



# User Manual

## Daimler LF-SPG

### History of changes

Version	Date	Editor	Changes / Comments
1.0	07.12.2015	Sven Berling, Daniel Klenner	



## Regulatory Information for USA and Canada

### NOTICE:

This device complies with Part 15 of the FCC Rules and with Industry Canada licence-exempt RSS standard.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications made to this equipment not expressly approved by Huf Tools may void the FCC authorization to operate this equipment.

FCC ID: PD6LFSPG125218

IC ID: 4008A-LFSPG125218

### List of abbreviations / Glossary

API.DLL	Software interface to enable interaction between the application and a device.
Download	Firmware Installation of the Key Programmer
Driver	Software Interface between hardware device and operating system
Firmware	Program which is installed on the Key Programmer
Flash Tool	Windows Software to install the Key Programmer Firmware
IR	Infrared
LED	Light Emitting Diode
LF	Low Frequency
LF-SPG	Key Reading Station
SPG.DLL	Software interface to enable interaction between the application and the LF-SPG Key Programmer
USB	Universal Serial Bus



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## 1. Introduction

### 1.1. Trade marks

Windows, Windows NT and other names of Microsoft products which are mentioned in this manual are trade Marks or registered trade marks of the Microsoft Corporation. Other trade marks and product names mentioned in this manual are trade marks belonging to their legal owners and are hereby acknowledged as such.

### 1.2. System requirements for operating the Key Reading Station

To install and start the Key Reading Station software, your system must meet the following minimum requirements:

- Pentium (at least 100) or higher processor
- Windows 2000, Windows XP, Windows Vista (32bit or 64bit) Windows 7 (32bit or 64bit)
- Installed Java Runtime Environment
- 9 MB free storage space
- A free serial or USB interface

### 1.3. Unpacking the LF-SPG Key Programmer

Please check the packaging for possible damage during transport. If the packaging is badly damaged, you should not install the device.

### 1.4. Scope of supply

- Key Programmer with standard USB connection cable
- Power Supply

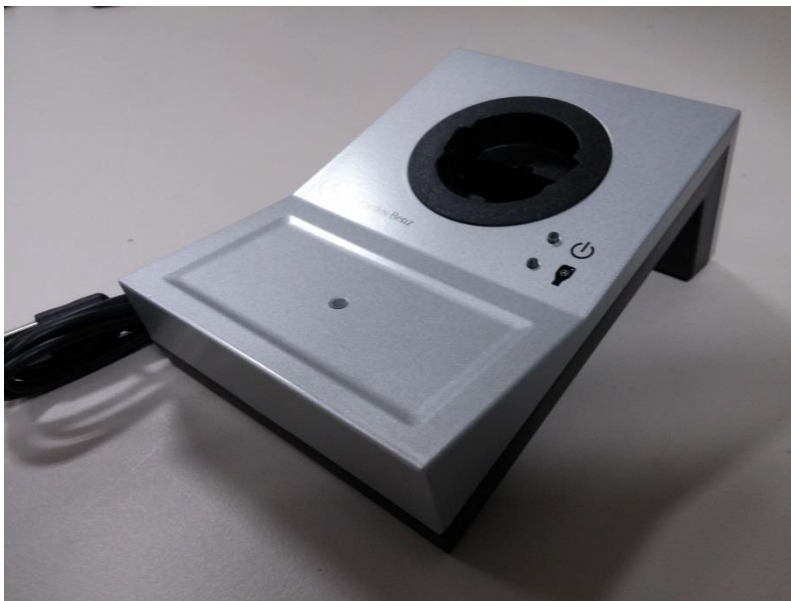


Fig. 1: Key Programming Station



## 2. Operation

The Key Programmer is able to read and write data to different Daimler car and truck keys

After successful installation, as described in chapter 3, the device is ready for operation. The device status is indicated by the upper LED, illuminate in green light when ready for operation. If the LED's show any other indication please refer to the Table of states on page 15.

Carry an ignition key into the key receptacle of the LF-SPG. The detection of the key will start automatically. When the key is recognized the lower LED shows this by a green light.

Recent keys (Gen.6) are detected by placing them on the lower tray. A successful detection is indicated by green light of the lower LED.

## 3. Installation

To install the driver under all specified Windows operating systems you must have administrator rights. This is a default setting from Microsoft.

### 3.1. Choice of location

Please do not install the Key Reading Station at locations in which the device is exposed to the following environmental conditions:

- Strong vibrations
- Strong electromagnetic fields, elder types of monitors.
- Temperatures beyond 5°C - 40°C,
- Moist environment (IP30 Device)

For optimal use of the Key Programmer, you should set up the device as follows:

- Near the computer on which the software has been installed, whereby the distance to the nearest CRT monitor should be at least 0.5 m
- On a level, stable surface

### 3.2. Installing the Hardware

1. Plug in the USB connector coming from the Key Programmer Station into a free USB connection on your computer

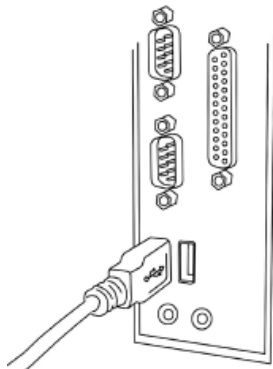


Fig.2: USB Device Connection to the computer

2. Connect the power adapter into the socket provided on the back of the key programmer

### 3.3. Installing the driver

To install the driver you need operating system independent administrator rights. This is a Windows default.

