DA-Dongle J2534
User's Manual

Contents

Important Information

General Notice

The DA–Dongle J2534 communication interface has been designed and tested to comply with OBDII protocols. However, some vehicle models are not in full compliance with these protocols for various reasons.

While Diagnostic Associates' testing and the experience of its many product users have shown the unit to be safe and reliable, there is an inherent risk in using any product that may potentially affect the operation or driveability of your vehicle.

If you are concerned about the operation of your vehicle at any time while using these products:

- Pull off the roadway immediately or as soon as it is safe to do so.

- Disconnect the device from the vehicle OBDII connector.

- Consult your local car dealership or garage.

Report any issues or concerns to our Technical Support Team at support@diagnostic-associates.com. We are open Monday through Friday, 7:30 a.m. to 5:00 p.m. GMT, and all queries will be dealt with within a working day.

This User Manual is updated on a regular basis to ensure its content is up-to-date. Every effort is made to ensure that the latest version is supplied with your product, however this is not always practical. As a result you should always consult the Diagnostic Associates website to determine if you have the latest version.

Product Warranty

Diagnostic Associates Limited guarantees that every DA-Dongle J2534 device is free from physical defects in material and workmanship under normal use for twelve months from the date of purchase.

Product Terms & Conditions

In no event shall Diagnostic Associates Limited's liability exceed the price paid for the product. Diagnostic Associates shall be exempt from all other claims whether based upon direct, indirect, special, incidental, or consequential damages resulting from the use of this product, its accompanying software, or its documentation.

Diagnostic Associates Limited makes no warranty or representation, expressed, implied, or statutory, with respect to its products or the contents or use of this documentation and all accompanying software, and specifically disclaims its quality, performance, merchantability, or fitness for any particular purpose. Diagnostic Associates Limited reserves the right to revise or update its products, software, or documentation without obligation to notify any individual or entity.

If you are not in agreement with these terms then you are advised to return the product, prior to use, immediately for a full refund.

Please direct all enquiries to:

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Introduction

Thank you for choosing the DA-Dongle J2534 device. This compliant SAE J2534 "Pass-Thru" vehicle interface lets you use your PC to communicate and perform ECU diagnostics and reprogramming on many modern vehicles.

The DA-Dongle J2534 device is a low-cost SAE J2534 compliant device. It provides a direct connection to a laptop or desktop computer via a USB 2.0 full-speed connection (cable supplied). All of the electronics are contained within the OBDII connector housing, making it a compact and rugged vehicle communications tool.

The DA-Dongle J2534 can be powered by the USB connector, so there is no need to be connected to the vehicle when updating the device software. However, a vehicle 12V supply on pin 16 on the OBDII connector is required so that host PC applications will operate correctly during normal operation.

Getting to Know the Device

Your package includes a DA-Dongle J2534 device, a USB 2.0 cable and this user guide. There is no CD for the PC drivers and device update software, as up-to-date versions of these are available from the Diagnostic Associates website at:

http://www.diagnostic-associates.com/download.htm

There are three main parts to the device and these are shown on the picture above.

- **Vehicle OBDII Connector** : This is the end that connects to the vehicle OBDII diagnostic connector and provides power to the device and connection to the vehicle communications networks.

- **USB Connector** : This connects the device to the PC via a USB (A-B) cable and is used to control the device from the software application running on the PC.

- **LED Status Lights** : These are used to give a visual indication to the user as to the state of the device. There are 3 LEDs on the device that are repeated on both sides of the device, these have the following functions.

  - **PWR** : This indicates that the device is powered up, either via the vehicle if connected to the vehicle, or via USB if connected to a PC.

  - **LNK** : This indicates the state of the software within the device as well as indicates the device status during reprogramming.

  - **STS** : This indicates the status of the device during its operation when connected to a PC and its associated PC application. This LED has three colours, RED, GREEN and AMBER.

Installing the J2534 Device Drivers

In order for the device to operate correctly with the target PC diagnostic application, you will need to first install the DA-Dongle J2534 device drivers onto the PC that will control the device. This can be done by following the procedure outlined below.

Note: The DA-Dongle J2534 supports Windows XP, Windows Vista (32 bit) and Windows 7 (32 bit).

It is important to install the DA J2534 Device Setup software before plugging your DA-Dongle J2534 device into your computer.

Note: The following steps may differ slightly dependent upon the operating system or components that are installed on your computer, but in general these are standard install steps.

1. Download the 'DA J2534 Device Setup Vx.x.zip' from:

    http://www.diagnostic-associates.com/pages/downloads

    The version number x.xx will be the latest available for the Diagnostic Associates J2534 devices and must be used in conjunction with the appropriate software loaded on the DA-Dongle J2534.

