read and keep these safety instructions. Heed all warnings and follow all instructions.

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 this User Guide is read and completely understood by all persons operating, or coming into contact with the device.

Intended Use

The device is intended for use by properly trained and skilled professional automotive technicians that are certified by the California Bureau of Automotive Repair (BAR) to conduct vehicle emissions tests (smog checks). The safety information presented in this Users Guide reminds the operator to exercise safe care when conducting a smog check.

It is assumed that the operator has a thorough understanding of vehicle systems before using the device. Understanding of safety information and operating procedures is necessary for competent, safe and accurate use of the device.

Intended Personnel

There are no variations in procedures, techniques, tools, or in the skill of the individual doing the work in accordance with BAR and Applus Technologies guidelines. It is the automotive technician's responsibility to be knowledgeable about the testing system. It is essential to use proper service methods and test procedures. It is important to perform tests in an appropriate and acceptable manner that does not endanger your safety, the safety of others in the work area, the equipment being used, and 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 being tested. Read, understand, and follow all safety rules in this guide when operating the device.

Follow These Safety Rules

1	Keep all cables out of the reach of motorists and passengers. Failure to do this may result in injury.
2	Do not disassemble or modify the device, as this may result in fire, electric shock, or device failure.
3	Do not use the device in abnormal conditions, i.e. presence of smoke, excessive heat, odd smell, peculiar noise, etc. This may result in fire, burns, shock or device failure. If such conditions exist, turn the power off immediately, remove all cables from all device ports, and contact Bosch Customer Service.
4	In the event that any foreign material enters the device, turn off the power immediately and remove all cables from all device ports. Failure to do so may result in fire, electric shock, or device failure. Contact Bosch Customer Service.
5	Do not spill liquids (coffee, water, oil, etc.) on the device. Do not use the device in areas where liquids may splash on the device. This may result in igniting a fire, burns, shock or device failure.
6	To prevent danger of suffocation, keep plastic packaging out of the reach of motorist and passengers.
7	In the event of lightning strikes, do not touch the device to avoid potential electrical shock.
8	Do not expose Smog DADdy to an environmental temperature above 135°F (+55°C). This may result in a fire or device failure.
9	Damage to the device caused by dropping, throwing, being stepped on, etc., may prevent functionality of the device and may result in injury. In the event that the device is damaged, turn the power off immediately, remove all cables from all device ports, and contact Bosch Customer Service.
10	Do not place heavy objects on the device.
11	Do not use the device in any manner contrary to the instructions in this guide, or to perform any functions not explicitly provided in this guide. This may result in injury or device failure.
12	Do not use solvents (i.e. paint thinner, benzene, alcohol, etc.) when cleaning the device. This may damage the surface. Clean the device using a clean, dry cloth.

Smog DADdy Overview

Your Smog DADdy includes the following hardware components. Wired devices will include a 16 ft. OBDII DLC cable and wireless devices will include a 4 ft. OBDII DLC cable.

1.

Wired or Wireless
Smog DADdy Device

2.

16 ft. DLC Cable
(wired Smog DaDdy units)

3.

4 ft. DLC Cable
(wireless Smog DaDdy units)

4.

3.3 ft. USB Cable

5.

1 ft. Self-Test Cable

6.

Alternate Ground Cable

7.

Vehicle Charging Adapter
(wireless Smog DADdy units)

Hardware Descriptions

	Item	Description	Purpose
1	Wired Smog DADdy OR Wireless Smog DADdy	USB enabled Data Acquisition Device (DAD) ***Bosch P/N 573926*** Bluetooth enabled Data Acquisition Device (DAD) ***Bosch P/N 573927***	Provides a USB interface between the test vehicle and the computer. Provides a wireless interface between the test vehicle and the computer.
2	DLC Cable (OBDII) Wired units	16 ft. Data Link Connector (DLC) cable. Connections: • OBDII - male • Computer – female ***Bosch P/N 573924***	Connects a wired Smog DADdy to the test vehicle.
3	DLC Cable (OBDII) Wireless units	4 ft. Data Link Connector (DLC) cable. Connections: • OBDII - male • Computer – female ***Bosch P/N 573922***	Connects a wireless Smog DADdy to the test vehicle.
4	USB Cable	3.3 ft. USB Mini. Connections: • Computer - female • Smog DADdy – female ***Bosch P/N 573920***	Connects a wired or wireless Smog DADdy to the computer.
5	Self-Test Cable	1 ft. Self-Test. Connections: • DLC cable - female • Smog DADdy – female ***Bosch P/N 573925***	Tests the integrity of Smog DADdy and vehicle DLC cable.
6	Alternate Ground Cable	20 ft. Alternate Grounding • Battery Clamp • 1/8" Phono Plug ***Bosch* P/N 573921**	Provides an electrical ground for communication when a ground pin is not present on the test vehicle's DLC (Pin 4 or 5)
7	Vehicle Charging Adapter Wireless units	Vehicle Charger (Cigarette Lighter) to USB Female Converter • Input voltage 12-24 DC • Output voltage 5DC – 5% ***Bosch P/N 573923***	Provides an alternate power source when vehicle does not have voltage on PIN 16

Key Features

Indicator LEDs

Smog DADdy has 6 indicator LEDs that illuminate when communicating test or device information to you. For more information on indicators, see Troubleshooting in the Appendix.

Fault

Indicates a fault condition existed during the previous self-test.

Power

Indicates Smog DADdy is on and running. If there has been no activity between the PC and Smog DADdy, the light will dim to indicate low power mode on wireless units.

PC Comm

Indicates data transfer between Smog DADdy and the PC. Wired devices will show data transfer with short blinking flashes. Wireless devices will illuminate longer with shorter off times.

Information

Light flashes once every 2 seconds to indicate Smog DADdy is running in normal mode. Light flashes 5 times per second when the DAD firmware is being updated or is ready to be updated.

Vehicle Voltage

Illuminates when battery voltage is present on the vehicles OBDII port (pin 16).

OBD Comm

Once a vehicle inspection has been initiated, this light indicates a communications link between the vehicle and Smog DADdy has been established.

Cable Ports

Top Connections

Port	Connector	Function
USB	Mini USB 2.0	Connects Smog DADdy to the computer using a USB cable. Provides power and a communication link between the device and the computer. Wireless Version – USB port used to charge the battery in the device and allows it to operate as a wired device.
Alternate Ground	1/8” Phono Jack	Connects Smog DADdy to the Alternate Ground cable.

Bottom Connections

Port	Connector	Function
DLC	Female	Connects Smog DADdy to the vehicle's DLC (OBDII) using either a 4 ft. (wireless version) or 16 ft. (wired version) DLC cable.
Self-Test	Male	Connects the 1 ft. Self-Test cable to the SmogDADdy device.

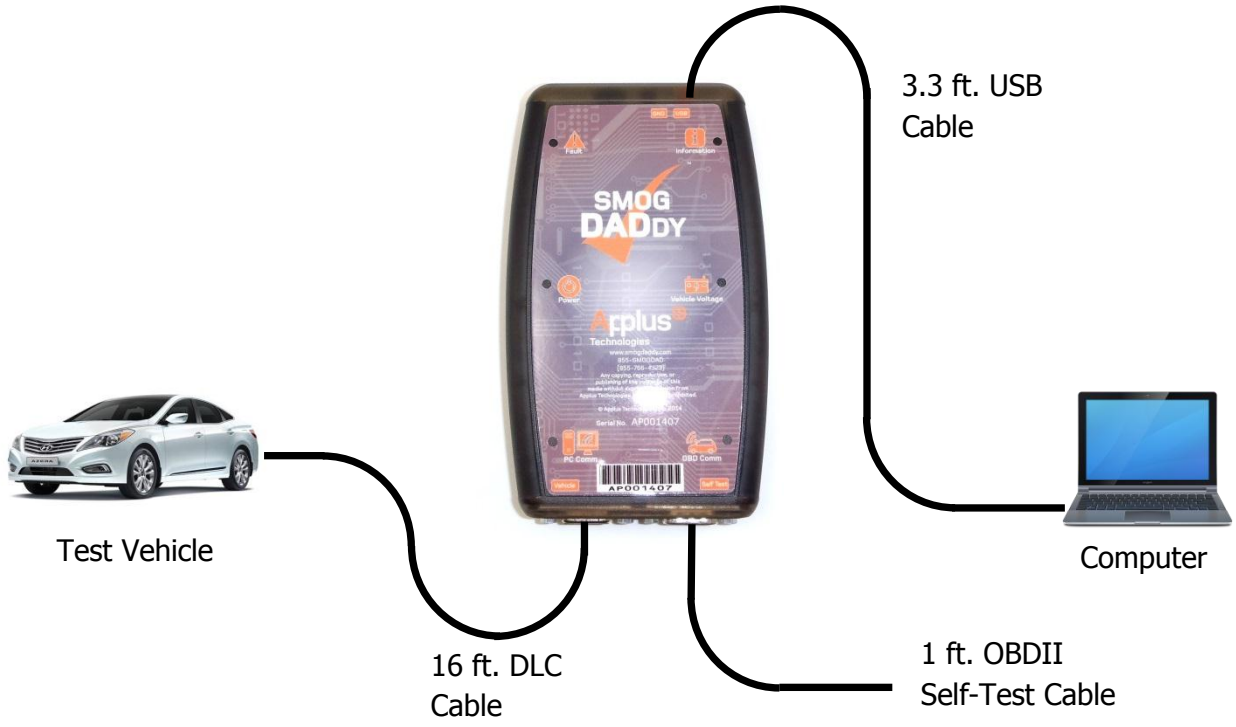
Cable Connections

Wired Smog DADdy

The wired model is equipped with a 16 ft. vehicle DLC cable and a 3.3 ft. (1 meter) computer USB cable to operate.

Smog DADdy Device Location	Cables Used
Next to the computer	• 16 ft. vehicle DLC cable • 3.3 ft. computer USB cable

Wired Connection Example



Wireless Smog DADdy

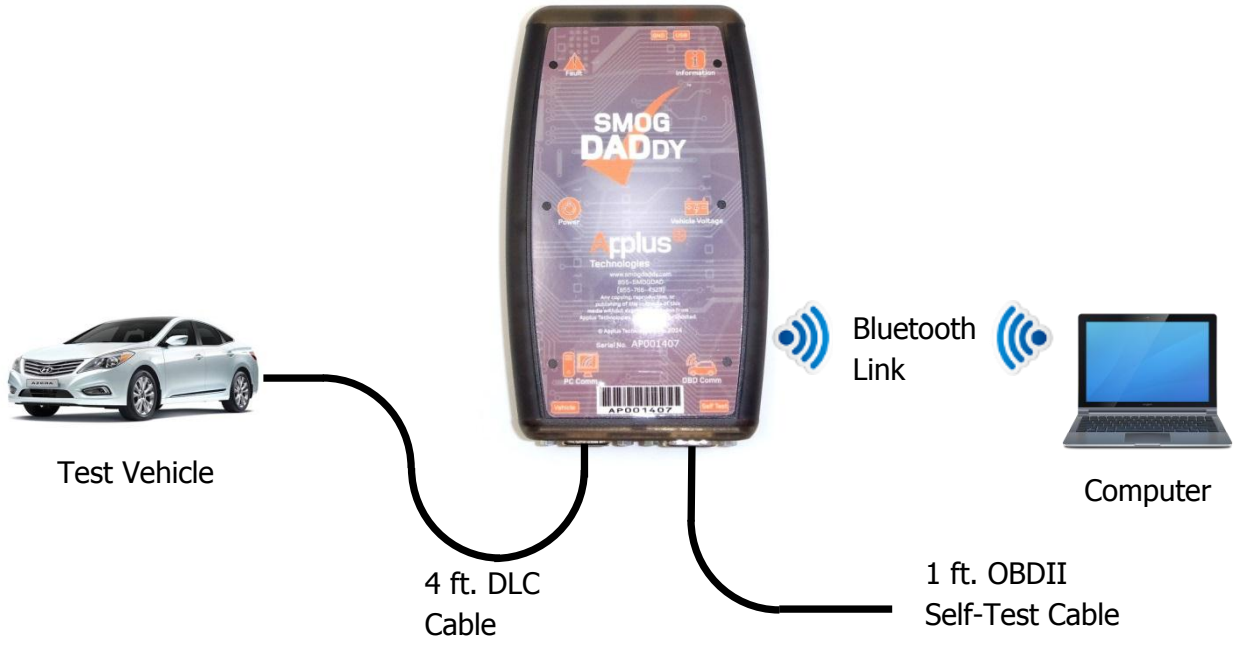
The wireless model adds the ability to communicate with the computer wirelessly via Bluetooth technology. It is equipped with one 4 ft. vehicle DLC cable to conduct a smog check. A 3.3 ft. (1 meter) computer USB cable is provided and is used to charge the device, or perform a self-check.

