DA-ST512
(Service Tool)
User's Manual

Contents

Important Information

General Notice

The DA–ST512 hand held device has been designed and tested to comply with modern vehicle 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 (if applicable).
- Disconnect the device from the vehicle OBDII connector.
- Consult your local car dealership or garage.

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-ST512 hand held 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.

Introduction

Thank you for choosing the DA-ST512 hand held device. This is a Jaguar Land Rover (JLR) approved device that can be used for a vast majority of the current JLR vehicles that support the diagnostic, configuration and set-up applications developed for this device (all of which appear on IDS/SDD).

The device is pre-loaded with a number of these applications that have a wide ranging use on the JLR range of vehicles. This is only a small sub-set of applications that are available, and more applications can be loaded onto the device by simply purchasing them from the Diagnostic Associates App Hub . More details on how to do this are shown later in this document.

The device works in a stand-alone mode which means that there is no need for a connection to a PC or the IDS/SDD tool. The only exception to this is when the device is used in pass-through mode, where it can be used as a J2534 pass-through communication device and used as part of IDS/SDD, negating the need for a separate vehicle communications device.

The DA-ST512 hand held device is easily updated using the Diagnostic Associates App Hub which is provided for free download from our website. This PC application will allow you to connect the DA-ST512 to your PC to check for updates to your currently installed set of applications, to install recently purchased additional applications, or to remove (temporarily) applications that are currently installed. Once an additional application has been purchased the tool keeps a track of what you have bought, and what you have installed at what version.

Note: During device update via USB, there is no need to have the device powered up via its OBDII connector.

The DA-ST512 device receives its power directly from the vehicle, and once plugged into the vehicle it will identify the vehicle before displaying the dynamic menu screen which will contain all applications that you have loaded on the device that are applicable to that vehicle. From this point you simply navigate to one of the installed applications, and select it to start the selected routine. Once complete the device will indicate via the screen or through its built in sounder that the application has been completed.

The device can be reset in either power mode (USB or vehicle power), by removing the power source and re-connecting it. Doing this will simply re-power the device and start from the beginning. No installed applications will be lost during a reset.

Getting to Know the Device

Your package includes a DA-ST512 hand held device, a 1 metre USB 2.0 cable and this user guide.

There are seven 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 a PC via a USB (A-B) cable and is used to update the device software when updates are available, or connect to SDD. This is accessed by opening the rubber USB cover.

- **SD Card Slot** : The use of this is application specific and the user will be notified if an SD card is required during and application. This is accessed by removing the port cover.

- **Keypad** : The 6 button keypad is used for navigating menus, selecting screen items or acknowledging user inputs during application use.

- **LCD Screen** : The back-lit LCD screen is used as the primary source for instructions and feedback to the operator during use. It is an automatically adjusting contrast screen that will operate equally well in high or low light and in a range of temperatures.

- **LED Light** : This illuminated when connected via USB to show device connectivity and is also used to show device status during reprogramming.

- **Internal Buzzer** : Internal to the device is an 80dB buzzer that is used during device operation (where applicable) to indicate process status.

Device Registration and Set-up

Before you can use your DA-ST512 device on the vehicle you will need to first of all register your product to unlock it for use. All devices are shipped in a locked state as each device is tied to a customer in order to maintain the applications on the device and to maintain the warranty.

To register your device you will need to first download the Diagnostic Associates App Hub from our website at http://www.diagnostic-associates.com/download.htm.

Note: If you already have existing DA products then you may already have the DA Software Update Application installed, however you will need to ensure that you install the DA App Hub in order to update your DA-ST512 device. The DA App Hub will also update your existing products.

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-ST512 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-ST512 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/download.htm

    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-ST512 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.

Registering your DA-ST512

Once the DA App Hub is installed and running on your PC correctly, you can plug the device into the PC via its USB cable and connection. The device should be recognised by the DA App Hub and you can now start to register the product.