2. Unzip the files to a folder on the PC you want to use your DA-Dongle J2534 device with.

3. Double-click on the setup.exe file to begin the installation.

    Note: If you do not have the .net Framework 4.0 on your PC this will be automatically installed now. Similarly if you don't have the Visual C++ 2010 Runtime Libraries (x86) installed you will be prompted to install these now also. When these have been installed and completed the DA J2534 Software Setup Wizard installation will begin.

4. Choose a location to store the files. You may either leave the default installation folder or choose your own and then confirm the installation. The DA J2534 software will now install. During this part of the process two MS-DOS style windows will pop-up and may remain on your screen for some time (even after the main installation application is at the installation complete stage), this is perfectly normal. Do not attempt to close the MS-DOS style windows manually as this will prevent the DA J2534 device drivers being installed successfully, they will close automatically when the device driver install is complete.

5. Plug your DA-Dongle J2534 device into your computer using the supplied USB cable. The device will automatically be recognised by Windows and is now ready for use with your chosen J2534 application.

Note: You should have no issues installing this software, however in the event that you experience problems, then please contact the support desk via the website to assist you in resolving your issue, once you have verified your issue.

Installing the DA App Hub

The DA App Hub is a PC based application that is installed on your PC which will allow you to check for software updates to your DA-Dongle device, and to download them to your device directly, via the USB cable.

The PC that this application is installed on should be connected to the internet as the installed application will connect to the Diagnostic Associates file server to check for and download device software updates.

Note: The DA App Hub is supported on Windows XP, Windows Vista (32 bit/64 bit) and Windows 7 (32 bit/64 bit).

⚠️ It is important to install the DA App Hub software before plugging your DA-Dongle device into your computer.

Note: The following steps may differ slightly dependent upon the operating system or components that are installed on your computer, but in general these are standard install steps.

1. Download the 'DAAppHub_Vx.x.x.zip' from:

   http://www.diagnostic-associates.com/pages/downloads

   The version number x.x.x will be the latest available for all the Diagnostic Associates devices.

2. Unzip the files to a folder on the PC that will be used to update the device software.

3. Double-click on the setup.exe file, to begin the installation.

   Note: If you do not have the Visual C++ 2010 Runtime Libraries (x86/x64) installed you will be automatically prompted to install these now. When the Visual C++ 2010 installation is complete the DA App Hub Setup Wizard installation will begin.

4. Choose a location to store the files. You may either leave the default installation folder or choose your own and then confirm the installation. The DA App Hub will now install.

5. A window will pop up asking if you wish to install the DA Device drivers - click 'Yes' as this is part of the installation process. Also, during this part of the process two MS-DOS style windows will pop-up and may remain on your screen for some time (even after the main installation application is at the installation complete stage), this is perfectly normal. Do not attempt to close the MS-DOS style windows manually as this will prevent the DA device drivers being installed successfully, they will close automatically when the device driver install is complete.

6. Plug your DA-Dongle device into your computer using the supplied USB cable. The device will automatically be recognised by Windows and is now ready for use.

7. Your DA App Hub is now ready for use, it can be run either from the Start Menu or the Desktop short-cut.

Updating the DA-Dongle J2534 Device

Periodically Diagnostic Associates will release updates to its products drivers and software. These updates are necessary to either release further device functionality, resolve any field issues that have been highlighted, or to ensure that the devices are working correctly with OEM software.

If you are experiencing any problems during device use, always make sure that you have the latest device software and drivers.

J2534 Device Driver Updating

The latest version of the J2534 OEM device drivers can be located and downloaded from the Diagnostic Associates website download page:

<div align="center">

http://www.diagnostic-associates.com/pages/downloads

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This can be downloaded by following the installation instructions on page 8 of this document.

Note: In conjunction with any J2534 Device Driver Updates, there will be a requirement to update the software on the J2534 device itself, to the version associated with the Device Driver Update. To do this, the following section should be followed.

DA-Dongle J2534 Software Updating

Note: An internet connection is required to update your DA-Dongle device as the software automatically downloads the latest version of software from the Diagnostic Associates file server.

1.   Connect your DA-Dongle to your PC using the supplied USB cable only.

  ⚠️   **Note:** The device should NOT be connected to the vehicle when updating the device software.

2.   Run the DA App Hub using either the Start Menu or the Desktop short-cut.

3.   The first 'tab' of the application you see will be the Home tab. This contains information about the status of your DA-Dongle software.

4.   Selecting the 'Update Applications' tab will allow you to update your DA-Dongle software as follows.

5.   Details of your DA-Dongle device will appear in the centre of the application window. The information window at the bottom of the application will inform you if an update is available or if your DA-Dongle is already up to date.

6.   If an update is available you can click 'Update Device' and the DA App Hub will update your software to the latest level. When you click 'Update Device' the information box will display the various stages required to update the software on your DA-Dongle. The progress bar will also indicate progress through the various stages.