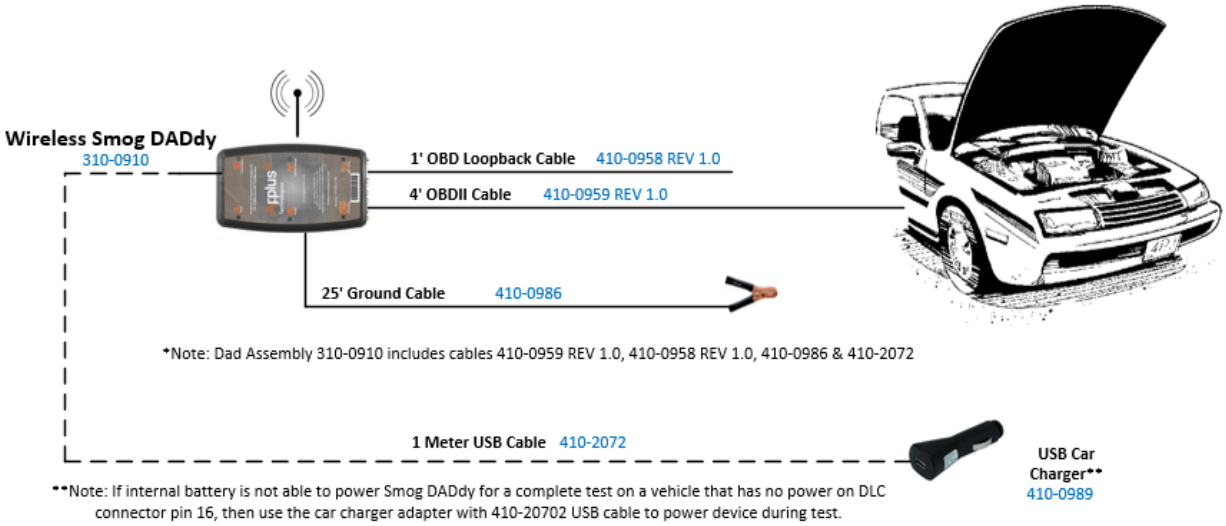
The wireless model contains an internal rechargeable lithium ion polymer (LiPo) battery that is recharged while the device is connected to a USB port, or vehicle. The internal battery provides power to the device when no battery voltage is present on the vehicle DLC (OBDII) connector (pin 16). The device shuts down to conserve the battery's power when it is not connected to the USB port or to a test vehicle for more than 6 minutes. Please refer to the Auxiliary Power and Wireless Tips sections that follow for additional information.

Smog DADdy Location	Cables Used
Next to the vehicle Next to the computer	• 4 ft. vehicle DLC cable • 3.3 ft. computer USB cable (used to charge the device and perform self-test)

NOTE: The Self-Test functionality is only available when the wireless device is connected to the USB port. Performing a cable Self-Test while connected via Bluetooth is currently not supported.

Wireless Connection Example





Smog DADdy Manager Software

Smog DADdy Manager Software is required for conducting smog checks. You must keep your device current with the latest Smog DADdy Manager software and firmware, or risk being locked out from testing.

You will need to install Smog DADdy Manager software on the computer that will be used for smog checks. Contact Bosch Service for assistance in obtaining and installing this software.

NOTE: The initial software installation will require a Windows User Account with Administrative privileges.

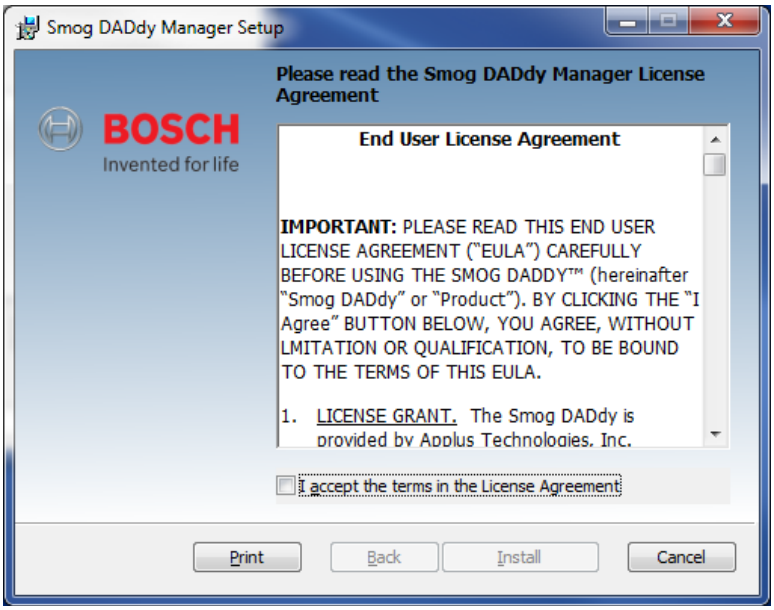
Installation

1. Download the Smog DADdy Manager installation from

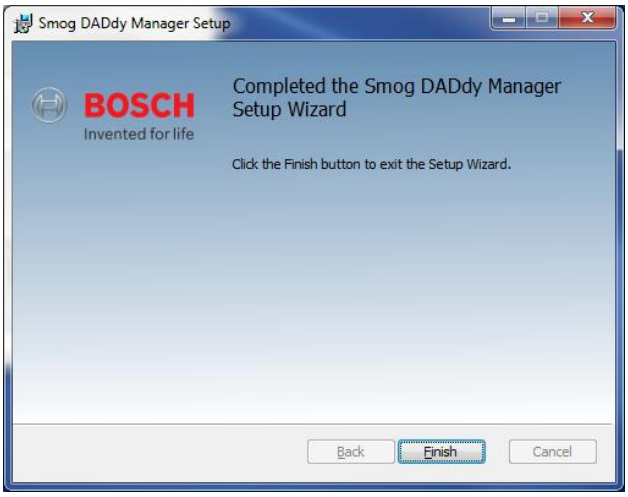
   http://www.otctools.com/california-dad

2. Read and agree to the licensing terms by clicking on the **box** to the left of 'I accept the terms in the License Agreement'.

3. Click **Install** to begin the installation update.



4. A status bar will show the progress of the installation.
5. Once the installation has completed, select **Finish**.



6. Smog DADdy Manager will automatically start and will be in the system tray.

Checking for Updates

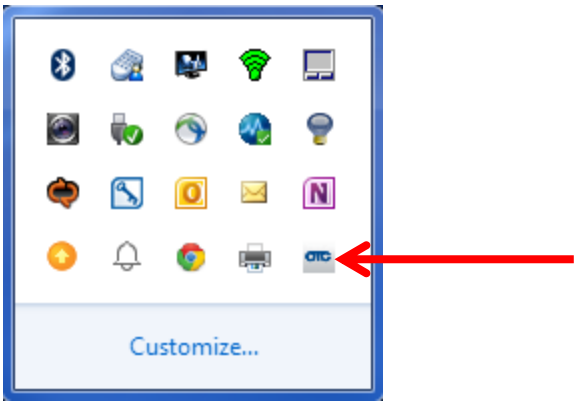
The Smog DADdy Manager software will periodically poll for firmware updates to your DAD, and will automatically download and install them.

When new versions of the Smog DADdy Manger software are released, you will be notified that update(s) are available. Alternately, you can check for both firmware and software updates manually.

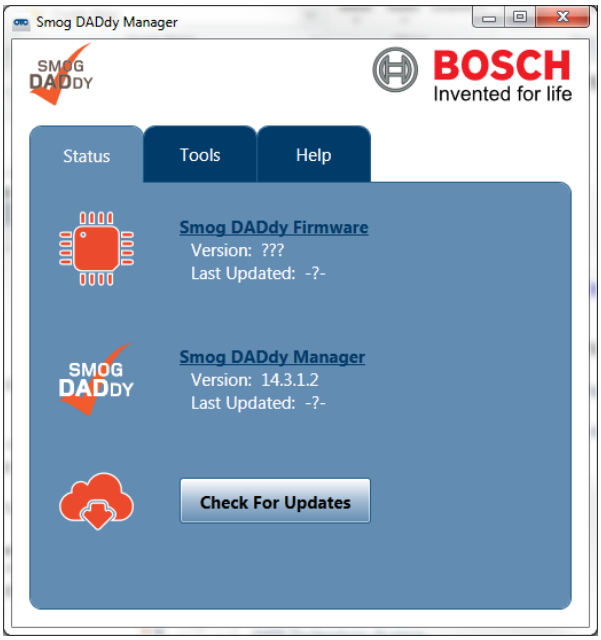
Updating Smog DADdy Firmware

Manually Checking for Updates

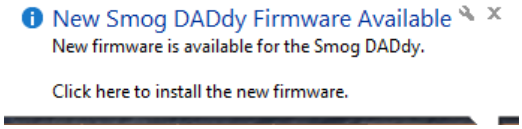
1. Connect the DAD to the computer or laptop being used to access the BAR OBD Inspection System (OIS) using the provided USB cable.
2. Open Smog DADdy Manager by clicking on the orange **small OTC icon** in the Windows System Tray (most commonly found at the lower right-hand corner of the screen).



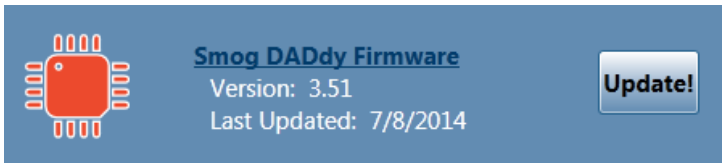
3. If the application is not running, select **Program Files** from the **Start Menu**, navigate to the **Applus Technologies** folder and select **Smog DADdy Manager**.
4. The 'Smog DADdy Manager' window will appear. Click on **Check For Updates** to manually check for updates. Clicking on the **X** at the upper right-hand corner of the application will minimize to the System Tray and the software will remain running.



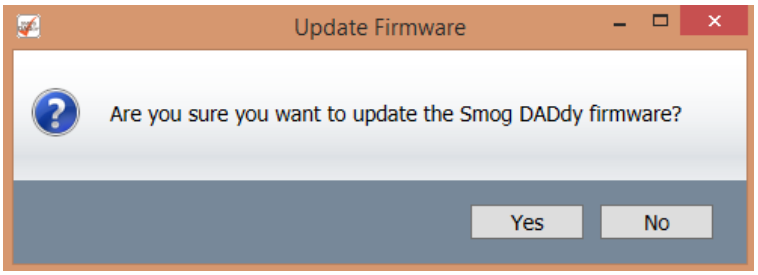
5. If alerted of an update via Windows Update Balloon as shown below, click the **Balloon** and proceed to step 7.