The registration process requires your name, address and email and when complete will enable the DA-ST512 for use and allow access to software updates via the DA App Hub. By registering you will also receive emails when new software is available to download to your DA-ST512. For franchised Jaguar Land Rover dealerships you need to select your dealer code (PAGxxxx) from the drop down lists starting with your country, town and then dealer PAG code.

Updating the DA-ST512 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 installed.

DA-ST512 Software Updating

Note: An internet connection is required to update your DA-ST512 device as the software automatically downloads the latest versions of software from the Diagnostic Associates file server.

1. Connect your DA-ST512 to your PC using the supplied USB cable only. The yellow LED on the device will flash periodically, this is a 'heartbeat' to show that the device is powered by USB as the display will not be active at this time.

   ⚠️ **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-ST512 applications and if any trial applications are available.

4. Selecting the Update tab will allow you add, remove and update your DA-ST512 applications as follows.

5. Details of your DA-ST512 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 you DA-ST512 is already up to date.

6. If an update is available you can click 'Update Device' and the software update application will update **all** of your applications 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-ST512. 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-ST512 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 DA-ST512 applications are up to date.'.

   Your DA-ST512 device is now fully updated and ready for use.

Advanced Software Updating

If you wish to update one or more applications on your device you can click the 'Advanced' button on the Update tab of the DA App Hub. This will enlarge the window to show any updated applications that are available in the 'Available Applications' window and the applications your device currently has in the 'Installed Software Applications' window. By default the applications that have updates available will be pre-selected in the 'Available Applications' window. To update these use the right arrow button to move them to the 'Installed Software Applications' window and click 'Update Application'.

To select specific applications to update highlight the application and select the version from the drop down in the 'Available Applications' window, use the right arrow button to move them to the 'Installed Software Applications' window and click 'Update Application'.

To remove applications from the device highlight them in the 'Installed Software Applications' window, use the left arrow to remove them from the window and click 'Update Applications'. You can roll back to previous application versions by selecting the older version from the drop down in the 'Available Applications' window, right arrow button to move them to the 'Installed Software Applications' window and click 'Update Application'.

Note: If at any time you want to reset the selections in the DA App Hub and start again use the reset button. This will not affect applications on the DA-ST512.

DA-ST512 Software Trial Applications

As new applications are launched Diagnostic Associates may make trial versions available to existing DA-ST512 customers. The trial applications will have a limited number of uses on the vehicle to enable you to determine whether the application is suitable for you.

When trial applications are available the 'Home' tab of the DA App Hub will give the title of the application and number of uses available to you. You will also note a 'Trial Applications' tab will be visible with more detailed information about the new application.

Along with more detailed information the 'Trial Applications' tab is where you select the application for trial by pressing the relevant 'Trial xxx' button. The download will begin when the 'Install' button is clicked.

DA-ST512 Applications

The DA-ST512 is pre-loaded with a number of applications that will allow a wide range of functions to be performed on a large range of JLR vehicles from 2005 model year onwards.

You can choose to add to this list of applications as time progresses by simply purchasing more applications to load onto the device. This is done via the DA App Hub mentioned previously. The device itself can hold hundreds of applications on internal flash memory.

The DA App Hub can be used to manage your applications on the device to keep the device tidy and manageable as well as up-to-date. The DA App Hub always knows what applications you have loaded on the device, what version each application is, and which applications are valid to be loaded on the device. This means that you can choose not to put applications on your device for a particular user to limit their use of the device, and when complete you can re-load the applications back onto the device next time you connect to the Software Update Tool. In summary you can choose to have all your applications loaded, a selection or just one of them.

None of the applications loaded on the device will require IDS/SDD to operate . The device works independent of IDS/SDD. The only exception to this is if the device is used as a J2534 communications device in pass-through mode. In this case, the device becomes a slave unit controlled via the IDS/SDD PC. During this operation the device screen is only used to indicate that you are in J2534 pass-through mode.

DA-ST512 Menu Application

The DA-ST512 has a dynamic menu system that identifies which of the installed applications are suitable for the vehicle it is connected to. To turn this feature off in order to display all of the installed applications, connect the DA-ST512 to a vehicle and from the menu screen press and hold the OK button until you hear an audible beep. Repeat this process to turn dynamic mode on again.