⚠️ **It is important that when you click 'Update Device' that you do not disconnect the DA-Dongle from the PC until the process is completed.**

7.   Finally your device will 'Reboot', this will cause it to re-enumerate on your PC, you may notice messages popping up from the system tray at this time. When complete the information window will display the message 'Your software is up to date'.

Your DA-Dongle device is now fully updated and ready for use.

Device Recovery

The DA-Dongle device has the ability to check the integrity of its own loaded software. It does this as soon as the device is powered up. If after powering-up your device the yellow LNK LED is flashing steadily and then illuminates constantly, then this means that the software on the device is corrupt.

In order to re-load the device software, simply follow the DA-Dongle J2534 Software Updating procedure shown on page 10 of this document.

Device Specification

The DA-Dongle J2534 device has the following pin-out connections.

ODBII pin no.	FUNCTION													
	FT CAN +ve	125K CAN +ve	500K CAN +ve	K-Line	FT CAN -ve	125K CAN -ve	FEPs Voltage	500K CAN -ve	L-Line	GND 1 Drive	GND 2 Drive	GND 3 Drive	VBatt +ve	VBatt -ve
1	S/W									S/W				
2														
3		S/W		S/W										
4														H/W
5														H/W
6			S/W											
7					S/W									
8					S/W						S/W			
9						S/W								
10														
11						S/W								
12												S/W		
13							S/W							
14								S/W						
15									S/W					
16													H/W	

S/W = Multiplexed Pin

H/W = Hardwired Pin

Note: This device does not support the J1850 (SCP) protocol.

The device has the following electrical characteristics:

- Vehicle Battery Range   =   8V to 36V

- Operating Current   =   70mA (nominal)

- Ground Drive Current   =   2A (max)

- All Vehicle communication interfaces are multiplexed

Troubleshooting

The DA-Dongle gets its power from either the vehicle (for vehicle communications) or a PC USB port (for device re-programming). There are LED's repeated on both side of the device that are used to indicate the device status.

- If an LED is not working when it's corresponding pair LED is, then the device will still be working correctly, however the other LED will be faulty and will need replacing eventually.

- If the LNK LED has a slow flashing light which then goes out after 30 seconds, then the device loaded software was corrupt but was automatically re-loaded from the device, and can be now used as normal.

- If the LNK LED has a slow flashing light which then turns on continuously after 30 seconds, then the device loaded software is corrupt as well as its backup copy, and you will need to download new software onto the device.

- If the STS LED is flashing RED then GREEN when powered via the ODBII connector, then this means that the device has past its self-test and is ready for host PC communications.

- If the STS LED is flashing GREEN, then the device is connected to a PC and is communicating correctly with the PC application.

- If the PC displays a 'Device Not recognised' message when connecting the device to the PC then this probably indicates that there is a problem with either the device drivers on the PC or the software on the device (or possibly the USB cable). It is advisable to re-install the drivers and software on both of these to ensure that they are up-to-date and compatible drivers and software are installed (the J2534 drivers on the PC will need to match the software on the device itself to work correctly as they are paired together).

- Even though the device will power from USB only, this does not mean that the device will communicate with the OEM PC application. In order to do this the device has to be connected to the vehicle as well as the PC. Communication errors will occur if this is not the case.

- If no LEDs are lit, this may indicate a failure of the device. Try connecting your device to another computer.   If no LEDs light up on the device during this second test, then contact technical support.

- If the device does not power correctly when powered via USB, or a windows message appears saying the that there is a surge on the USB HUB, then this may be as a result of too many higher powered USB devices on the PC USB. To overcome this simply disconnect other USB devices from your PC until the device powers on. If the problem persists then the device could be faulty and should be returned for repair.

If any of these issues have been addressed and verified, and you are still having trouble, email support@diagnostic-associates.com with a summary of the problem and we will endeavour to resolve your issue as soon as possible.

Technical Support

Diagnostic Associates Limited are open Monday through Friday, 7:30 a.m. to 5:00 p.m. GMT, to answer technical support questions.

If you need assistance please email support@diagnostic-associates.com.

If technical support finds it necessary to return your device for repair, you will be asked for your contact information and provided with a Return Merchandise Authorization number (RMA) that Diagnostic Associates will use to track the unit through the repair department back to you. Please write this number on the outside of your shipping box so it can be directed to the correct department.

Note: If the necessary repair is not covered by Diagnostic Associates warranty, and you still wish to have the unit repaired, then you will be contacted for payment arrangements to allow this to happen.

Related Products

Diagnostic Associates Limited has several JLR approved products available for data acquisition, diagnostics, development, testing, and reprogramming for modern vehicles.

Visit www.diagnostic-associates.com for more information on these products.