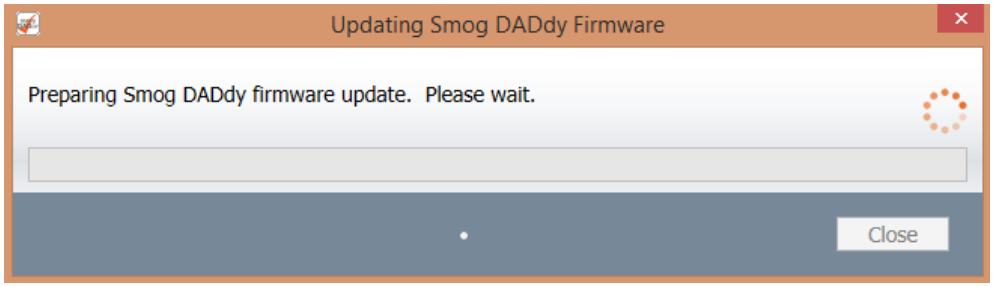
6. If an update is available, an **Update** button will appear. Select the **Update** button.

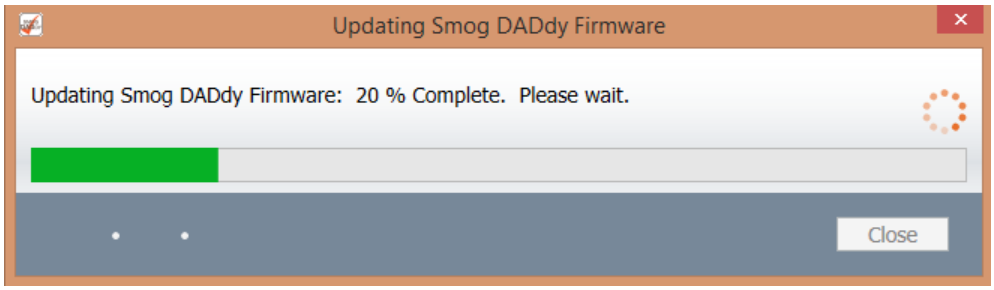


7. When prompted for confirmation, select **Yes**.

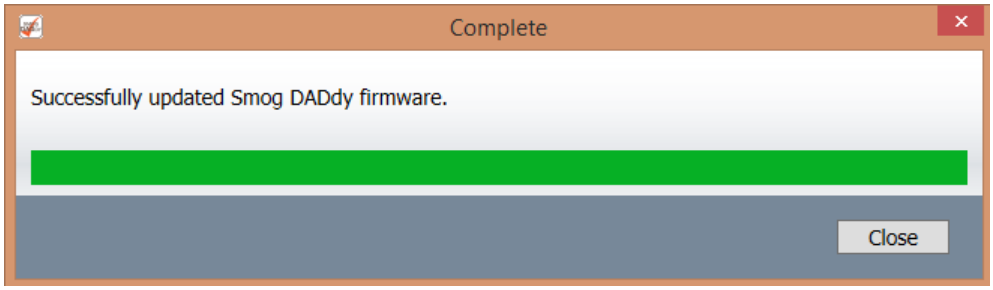


8. The update process will execute.





9. A message will be displayed when the process is complete. Select **Close.**

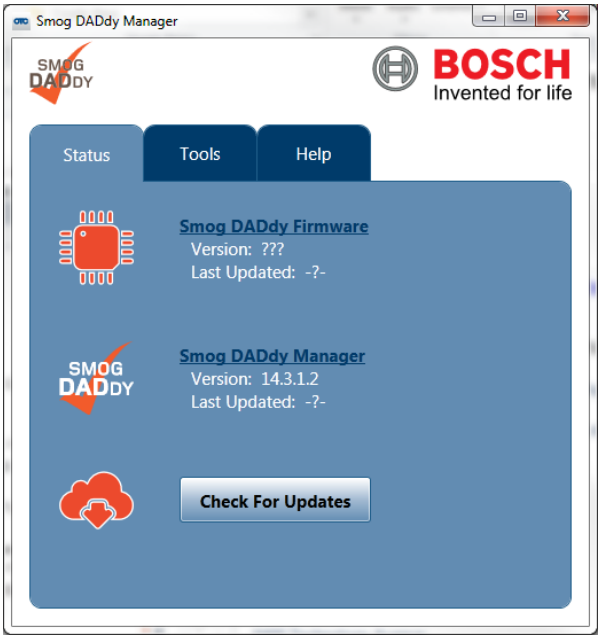


10. The new version number should be displayed (3.51 version number shown for reference purposes only).

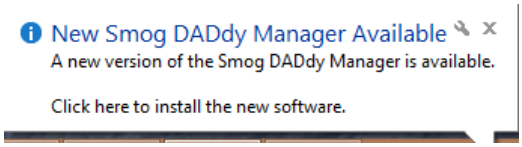
NOTE: To manually query the Smog DADdy for its current firmware information, simply click the **Smog DADdy Firmware** text.

Updating Smog DADdy Manager Software

1. If the Smog DADdy Manager software is already running, click the **icon** in the Windows System Tray to bring the application to the desktop. If the application is not running, click the **Start Menu**, select **Program Files**, navigate to **the Bosch Automotive Service Solutions** folder and select **Smog DADdy Manager**.



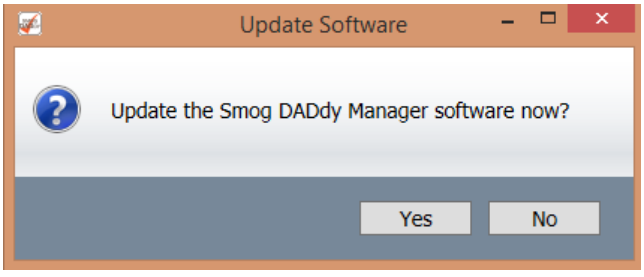
2. If alerted of an update via Windows Update Balloon as shown below, click the **Balloon** and proceed to step 5.



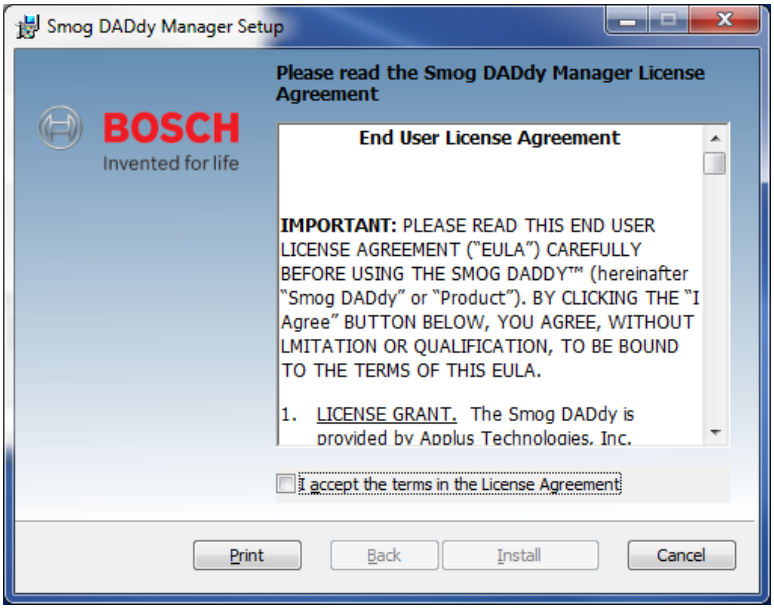
3. To check for updates manually, click **Check for Updates.**

4. When a software update is available, an 'Update!' button will appear to the right of the Smog DADdy Manager Version. Click on **Update!** to initiate the update process.

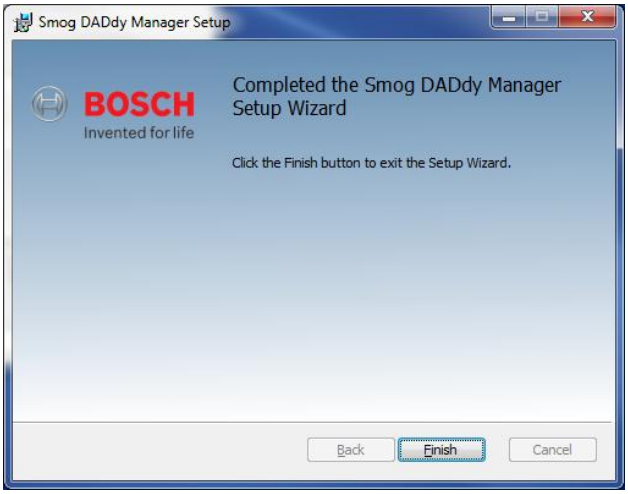
5. When prompted for confirmation, select **Yes**.



6. Read and agree to the licensing terms by clicking on the **box** to the left of 'I accept the terms in the License Agreement'.
7. Click **Install** to begin the installation update.



8. A status bar will show the progress of the installation.
9. Once the installation has completed, select **Finish**.



10. Smog DADdy Manager will automatically restart.
11. View the **Status** tab and verify the Smog DADdy Manager software version is listed (14.3.3.1 in this example, yours may be newer):

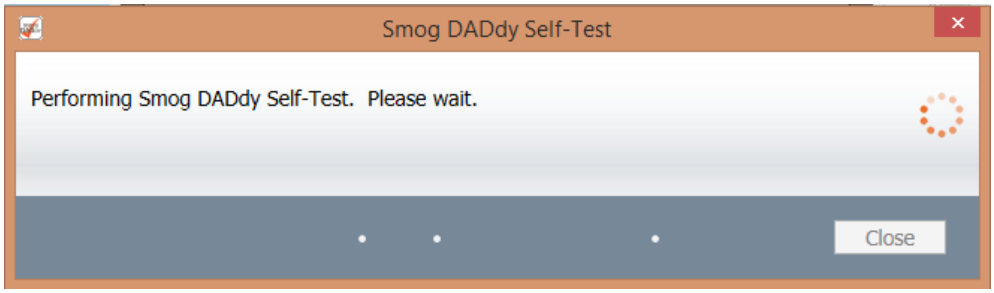
Performing a Self-Test

The self-test verifies that Smog DADdy and the vehicle DLC cable are functioning properly.

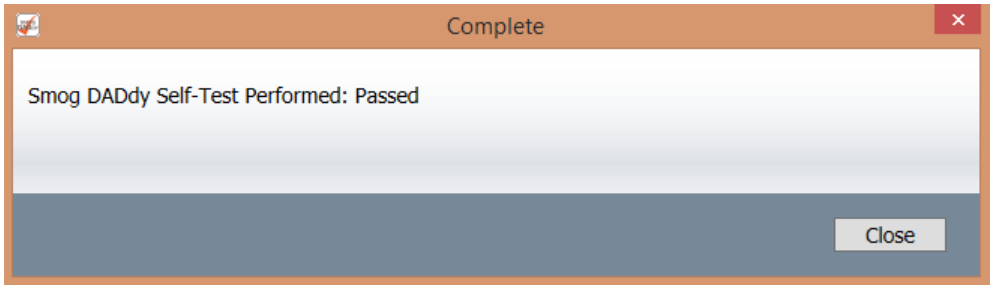
1. If the Smog DADdy Manager software is already running, click the **icon** in the Windows System Tray to bring the application to the desktop. If the application is not running, select **Program Files** from the Start Menu, navigate to **the Bosch** folder and select **Smog DADdy Manager**.
2. Connect Smog DADdy to your computer using the USB cable provided.

3. Connect the smaller end of the self-test cable to the Smog DADdy self-test port.
4. Connect the larger end of the vehicle DLC cable to the 1 ft. self-test cable.

5. Select the **Tools** menu option followed by **Perform Self-Test** to start the test.



6. When the self-test has finished successfully, click **Close**.



7. If the self-test failed, perform the following steps to try and fix or identify the problem:
    a. Check all cables to confirm they are securely attached to the proper Smog DADdy ports and to each other. If you are using a wireless device, make sure the device is charged and USB cable is plugged in to the computer.
    b. Unplug all cables from the device and the computer and plug them back in again.
    c. Try using alternate cables.
    d. If the error message still displays, contact Applus customer service for technical support.