The menu application presents the applications in a list format. If the list exceeds the screen depth, then arrows are indicated on the screen to show that the device up and down arrows can be used to navigate up and down the screen. An application is highlighted when the cursor is moved to the application in the menu list. Pressing the 'OK' keypad button when the menu item is highlighted will launch the application. When the application has been completed the user is returned to the menu application or any sub menu that is contained within the selected application.

The following sections will cover the applications that are pre-loaded on the device. These may have changed since you received your device so you should always check the Diagnostic Associates website for the latest updates to this document or any other documents or downloads.

The following applications are updated periodically to increase its coverage for new JLR vehicles and model year updates, as well as application enhancements from user feedback. You can check for these updates by connecting your DA-ST512 device to the DA App Hub. It should be noted that, unless stated at purchase time, all applications will be updated for new vehicle and model year updates for a period of 3 years (as a minimum) following initial purchase.

DA-ST512 Basic Operation

When the device is plugged into the vehicle OBDII connector, the device powers from the vehicle, and a splash screen is displayed where a number of device initialisations and checks are taking place.

Following this, the operator will be instructed to switch the vehicle ignition on and the to press the 'OK' button once this has been done. If the vehicle ignition is already on then this step is bypassed.

The device will now read the vehicle VIN, and display the VIN, vehicle type and engine size for operator reference. The operator is then instructed to press 'OK' to proceed to the menu application of all loaded applications stored on the device.

An application is started by selecting the desired application and pressing the 'OK' button.

Feedback Session Data

For DA-ST512 devices registered as franchised dealerships, the DA-ST512 will perform a vehicle sweep when you plug into a vehicle that is within its warranty period. This vehicle sweep consists of reading DTC (Diagnostic Trouble Codes) and various vehicle parameters that provide valuable information to JLR. This information is collected and stored on the device internal memory.

This feedback session data is sent back to JLR and cleared from the device memory automatically by the DA App Hub each time you connect to check for updates or manage your applications. As the device memory becomes 80% or more full of the session data you will be informed by a message on the device display. At 100% full you will need to connect the DA-ST512 to the DA App Hub to send the session data back to JLR, at which point the device internal storage memory will be cleared. If the device does become 100% full, you will not be able to use the device until you have downloaded the data on the DA App Hub.

For non-franchised dealerships or for cars out of warranty, this feedback session data is not collected.

Pre-Loaded Applications

The following sections cover the user manuals of the applications that have been loaded on your ST512 device. These are known as the 'base' applications and whether they are loaded on your device is dependant upon the 'base' application package chosen. Currently there are two 'base' packages, ROW (Rest Of World) and NA (North America). Each application defined in the following sections will clearly identify which 'base' package it relates to.

If you have chosen at point of purchase to included additional application outside of the 'base' package, and it is not covered in the following sections, then you would have either received a separate user manual sheet for each application, or you can download the latest application user manual from the Diagnostic Associates website.

Service Interval Reset (SIR)

Part of the ROW & NA base Application package.

This application will perform the Service Interval Reset via diagnostic communication to the Instrument Cluster module. This will remove the service warning from the Instrument Cluster and reset the counter in preparation for the next service interval (including oil counter resets where appropriate).

SIR Process

The SIR application is simple and easy to use, the following procedure identifies the steps required to operate the device on the vehicle.

> ⚠️ Please ensure the vehicle is in a safe working mode prior to exercising the following procedure.

- The trigger is for the operator to switch on the vehicle ignition. If this is not currently on, then you will be asked to turn it on and to press 'OK' when this has been done.

- On detecting the ignition state, the process starts to run and the message 'Please wait' is displayed on the screen. The process will complete in approximately 10 seconds.

- Once the application has successfully completed a message "PROCEDURE COMPLETE" will be displayed and the distance to next service will be displayed if this is supported by the ECU. Pressing the 'OK' button to return to the main application menu.

  Note: If the process fails for whatever reason, a failure message will be displayed. At this time the process should be repeated ensuring that all conditions for the process have been met.
- To abort the procedure press the 'X' button on the keypad at any time.

Hint: If the application fails (especially on older vehicles), it is advisable to disconnect the battery for 3 minutes, before retrying the application.

SIR Supported JLR Vehicles

The following JLR vehicles and associated model years are supported by the SIR application at the time this user manual was produced. To obtain an up-to-date version of this table you should visit the Diagnostic Associates website.

Jaguar & Land Rover Vehicle Coverage Service Interval Reset										
Vehicle / Model Year	MY05	MY06	MY07	MY08	MY09	MY10	MY11	MY12	MY13	MY14
Defender	-	-	-	-	-	-	-	-	-	-
Discovery /LR3/LR4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Range Rover Sport	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Range Rover	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Freelander /LR2	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Evoque	-	-	-	-	-	-	-	Yes*	Yes*	Yes*
XJ - New	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes
XJ - Old	-	-	-	-	-	-	-	-	-	-
XK - New	-	-	-	-	-	-	-	-	-	-
XK - Old	-	-	-	-	-	-	-	-	-	-
XF	-	-	-	-	-	Yes*	Yes*	Yes*	Yes*	Yes**
F-Type	-	-	-	-	-	-	-	-	-	Yes**
S-Type	-	-	-	-	-	-	-	-	-	-
X-Type	-	-	-	-	Yes***	-	-	-	-	-

(Yes) - Covered for MY : (-) - N/A

(Yes*) - Oil Service reset only on XF 3L Diesel and Evoque 2.2L Diesel, a manual process may also be required

(Yes**) - Oil Service reset only on Petrol and Diesel engines, a manual process may also be required

(Yes***) - 2.2L DPF only

Electronic Park Brake Release (EPBR)

Part of the ROW & NA base Application package.

This application will perform the Electronic Park Brake Release via diagnostic communication to the EPBR module. This will force the brake to move to its mount mode and effectively release the brake pads from the disc in readiness for inspection or replacement. In the case of Land Rover vehicles it can also perform an un-jam function before moving to the mount position (except for Evoque, Freelander MY13 and Range Rover MY13).

EPBR Process

The EPBR application is simple and easy to use, the following procedure identifies the steps required to operate the device on the vehicle.

<div style="color:red">

⚠️ Ensure the vehicle is not in a position to roll prior to exercising the following procedure, that the gear is not in DRIVE if the engine is running, and ensure that you exercise caution if operating on a ramp.

</div>

- The trigger is for the operator to switch on the vehicle ignition. If this is not currently on, then you will be asked to turn it on and to press 'OK' when this has been done.

- On detecting the ignition state, the process starts to run and the message 'Please wait' is displayed on the screen. The process will complete in approximately 10 seconds.

- Once the application has successfully completed a message "PROCEDURE COMPLETE" will be displayed. Pressing the 'OK' button to return to the main application menu.

  Note: If the process fails for whatever reason, a failure message will be displayed. At this time the process should be repeated ensuring that all conditions for the process have been met.

- To abort the procedure press the 'X' button on the keypad at any time.

- To restore the park brake to its normal operation the park brake switch should be turned on until the park brake engages. For Evoque, Freelander MY13 and Range Rover MY13 vehicles only, when the brake maintenance operation is complete this device will need to be used again to restore the vehicle to normal operation.

- For Land Rover vehicles (except for Evoque, Freelander MY13 and Range Rover MY13) to perform the un-jam feature follow the process above but with the engine running.

- It is no longer necessary to release the Parking brake before running this application on Evoque, Freelander MY13 onwards, F-Type, Range Rover MY13 onwards and Range Rover Sport MY14 onwards.

EPBR Supported JLR Vehicles

The following JLR vehicles and associated model years are supported by the EPBR application at the time this user manual was produced. To obtain an up-to-date version of this table you should visit the Diagnostic Associates website.