BAR-OIS Software Installation

The BAR-OIS Software will need to be installed on your PC. Please follow the steps below.

NOTE: The initial software installation, as well as subsequent updates, may require a Windows User Account with Administrative privileges.

---

1. Step 1. Once BAR has activated your station, you will be contacted by Bosch, and provided a webpage from which you can download the BAR-OIS software to your work station.

   The main screen of the BAR-OIS website should look like this:

2. Follow the steps in this video which will explain the installation and registration process for BAR-OIS software:

   https://www.youtube.com/watch?v=fmlPX5eV04U&feature=youtu.be

---

NOTE: If you previously registered with BAR-OIS, you will not need to re-register your workstation.

---

3. Once installation of the BAR-OIS software is complete, your workstation will be ready to test vehicles.

For additional BAR-OIS training material visit:

http://www.bar.ca.gov/80_BARResources/05_Legislative/RegulatoryActions/NewEquipandInspProcedures.htm

BAR-OIS Software Password Policy

1. The technician passwords expire after 90 days.
2. The technicians should update their passwords when instructed by the OIS.
3. Password length is to be a minimum of 8 characters, maximum of 30 characters.
4. Password must contain a minimum of 2 numeric characters, 1 alphabetic character, 1 non-alphanumeric character, and not have special or high ASCII characters.
5. Password expiration is set to 90 days, with 16 grace logins.
6. User is prevented from using the last five passwords.
7. Allow upper and lower case characters, but do not require a minimum.
8. Requires password to be a minimum of 4 characters different than the previous password or any of the passwords stored in the history list.

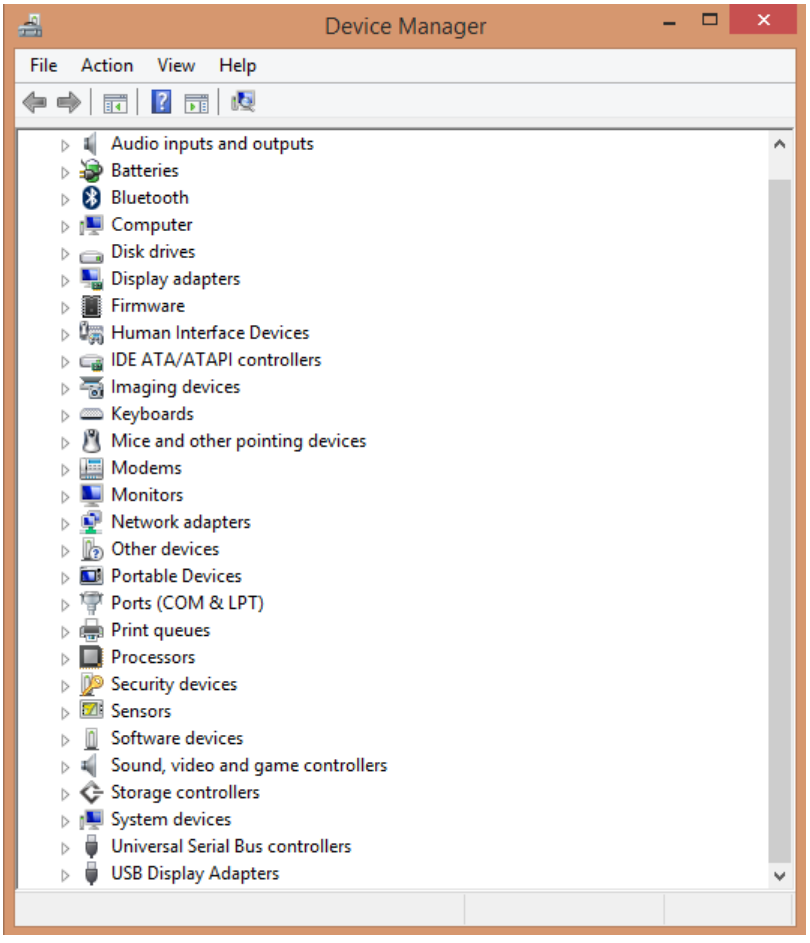
COM Port and BAR-OIS Configuration

During the BAR OIS software installation process, you will be required to enter your Smog DADdy communication (COM) port number. This section reviews how to find and submit the proper information. The steps are different for the wired and wireless versions of Smog DADdy and vary by Windows Operating System (OS). Instructions for each type of device are listed separately.

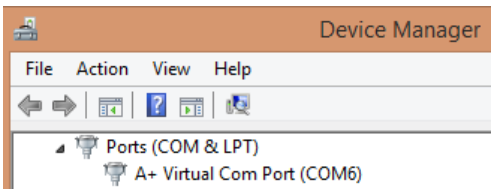
Windows XP and Windows 7

Wired Smog DADdy

1. Connect Smog DADdy to the computer using the USB cable provided.
2. Click on the **Start Menu**.
3. Click on **Control Panel**.
4. Click on **System**.
5. Click on **Device Manager**.
6. Scroll down and find **Ports (COM & LPT)**, click on it to expand.



7. Make note of the COM port number in parenthesis after A+ Virtual Com Port. In the example below, it is "COM6" (capital letters, no spaces).



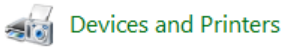
NOTE: Your port number will be used in the next step; you may want to write it down.

Please go to the Configuring BAR-OIS section, to complete the configuration process.

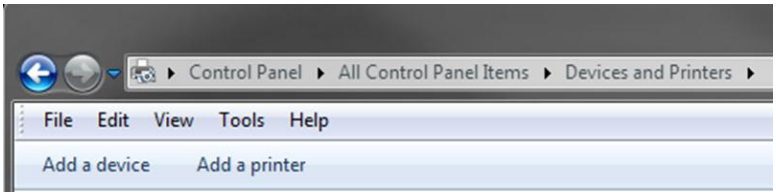
Wireless Smog DADdy

If you are a supplying your own laptop or PC it must have Bluetooth adapter installed and enabled.

1. Connect Smog DADdy to the computer using the USB cable provided.
2. Click on the **Start Menu**.
3. Click on **Control Panel**.
4. Click on **Devices and Printers**.



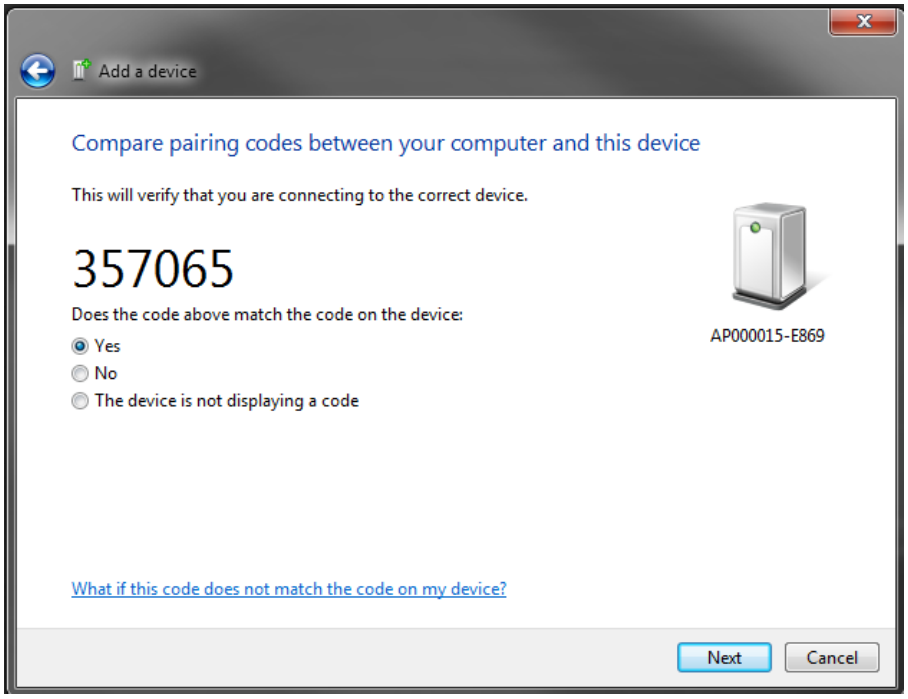
5. Click **Add a device** from the window toolbar at the upper-left hand side of the screen.



6. On the **Add a device** window scroll to locate the device, click on it to highlight it, and click **Next.**

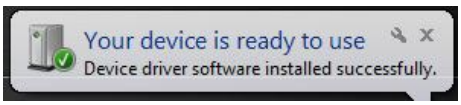
NOTE: The device name will match the Serial Number printed on the Smog DADdy label followed by a dash and 4 alphanumeric characters, AP000014-E869 in the example above.

7. A prompt asking "Does the code match the code on the device:" will appear. Click on **Yes** and then click **Next**. If there is no code provided for the device enter `1234` as the code and then click **Next.**



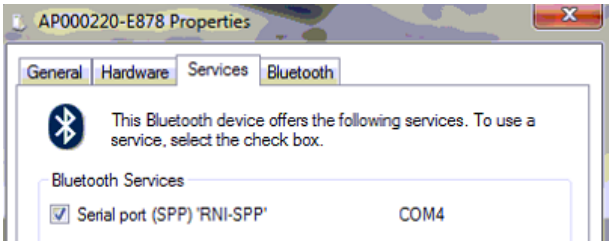
8. Click **Close** to complete the Bluetooth pairing process.

9. Windows will install the appropriate drivers. You will see this message when the process is complete.



10. Go back to **Devices and Printers** and locate the device that was just installed. See the first 4 steps at the beginning of this section to locate Devices and Printers.

11. Right click on the **device name** (Smog DADdy serial number) and click **Properties**.
12. Click on the **Services** tab to view your port number. In the example below, the port number is "COM4".



NOTE: Your port number will be used in the next section; you may want to write it down.

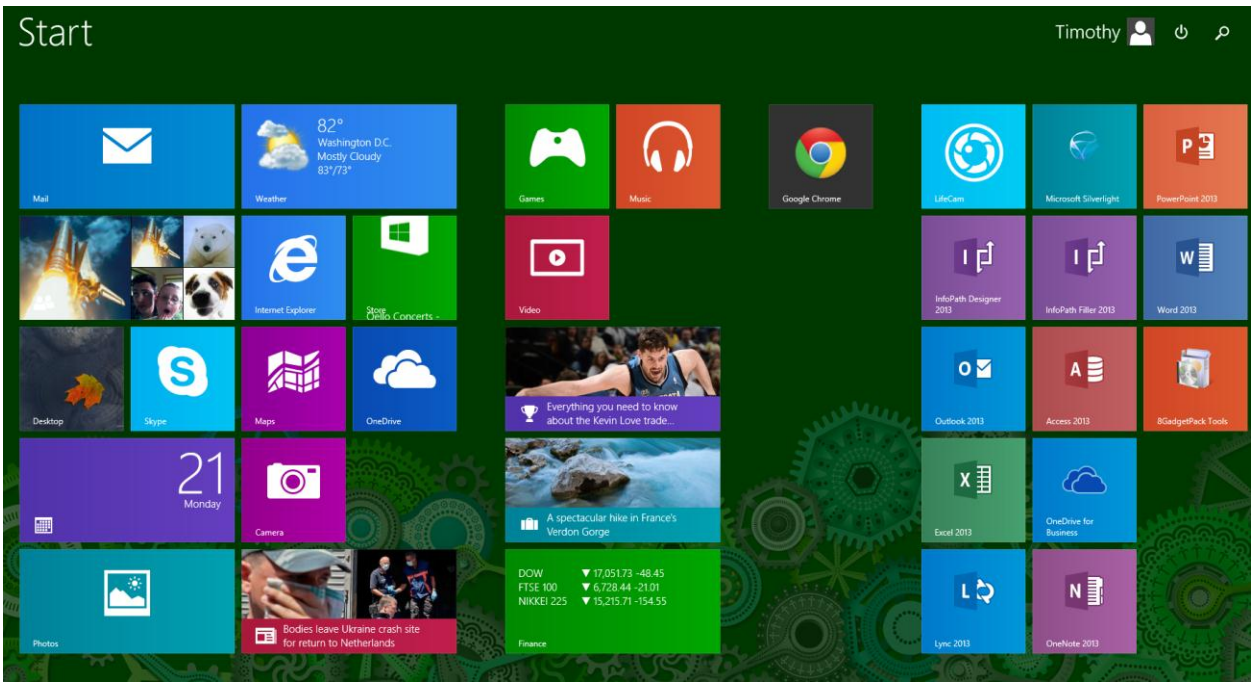
---

13. Click **OK** to exit the Properties window.

Please go to the Configuring BAR-OIS section, to complete the configuration process.