Jaguar & Land Rover Vehicle Coverage Electronic Park Brake Release										
Vehicle / Model Year	MY05	MY06	MY07	MY08	MY09	MY10	MY11	MY12	MY13	MY14
Defender	-	-	-	-	-	-	-	-	-	-
Discovery /LR3/LR4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Range Rover Sport	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Range Rover	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Freelander /LR2	-	-	-	-	-	-	-	-	Yes	Yes
Evoque	-	-	-	-	-	-	-	Yes	Yes	Yes
XJ - New	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes
XJ - Old		Yes*	Yes*	Yes*	Yes*	-	-	-	-	-
XK - New	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
XK - Old	-	-	-	-	-	-	-	-	-	-
XF	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F-Type	-	-	-	-	-	-	-	-		
S-Type	-	-	-	-	-	-	-	-	-	
X-Type	-	-	-	-	-	-	-	-	-	
(Yes) - Covered for MY : (-) - N/A (Yes*) - Only applicable to CAN-based electronic park brake systems for VIN G49701 onwards										

Tight Tolerance Mode Toggle (TTMT)

Part of the ROW & NA base Application package.

This application will put the vehicle into tight tolerance mode where the vehicle suspension will be locked at a known level to allow geometry related functions to be undertaken on the vehicle (such as wheel alignment and headlamp levelling etc.). Once in tight tolerance mode, the application can be used again to take the vehicle out of tight tolerance mode and return to customer mode.

TTMT Process

The DA-Dongle TTMT device is simple and easy to use, the following procedure identifies the steps required to operate the device on the vehicle.

⚠️ Ensure the vehicle is not in a position to roll prior to exercising the following procedure, that the gear is not in DRIVE if the engine is running, and ensure that you exercise caution if operating on a ramp.

Note: It is recommended that **before** the TTMT device is connected to the vehicle, the vehicle ignition is switched on and the vehicle left to stabilise for 30 seconds.

- The trigger is for the operator to switch on the vehicle ignition. If this is not currently on, then you will be asked to turn it on and to press 'OK' when this has been done.

- On detecting the ignition state, the process starts to run and the message 'Please wait' is displayed on the screen.

- The process can take up to 2 minutes to enter or leave tight tolerance mode.

- Once the application has successfully completed a message "PROCEDURE COMPLETE" will be displayed. Pressing the 'OK' button to return to the main application menu.

   Note: If the process fails for whatever reason, a failure message will be displayed. At this time the process should be repeated ensuring that all conditions for the process have been met.

- To abort the procedure press the 'X' button on the keypad at any time.

- To take the vehicle out of tight tolerance mode, simply follow the above process again.

Note: When exiting tight tolerance and returning the vehicle to customer mode, the vehicle may require the air suspension compressor to run, returning the vehicle to the customer selected ride height. This will happen automatically. If the engine is running the compressor will run immediately, if the ignition is ON with engine OFF the compressor will run next time the engine is

TTMT Supported JLR Vehicles

The following JLR vehicles and associated model years are supported by the TTMT application at the time this user manual was produced. To obtain an up-to-date version of this table you should visit the Diagnostic Associates website.

Jaguar & Land Rover Vehicle Coverage Tight Tolerance Mode Toggle										
Vehicle / Model Year	MY05	MY06	MY07	MY08	MY09	MY10	MY11	MY12	MY13	MY14
Defender	-	-	-	-	-	-	-	-		
Discovery /LR3/LR4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Range Rover Sport	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Range Rover	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Freelander /LR2	-	-	-	-	-	-	-	-	-	-
Evoque	-	-	-	-	-	-	-	-	-	-
XJ - New	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes
XJ - Old							-	-	-	-
XK - New	-	-	-	-	-	-	-	-	-	-
XK - Old	-	-	-	-	-	-	-	-	-	-
XF	-	-	-	-	-	-	-	-	-	-
F-Type	-	-	-	-	-	-	-	-	-	-
S-Type	-	-	-	-	-	-	-	-	-	-
X-Type	-	-	-	-	-	-	-	-	-	-
(Yes) - Covered for MY : (-) - N/A										

Transport Mode Toggle (TMT)

Part of the NA base Application package.