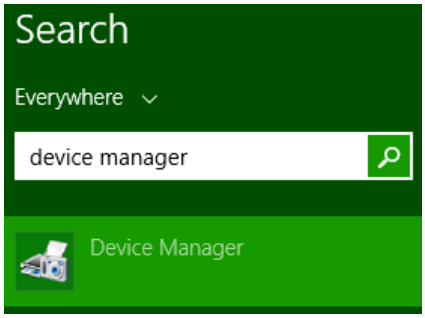
Windows 8/8.1

This section reviews the steps to configure a wired or wireless Smog DADdy Communication (COM) Port from the native Windows 8/8.1 Start screen, shown below, rather than the traditional Desktop Start screen.

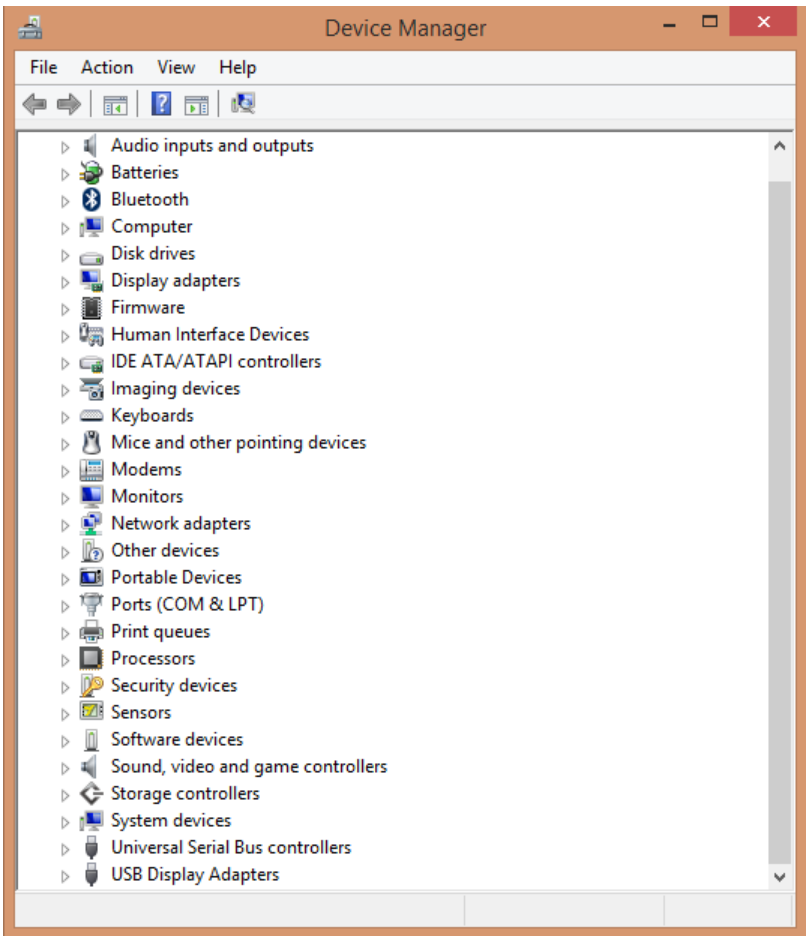


Wired Smog DADdy

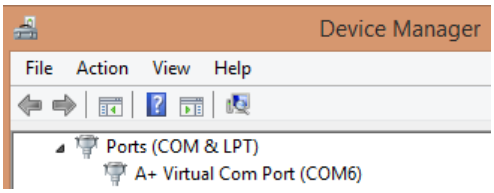
1. Connect Smog DADdy to the computer using the USB cable provided.
2. From the Windows 8 Start screen, type `device manager` and select **Device Manager** from the search results.



3. Scroll down and find **Ports (COM & LPT)**, click on it to expand.



4. Make note of the COM port number in parenthesis after A+ Virtual Com Port. In the example below, it is "COM6" (capital letters, no spaces).



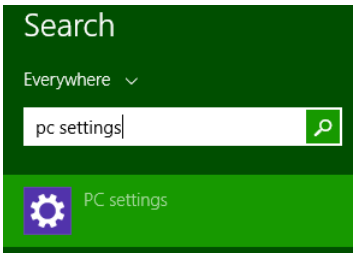
NOTE: Your port number will be used in the next step; you may want to write it down.

Please go to the Configuring BAR-OIS section, to complete the configuration process.

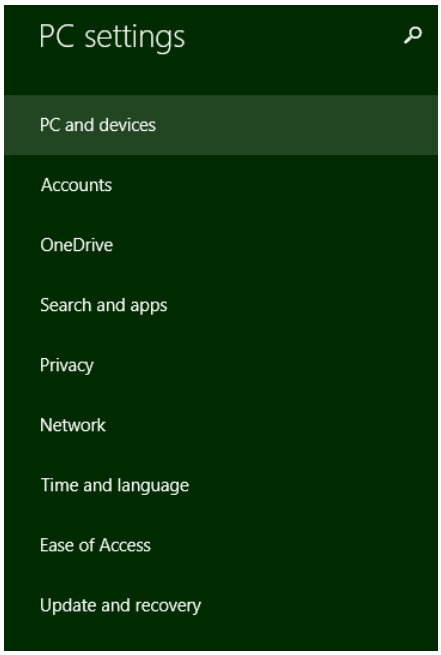
Wireless Smog DADdy

1. Connect Smog DADdy to the computer using the USB cable provided.

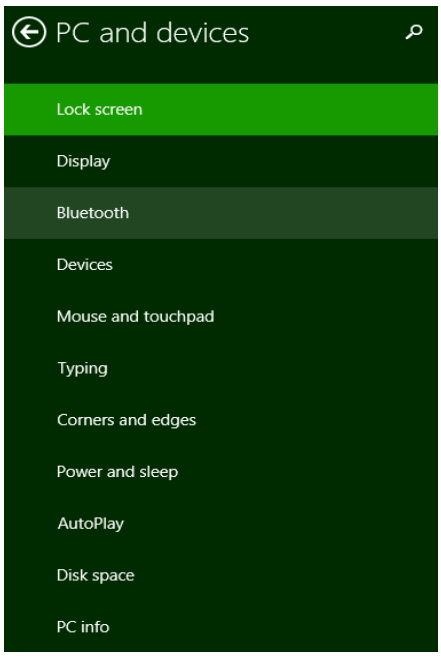
2. From the Windows 8 Start screen, type `pc settings` and select **PC Settings** from the search results.



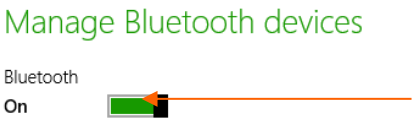
3. From PC Settings, select **PC and devices**.



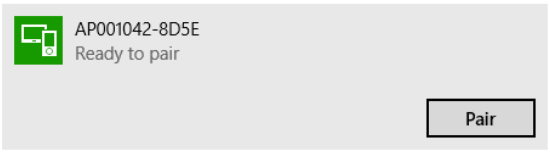
4. From PC and devices, select **Bluetooth**.



5. Confirm that Bluetooth is turned On as shown in the screenshot below. If Bluetooth is not turned On, click on the **box** pointed to by the orange arrow below.



6. Locate your Smog DADdy device, click on it to highlight it, and then click **Pair**.



NOTE: The device name will match the Serial Number printed on the Smog DADdy label followed by a dash and 4 alphanumeric characters, AP001042-8D5E in the example above.

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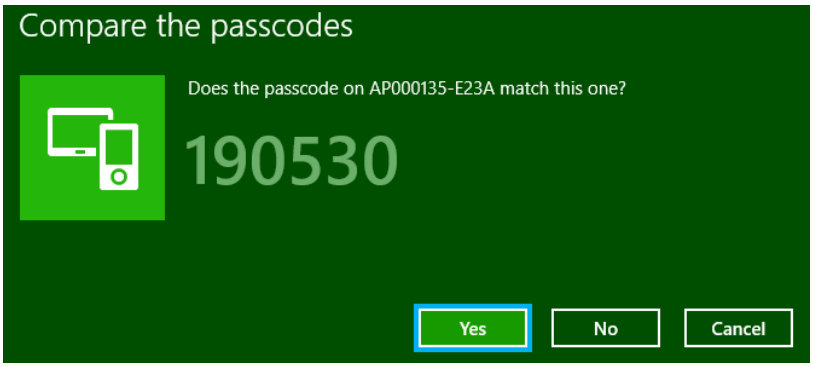
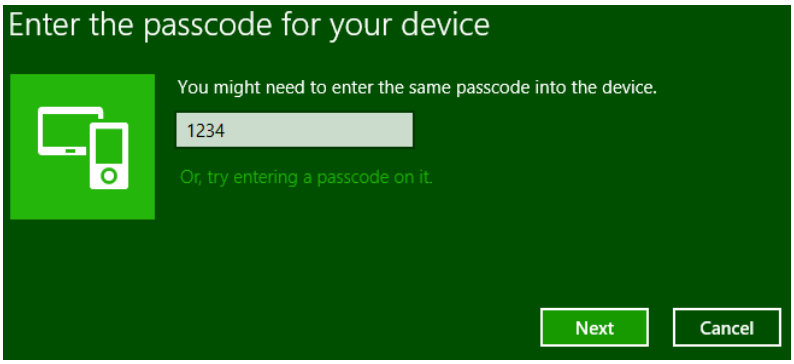
7. If prompted to Compare the passcodes as shown in the screenshot below, click **Yes**.

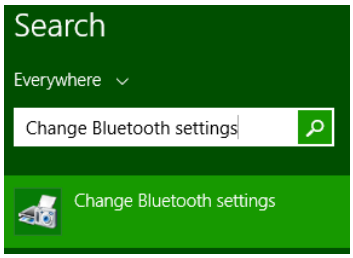


If prompted to Enter the passcode for your device as shown below, enter `1234` as the passcode and then click **Next**.

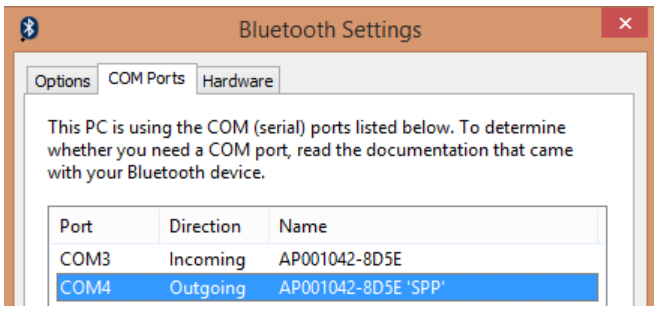


8. The Smog DADdy is now connected to your computer.

9. From PC Settings, type `change bluetooth settings` and select **Change Bluetooth Settings** from the search results.



10. In Bluetooth Settings, click on the **COM Ports** tab and locate the Outgoing Port value for your Smog DADdy. In the example below, the port number is "COM4".



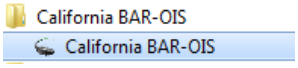
NOTE: Your port number will be used in the next section; you may want to write it down.