This application will perform the Transport Mode toggle via diagnostic communication. Therefore if the vehicle is already in its transport mode, connecting the device will disable the speed limit and disable the air suspension on applicable vehicles within the JLR range from 2010 vehicles onwards. If the device is connected to the vehicle when is not in its transport mode, it will put the vehicle into its transport mode.

TMT Process

The TMT application is simple and easy to use, the following procedure identifies the steps required to operate the device on the vehicle.

Please ensure the vehicle is in a safe working mode prior to exercising the following procedure.

- The trigger is for the operator to switch on the vehicle ignition. If this is not currently on, then you will be asked to turn it on and to press 'OK' when this has been done.

- On detecting the ignition state, the process starts to run and the message 'Please wait' is displayed on the screen.

- Once the application has successfully completed a message "PROCEDURE COMPLETE" will be displayed. Pressing the 'OK' button to return to the main application menu.

    Note: If the process fails for whatever reason, a failure message will be displayed. At this time the process should be repeated ensuring that all conditions for the process have been met.

- To abort the procedure press the 'X' button on the keypad at any time.

- To take the vehicle out of transport mode, simply follow the above process again.

TMT Supported JLR Vehicles

The following JLR vehicles and associated model years are supported by the TMT application at the time this user manual was produced. To obtain an up-to-date version of this table you should visit the Diagnostic Associates website.

Jaguar & Land Rover Vehicle Coverage									
Transport Mode Toggle									
Vehicle / Model Year	MY06	MY07	MY08	MY09	MY10	MY11	MY12	MY13	MY14
Defender	-	-	-	-	-	-	-	-	-
Discovery /LR3/LR4	-	-	-	-	Yes	Yes	Yes	Yes	Yes
Range Rover Sport	-	-	-	-	Yes	Yes	Yes	Yes	Yes
Range Rover	-	-	-	-	Yes	Yes	Yes	Yes	Yes
Freelander /LR2	-	-	-	-	Yes	Yes	Yes	Yes	Yes
Evoque	-	-	-	-	-	-	Yes	Yes	Yes
XJ - New	-	-	-	-	Yes	Yes	Yes	Yes	Yes
XJ - Old	-	-	-	-	-	-	-	-	-
XK - New	-	-	-	-	Yes	Yes	Yes	Yes	Yes
XK - Old	-	-	-	-	-	-	-	-	-
XF	-	-	-	-	Yes	Yes	Yes	Yes	Yes
F-Type	-	-	-	-	-	-	-	-	-
S-Type	-	-	-	-	-	-	-	-	-
X-Type	-	-	-	-	-	-	-	-	-
(Yes) - Covered for MY : (-) - N/A									

Note:

For XJ MY13 vehicles, it is recommended that the trunk be open before attempting to put the vehicle into transport mode as the trunk will not open if there is no transit relay fitted.

Diesel Particulate Filter Adaptions Reset (DPFAR)

Part of the ROW base Application package.

The DPFAR application resets the DPF soot value enabling the DPF dynamic regeneration to be performed or following the fitment of a new diesel particulate filter.

DPFAR Process

With the vehicle ignition on, connect the DA-ST512 to the vehicle and launch the DPFAR application. The application will reset the soot values to enable the vehicle to be driven to enable the DPF dynamic regeneration to be performed.

- The trigger is for the operator to switch on the vehicle ignition (engine off). If this is not currently on, then you will be asked to turn it on and to press 'OK' when this has been done.

- On detecting the ignition state, the process starts to run and the message 'Please wait' is displayed on the screen.

- If the soot value read is less than 60 grams the application will reset the values.

  If the soot value read is greater than 60 grams the device will indicate the soot value is greater than 60 grams and then reset the soot value.

- Once complete the Procedure Complete is displayed and the device emits a constant high-pitched audible tone to ensure the operator removes the device from the vehicle. The vehicle is now ready for the DPF dynamic regeneration process.

  Note: If the process fails for whatever reason, a failure message will be displayed and the device emits a high-pitched audible tone. At this time the process should be repeated ensuring that all conditions for the process have been met.

- To abort the procedure press the 'X' button on the keypad at any time.

DPFAR Application Model Year Updates

The following JLR vehicles and associated model years are supported by the DPFAR application at the time this user manual was produced. To obtain an up-to-date version of this table you should visit the Diagnostic Associates website.

Jaguar & Land Rover Vehicle Coverage DPFAR Application										
Vehicle / Model Year	MY05	MY06	MY07	MY08	MY09	MY10	MY11	MY12	MY13	MY14
Defender	-	-	-	-	-	-	-	-	-	-
Discovery /LR3/LR4	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Range Rover Sport	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Range Rover	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Freelander /LR2	-	-	-	-	-	-	Yes	Yes	Yes	Yes
Evoque	-	-	-	-	-	-	-	Yes	Yes	Yes
XJ - New	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes
XJ - Old	-	Yes	Yes	Yes	Yes		-	-	-	-
XK - New	-	-	-	-	-	-	-	-	-	-
XK - Old	-	-	-	-	-	-	-	-	-	-
XF	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F-Type	-	-	-	-	-	-	-	-	-	-
S-Type	Yes	Yes	Yes	Yes	-	-	-	-	-	-
X-Type	-	-	-	-	-	-	-	-	-	-
(Yes) - Covered for MY : (-) - N/A										

Diesel Particulate Filter Dynamic Regeneration (DPFDR)

Part of the ROW base Application package.

This application will perform the DPF dynamic regeneration procedure whilst the engine is running to clear the DPF of soot build up, following a DPF adaption reset.

⚠️ Care should be taken during any road test to ensure that any cables or devices plugged in the OBDII connector, do not impede the driver whilst undertaking the road test.

DPFDR Process

- The trigger is for the operator to have the engine running. If this is not currently the case, then you will be asked to turn it on and to press 'OK' when this has been done.

- If the soot value is less than 60 grams the device will wait until the engine temperature reaches the required temperature for DPF dynamic regeneration to begin (60°C).

  If the soot value is greater than 60 grams the device will emit a rapid beep and the screen will display Procedure Failed. Dynamic regeneration cannot be performed on a DPF system with a soot value of 60 grams or more.

- When the target engine temperature is reached the device will emit a high-pitched audible tone for a duration of 3 seconds at intervals of 10 seconds. This signifies that the DPF regeneration is about to start and the vehicle can now be driven. The screen will display the current engine temperature and target engine temperature.

- The vehicle should now be driven above 40KPH for approximately 15 minutes for DPF regeneration to be completed successfully.

  A very short high-pitched audible tone will sound every second to indicate that the process is running correctly. The screen will display the current soot value and the target of less than 6 grams.

  Note: If the vehicle speed drops below the 40KPH speed for more than 5 minutes then the process will have to be started from the beginning again. This will be indicated on the screen.

- Successful completion of the DPF dynamic regeneration process will be indicated by the screen and the device emitting a constant high-pitched audible tone (to ensure the operator removes the device from the vehicle).

  Note: If the process fails for whatever reason, a failure message will be displayed and the device emits a high-pitched audible tone. At this time the process should be repeated ensuring that all conditions for the process have been met.

DPFDR Application Model Year Updates

The following JLR vehicles and associated model years are supported by the DPFDR application at the time this user manual was produced. To obtain an up-to-date version of this table you should visit the Diagnostic Associates website.