11. Click **OK** to exit the Bluetooth Settings window.

Configuring BAR-OIS

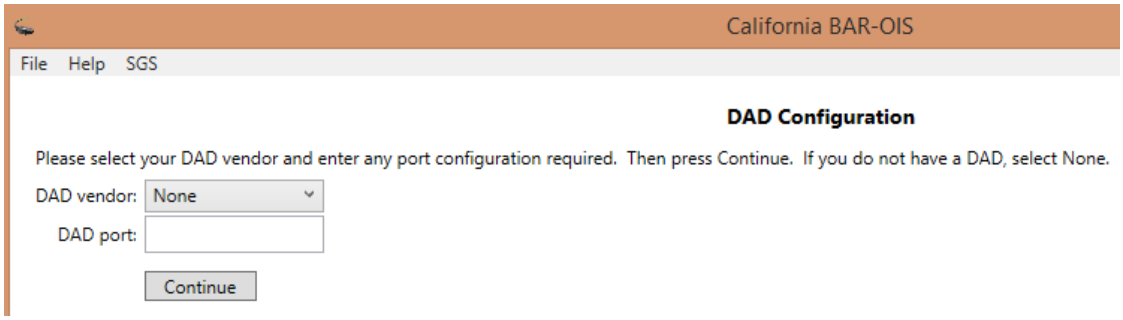
If this is the first time you are using the BAR-OIS software please review the ***BAR-OIS Station Registration and Download Video*** located here: https://www.youtube.com/watch?v=fmlPX5eV04U&feature=youtu.be and then complete your configuration process with the following steps.

1. Launch the BAR OIS software by clicking on the **Start Menu**, **Program Files**, and **California BAR-OIS**.

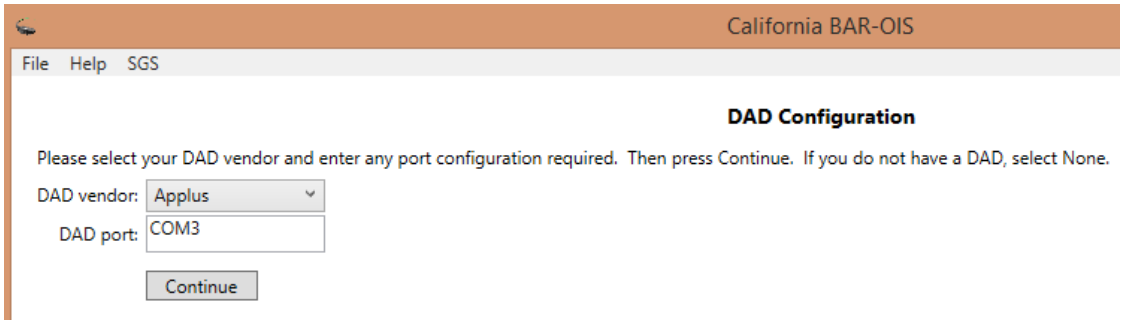


2. The 'DAD Configuration' screen will appear. Select *Applus* as your DAD vendor. Type the `COM port number` you obtained from step 7 (wired) from the previous section or step 12 (wireless) into the DAD port field. If you are using a **wireless** device, you **MUST** include an asterisk symbol (*) before entering the COM port number. For example, type `*COM4` versus `COM4`.

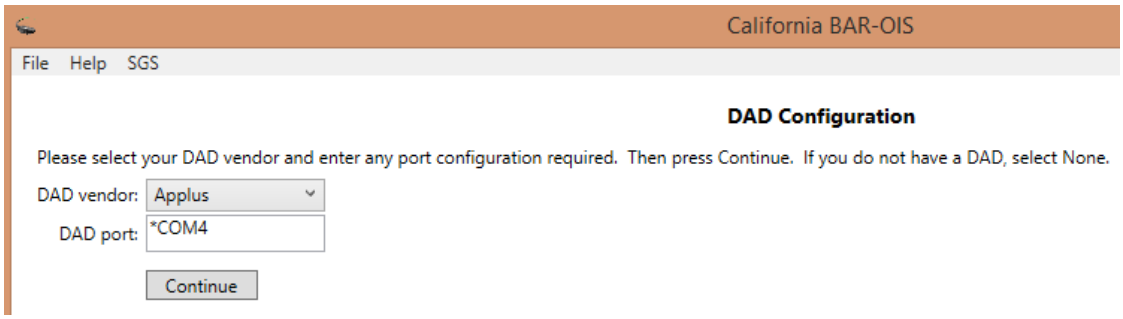
Upon initial installation and prior to configuration, the 'DAD Configuration' screen will appear as shown below.



A sample screenshot for a wired DAD configured to 'COM3' is shown below.



A sample screenshot for a wireless DAD configured to '*COM4' is shown below.

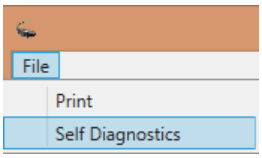


NOTE: Throughout the remaining pages of this chapter, you will see illustrations that reference both types of COM port numbers used. Remember, if you are using a wired device you do not need to precede the COM port number with an asterisk symbol. If you are using a wireless device, you will **ALWAYS** need an asterisk symbol before the COM port number.

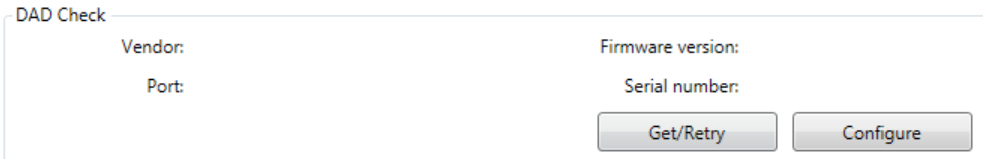
---

3. Click **Continue**

4. Click on the BAR-OIS **File** menu and select **Self Diagnostics**.



5. Confirm BAR-OIS can successfully communicate with Smog DADdy by clicking on **Get/Retry**.



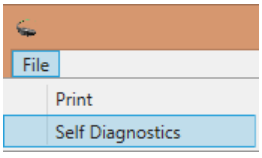
6. Verify the serial number displayed matches the serial number shown on the Smog DADdy decal.

7. Select **Return to BAR-OIS**.

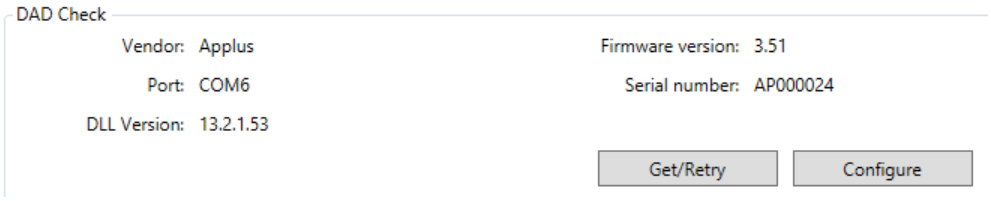
Updating BAR-OIS Configuration

If you ever need to change the port configuration, follow these steps.

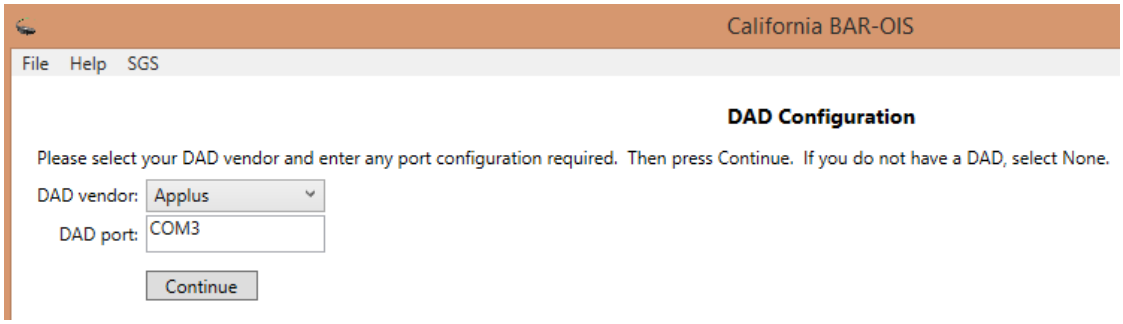
1. Click on the BAR-OIS **File** menu and select **Self Diagnostics**.



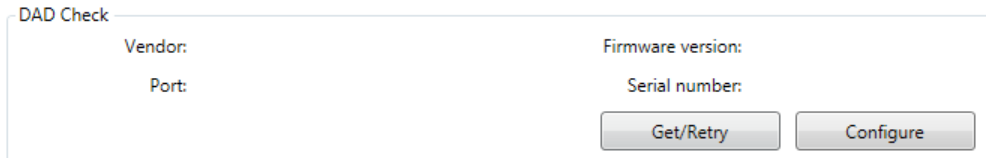
2. Locate DAD Check in the 'Self Diagnostics' screen and click **Configure**.



3. Type the new `DAD port number` and click **Continue.** A sample screenshot for a wired DAD configured to 'COM3' is shown below.



4. Confirm BAR-OIS can successfully communicate with Smog DADdy by clicking on **Get/Retry**.



5. Verify the serial number displayed matches the serial number shown on the Smog DADdy decal.

6. Select **Return to BAR-OIS**.

Using the BAR-OIS

Performing a Vehicle / Smog Inspection

This option performs an official OIS smog check on a vehicle.

1. If you haven't done so already, launch the BAR-OIS application.
2. From the home screen, click on **1 Perform Inspection**

NOTE: When using a wireless unit, always connect the DLC cable to the test vehicle prior to selecting **Perform Inspection** and confirm that the DAD power light is on. Please see Wireless Tips in the Appendix for additional information.

---

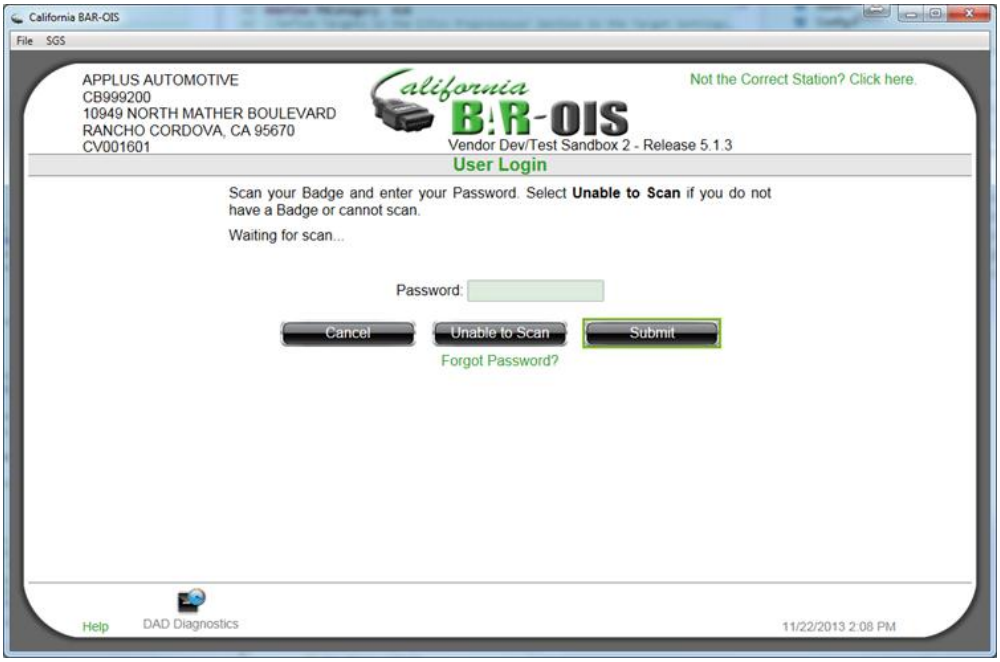
3. Follow the prompts.

Performing a Self-Test

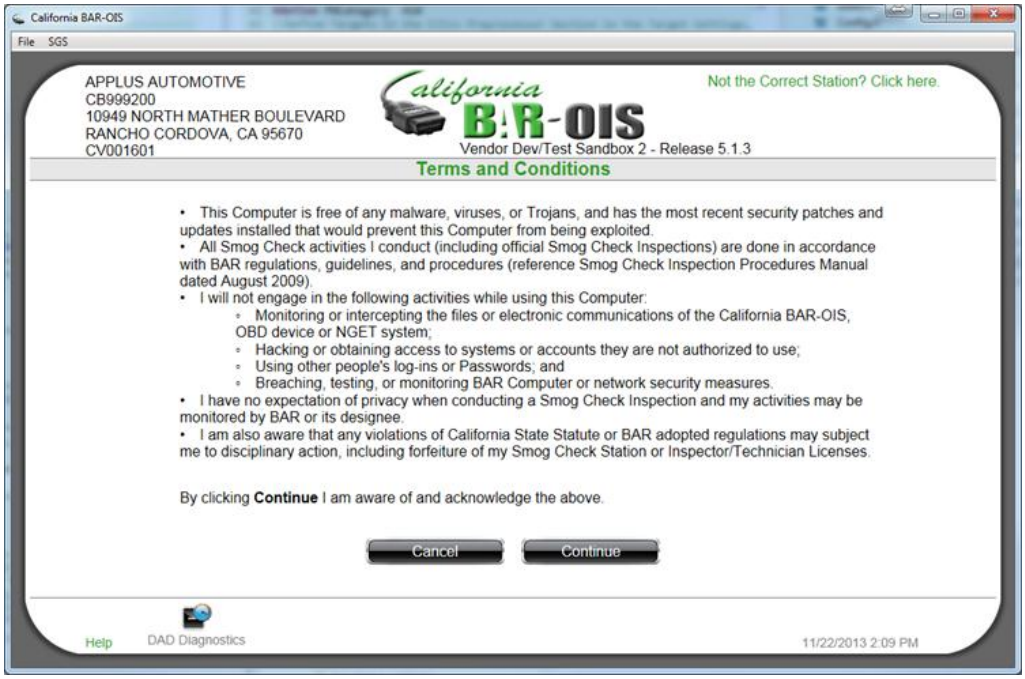
The self-test verifies that Smog DADdy and the vehicle DLC cable are functioning properly.

1. Connect Smog DADdy to your computer using the USB cable provided.
2. If you haven't done so already, launch the BAR-OIS application.
3. From the home screen, click on **4 DAD Diagnostics** to run a self-test.

4. You will be required to log in. Scan your badge and type your **password**. Click **Submit**. If you are unable to scan your badge, click on **Unable to Scan**.



5. Read the Terms & Conditions and click **Continue** to agree.

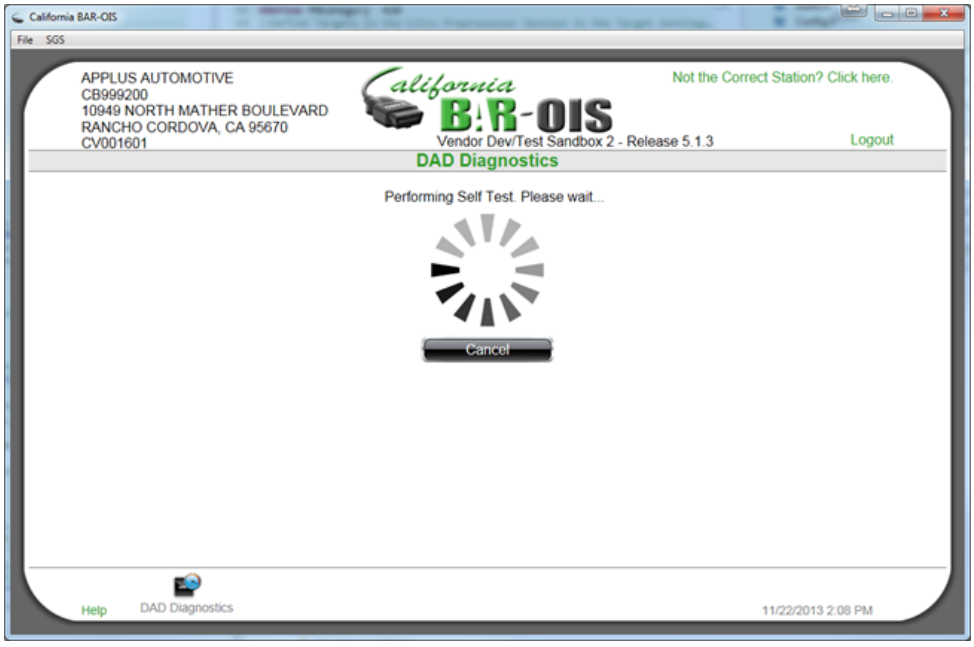


6. Connect the smaller end of the self-test cable to the Smog DADdy self-test port.

7. Connect the larger end of the vehicle DLC cable to the 1 ft. self-test cable.

8. After the cables are attached to the device, click **Continue** to perform the self-test.

9. You will be notified that the self-test has begun with the following screen.



10. When the self-test has finished successfully, click **Done**.

11. If the self-test failed, you will see the following screen.

Perform the following steps to try and fix or identify the problem:

e. Check all cables to confirm they are securely attached to the proper Smog DADdy ports and to each other. If you are using a wireless device, make sure the device is charged and USB cable is plugged in to the computer.

f. Unplug all cables from the device and the computer and plug them back in again.
g. Try using alternate cables.
h. If the error message still displays, contact Applus customer service for technical support.

If a test fails during an actual inspection, the OIS should automatically prompt the inspector to run a self-test.

Auxiliary Power and Alternate Ground Operation

The Smog DADdy unit will attempt to communicate with vehicles that are missing ground and/or battery connections as described below.

Auxiliary Power

If no battery voltage is present on pin 16 of the vehicle's DLC:

Wired Smog DADdy - When connecting to vehicles with insufficient battery voltage present on pin 16 of the DLC connector, the 'Vehicle Voltage' indicator will not illuminate. The unit will still attempt to communicate even if this indicator is not lit, no additional user intervention is required.

Wireless Smog DADdy - The Smog DADdy unit shuts down after 6 minutes of inactivity to conserve the internal battery and wakes up if sufficient battery voltage on pin 16 is detected or a USB connection is established. If the vehicle has insufficient battery voltage present on pin 16 of the DLC, reconnect using a USB tethered connection or by using the USB vehicle charging adapter.

NOTE: A wireless connection can be re-attempted after waking up the device using either of the methods described above.

Alternate Ground

If no signal or chassis ground is present on the vehicle's DLC:

Wired and Wireless Smog DADdy - If the unit is unable to establish vehicle communications, the vehicle's DLC may have no signal or chassis ground present. Connect the **alternate ground** cable to the DAD and attach the grounding clamp to a known good ground point on the vehicle.

Appendix

Maintenance

Smog DADdy is a durable device that requires little maintenance. Following a few simple procedures will help ensure its longevity.

Storage

Store your Smog DADdy in a dry and dirt free location.

Wireless Device Storage

When not in use, connect Smog DADdy to the computer using the USB cable provided. This will keep the internal battery healthy and fully charged between uses.

Cables

Inspect the ends of the DLC and Self-Test cables regularly to ensure they are in good working order.

Troubleshooting

If you are having difficulty with your Smog DADdy, read this section before calling for technical support.

Power

Difficulty	Suggestions
No Power - Wired Version	Check to see if the USB cable is properly attached to the computer and Smog DADdy. USB hubs may not function properly, connect the DAD directly to the PC using the supplied USB cable.
	Confirm that the USB cable is not damaged.
No Power - Wireless Version	Make sure Smog DADdy has been charged for a minimum of 3 hours before using the first time.
	Connect Smog DADdy to the computer using the USB cable to confirm the power light illuminates.
	The Smog DADdy unit shuts down after 6 minutes of inactivity to conserve the internal battery and wakes up if sufficient battery voltage on pin 16 is detected or a USB connection is established. If the vehicle has insufficient battery voltage present on pin 16 of the DLC, reconnect using a USB tethered connection or by using the vehicle charging adapter. **NOTE:** A wireless connection can be re-attempted after waking up the device using either of the methods described above.

Self-Test

Difficulty	Suggestions
Self-Test Failed	Confirm the male end of the vehicle cable is securely connected to the female end of the self-test cable.
	Confirm the self-test cable is securely attached to the Self-Test connector on the Smog DADdy.
	Check the male connector of the DLC cable for bent pins.
	Check that nothing is obstructing the cable and device connections.
	Confirm the device has power and USB cable connected.
	If you own more than one Smog DADdy, try using those cables to determine if either the DLC or Self-Test cables need replacement.

Vehicle Communication

Difficulty	Suggestions
OBD Comm didn't illuminate	Check all cables to confirm they are properly and securely connected.
	Confirm BAR-OIS software is open and operational.
	Use Alternate Grounding cable - ground pin may not be present on the test vehicles DLC. See Auxiliary Power and Alternate Ground Operation section.
General	See Troubleshooting Flowchart below. See Internet below.

Indicator Lights

Difficulty	Suggestions
OBD Comm didn't illuminate	Check all cables to confirm they are properly and securely connected.
	Confirm BAR-OIS software is open and operational.

Vehicle Voltage didn't illuminate	See Auxiliary Power and Alternate Ground Operation section.
Power light didn't illuminate	See Power troubleshooting.
Information light illuminated	Light flashes once every 2 seconds to indicate Smog DADdy is running in normal mode. Light flashes 5 times per second when the DAD firmware is being updated or is ready to be updated.
Fault light illuminated	This only indicates failed Self-Test.

Smog DADdy Manager Software

Difficulty	Suggestions
Software didn't install properly	Check computer administrative, security and privacy settings.
	Check internet security and privacy settings.
	Disallow pop-up blockers.
	Confirm your computer is free of viruses, malware, and Trojans.
	Click on Control Panel and uninstall program if it is there. Install the software again.
Software isn't functioning properly	Confirm your computer is free of viruses, malware, and Trojans.

Internet

Difficulty	Suggestions
Can't connect to the internet	Using the BAR-OIS, select Self-Diagnostics from the File menu and verify the Google Internet Check passed (green check mark). If the internet Check failed, connect to an alternate web site using your browser to confirm.
	Contact your Internet Service Provider (ISP).

BAR-OIS Software

Difficulty	Suggestions
Software didn't install properly	Contact BAR Help Desk.
Software isn't functioning properly	Contact BAR Help Desk.
Can't communicate with BAR's web application (NWA)	Using the BAR-OIS, select a Self-Diagnostics from the File menu and verify the BAR-OIS Server check passed (green check mark).
	Verify you have the proper version of OIS software.
	Contact BAR Help Desk.
Can't log into BAR OIS	Contact BAR Help Desk.

BAR HELP DESK NUMBER: 866-860-8509

Wireless Tips

The OIS checks the DAD connected to the PC when you start the software and when you first start a test. Therefore, the DAD needs to be powered when you first start the software and when you begin an inspection. If the DAD is not connected to power, either from the vehicle or from the USB connector, and there is no communications with it from the OIS for 6 minutes, the DAD will power off to conserve its battery.