Jaguar & Land Rover Vehicle Coverage DPFDR Application										
Vehicle / Model Year	MY05	MY06	MY07	MY08	MY09	MY10	MY11	MY12	MY13	MY14
Defender	-	-	-	-	-	-	-	-	-	-
Discovery /LR3/LR4	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Range Rover Sport	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Range Rover	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Freelander /LR2	-	-	-	-	-	-	Yes	Yes	Yes	Yes
Evoque	-	-	-	-	-	-	-	Yes	Yes	Yes
XJ - New	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes
XJ - Old	-	Yes	Yes	Yes	Yes	-	-	-	-	-
XK - New	-	-	-	-	-	-	-	-	-	-
XK - Old	-	-	-	-	-	-	-	-	-	-
XF	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F-Type	-	-	-	-	-	-	-	-	-	-
S-Type	Yes	Yes	Yes	Yes	-	-	-	-	-	-
X-Type	-	-	-	-	-	-	-	-	-	-
(Yes) - Covered for MY : (-) - N/A										

J2534 IDS/SDD Operation Mode

Part of the ROW & NA base Application package.

This application will allow the device to operate as a SAE J2534 compliant "Pass-Thru" communications interface that can be used in conjunction with the JLR IDS/SDD diagnostic system. It can be used as a replacement for the IDS/SDD VCM device, the Mongoose device or the other two Diagnostic Associates devices, the DA-Dongle J2534 and the DA-VINA 2534.

J2534 mode can be launched in two ways, by selecting the J2534 application from the DA-ST512 main application menu, or by powering up the DA-ST512 device whilst connected to a PC running IDS/SDD (installed with the correct DA-ST512 J2534 device drivers).

Note: When operating in J2534 mode the DA-ST512 device is effectively a DA-VINA 2534 device, and supports the same features and communications networks as the DA-VINA 2534 device.

Whilst in J2534 mode, the DA-ST512 becomes a slave unit which is controlled by the IDS/SDD PC. Operation of the DA-ST512 keypad functions are disabled during this mode of operation. The DA-ST512 screen will display that it is running the J2534 application, the connection status to the host IDS/SDD PC, the battery voltage read from the vehicle battery and the firmware version of the J2534 application.

To exit out of the J2534 mode simply remove the power to the DA-ST512 and the USB connection to the IDS/SDD PC before powering the DA-ST512 back up again.

Installing the J2534 Device Drivers

In order for the device to operate correctly in J2534 mode with the target IDS/SDD PC diagnostic application, you will need to first install the DA-ST512 J2534 device drivers onto the IDS/SDD PC. This can be done by following the procedure outlined below.

Note: The DA-ST512 J2534 device drivers support 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-ST512 J2534 2534 device into your IDS/SDD PC.

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/download.htm

    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-ST512.

2.   Unzip the files to a folder on the PC you want to use your DA-ST512 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-ST512 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.

Device Recovery

The DA-ST512 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 power-up your device the yellow 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-ST512 Software Updating procedure shown earlier in this document.

Device Specification

The DA-ST512 device has the following pin-out connections.

ODBII pin no.	J1850 VPW +ve	125K CAN +ve	500K CAN +ve	K-Line	J1850 VPW -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														
2	S/W													
3		S/W		S/W										
4														H/W
5														H/W
6			S/W											
7				S/W										
8														
9														
10					S/W									
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

Troubleshooting

- When connected to the vehicle the device will power on (without ignition on), the screen will illuminate and display a splash screen when first powered on. If there is no activity from the screen then the power to the device should be checked. If the power to the device is correct then contact technical support.

- If the screen gets corrupted when first plugging in the device, disconnect the device from the vehicle and re-connect it to reset the device. If this does not clear the problem then please contact technical support.

- When updating the device software using the DA App Hub, the device should only be connected via USB only and not vehicle power.

- If the LED (positioned at the top left hand side of the device) 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 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 using the DA App Hub.

- If the PC displays a 'Device Not recognised' message when connecting the device to the PC or attempting to communicate to the device, 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 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. 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 you experience problems with the DA App Hub you may find that these are generally related to a firewall blocking access to our server. This generally happens when the applications is installed on Company rather than personal computers. If this happens then you will have to get the firewall restriction removed by allowing the PC port to be opened up, or by requesting your IT department to do this for you. At this time they should contact us directly to determine which PC port is required.

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 be 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.