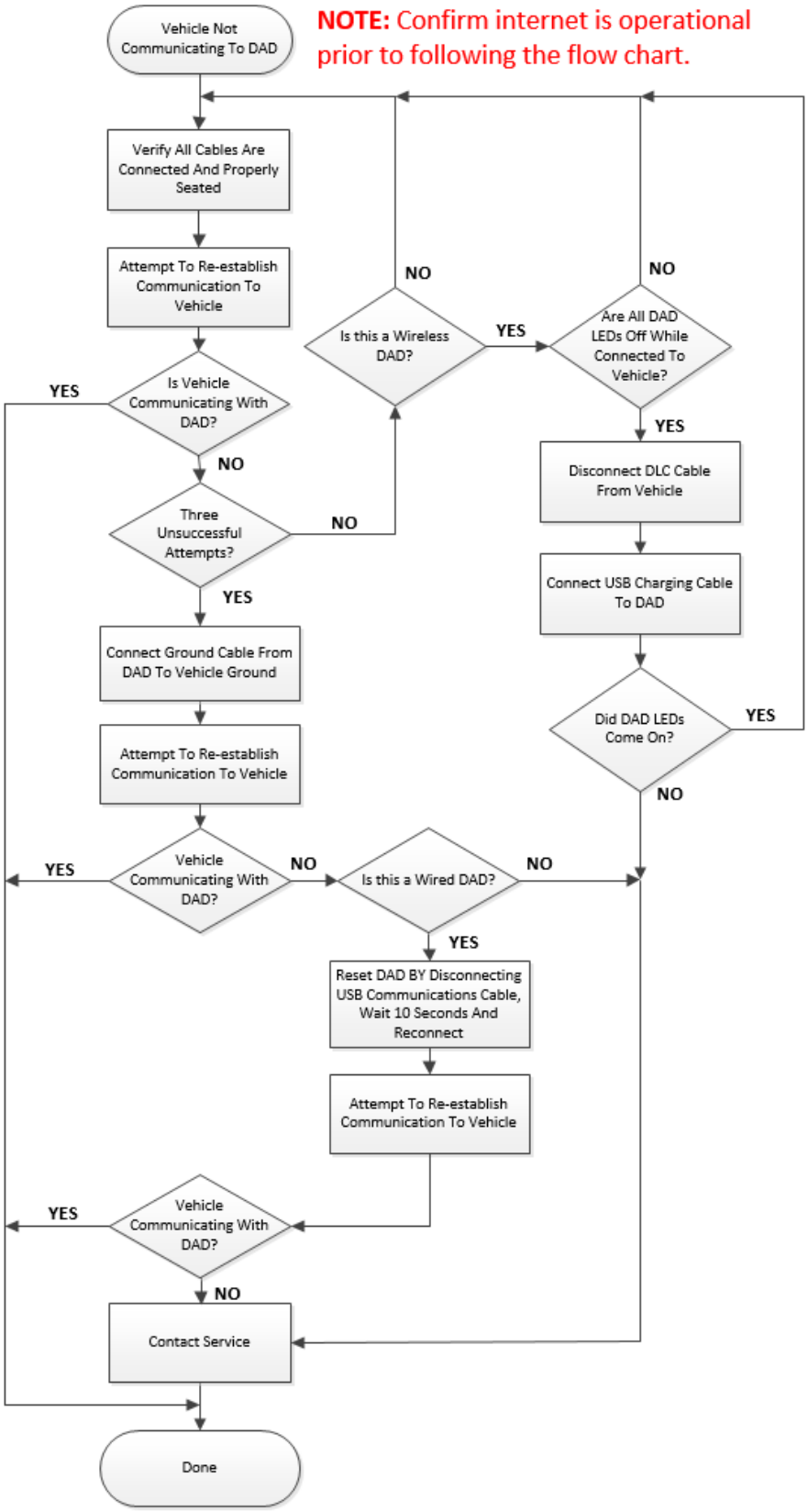
If you normally leave the DAD unplugged, that is fine. If so, you should plug the DAD into the vehicle before you begin the inspection. Most vehicles will provide power through the DLC connector, but some do not. Please observe whether the power and vehicle power light illuminate when you plug the DAD into the vehicle. If so, you can begin the inspection.

If the power lights do not illuminate when you plug the DAD into the vehicle, you will need to provide power to the DAD via the USB cable. Please see the section

Auxiliary Power and Alternate Ground Operation.

If it ever happens that you cannot obtain communications after ensuring your DAD has power, please unplug the DAD from both the vehicle and the USB until all the lights go out. Then, wait 10 seconds and plug it back in. You should be able to resume testing.

Troubleshooting Flowchart



Contacting Customer Service

Contact Bosch Customer Service for technical assistance, placing orders and to ask questions.

Technical Support

Telephone: 800-833-8377

Specifications

Item	Specification
Computer Interface (wired)	USB 2.0
Computer Interface (wireless)	Bluetooth Class 2
Bluetooth Version	V2.1 + EDR
Frequency	2.402 ~ 2.480 MHz
FCC ID	T9J-RN42
RF Transmit Power	0 ~ 4 dBm
Sensitivity at 0.1% BER	-86 dBm
Operating Temperature	20°F ~ 130°F
Storage Temperature	0°F ~ 135°F
Max. cordless distance	30 feet (10 meters)
Dimensions	6.05”L x 3.5”W x 1.015”H
Power Source (wired model)	USB
Power Source (wireless model)	LiPo Battery (charged via USB)
Battery	3.7V Li-polymer rechargeable battery
Battery Capacity	280 mAh
Normal recharge time	Less than 1 hour

Battery Information - Wireless

- The rechargeable battery inside the device is not fully charged when it is new. Charge Smog DADdy for 3 hours before using.
- The rechargeable battery has a long service life if treated properly. A new battery, or one that has not been used for a long period of time, could have reduced capacity the first few times it is used.
- Operate Smog DADdy in room temperature for maximum battery capacity.
- Do not expose Smog DADdy to an environment temperature above 135°F (+55°C).
- If Smog DADdy is operated in cold temperatures, the battery capacity is reduced.

- It is recommended to charge the battery in temperatures between 55°F (+10°C) and 113°F (+45°C).

Regulatory Information

Any modifications or changes (e.g., antennas) made to this device may void the user's authority to operate this device.

Declaration of Conformity

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions.

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

Federal Communications Commission (FCC) Statement

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

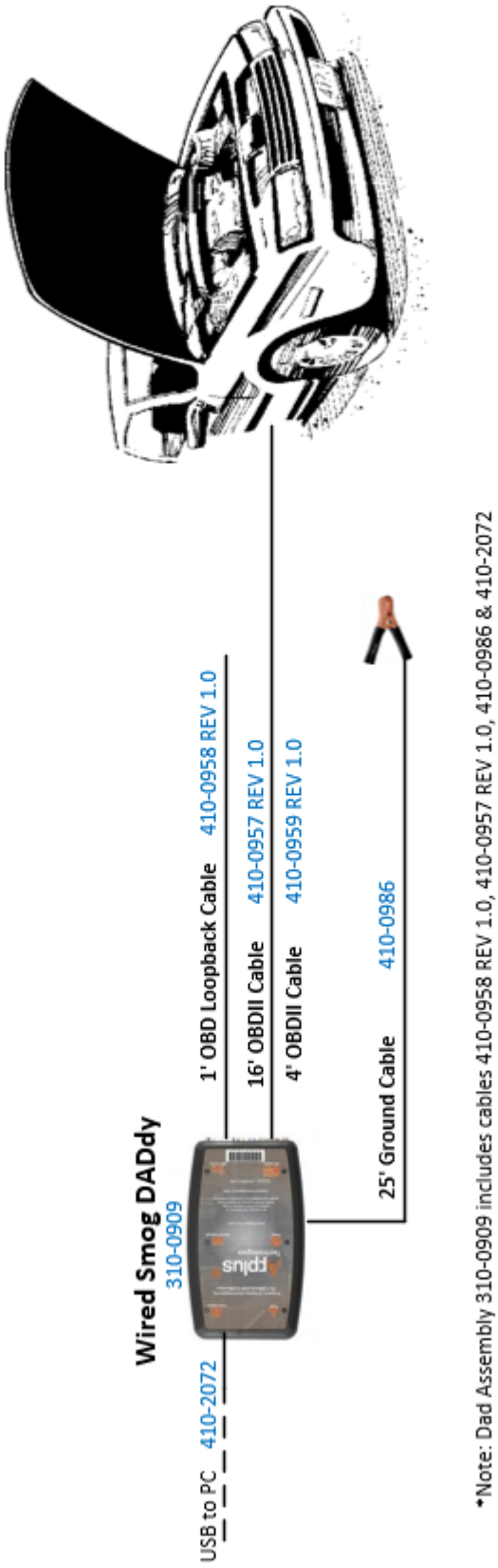
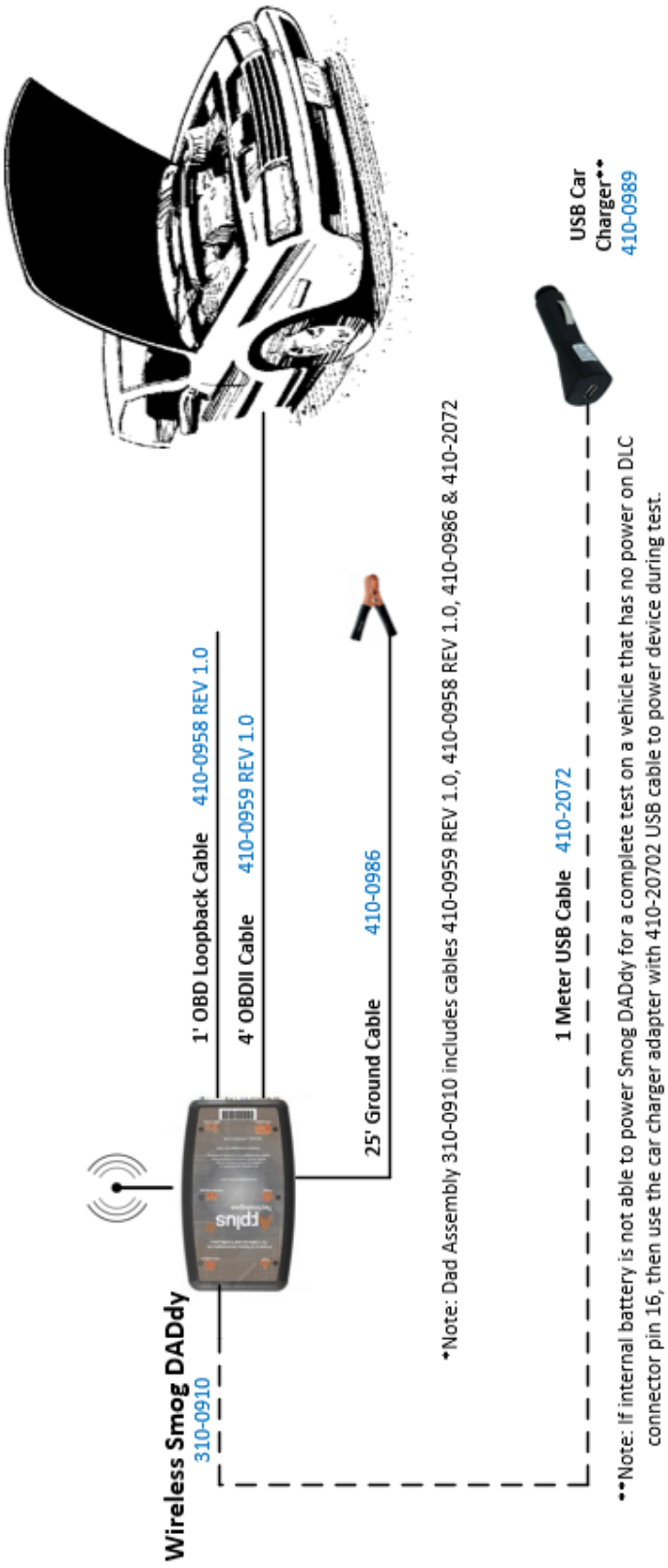
FCC RF Radiation Exposure Statement

This device complies with FCC RF radiation exposure limits set forth for the general population. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Smog DADdy System Connection Diagrams

The following diagrams illustrate the different configurations possible when using either the wired or wireless Smog DADdy. They include the proper part numbers of the different components used with each configuration option available.

Wired SmogDADdy



Wireless SmogDADdy