The installation of the drivers is analogous with the 32Bit and 64Bit versions of each operating system.

## 3.3.1. Installing the USB driver on Windows XP

After connecting the LF-SPG to the computer, it will be recognized automatically by Windows. A message is displayed on the screen indicating „Welcome to the Found New Hardware Wizard“.

In the following dialog, select the option: **No, not this time** and press **Next**



Fig. 3: Start dialog for driver installation

Please insert CD delivered with the package and select the option: **Install the software automatically (recommended)** and press **Next**.

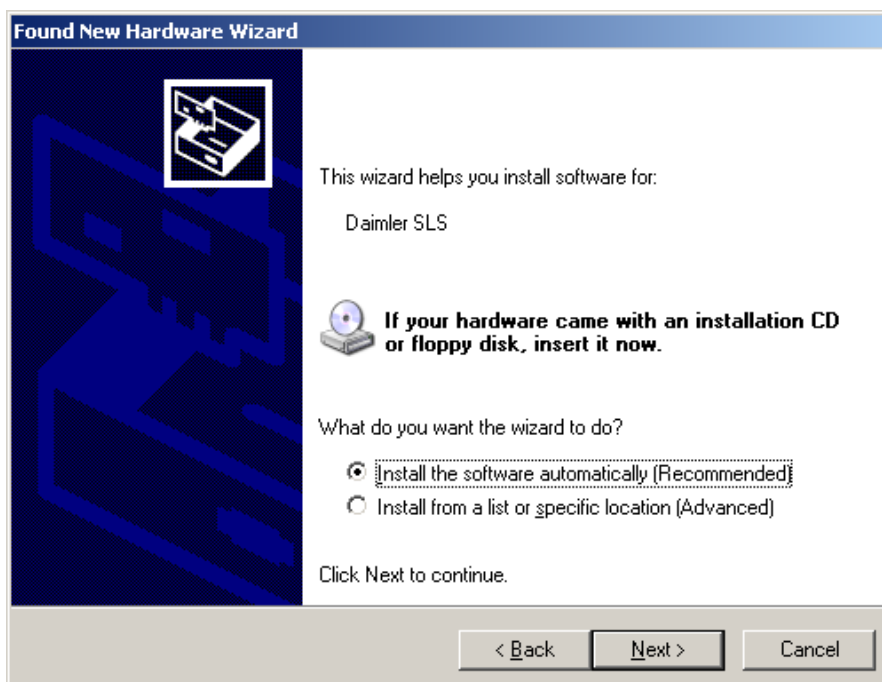


Fig.4: Selection of automatic or manual installation

When the following dialog appears, click on: **Continue Anyway**

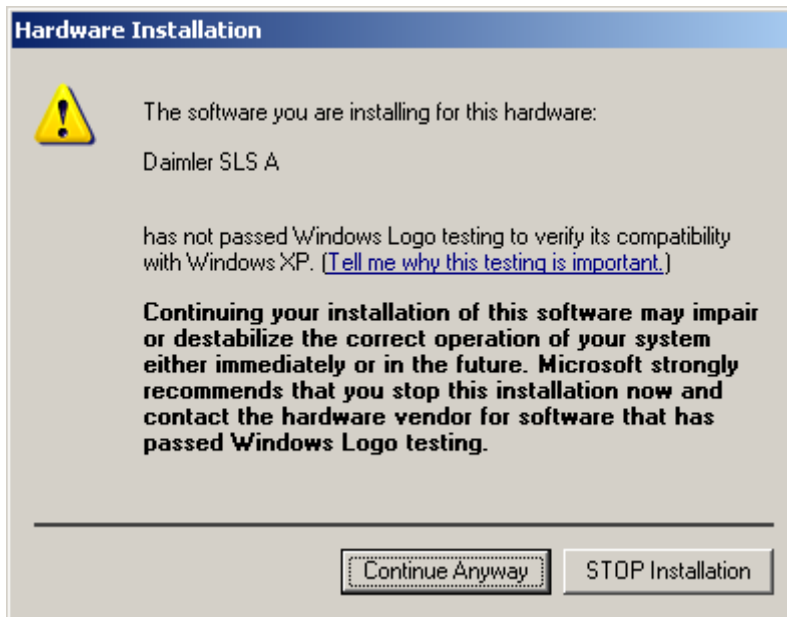


Fig.5: Installation warning

Wait for the files to be installed.

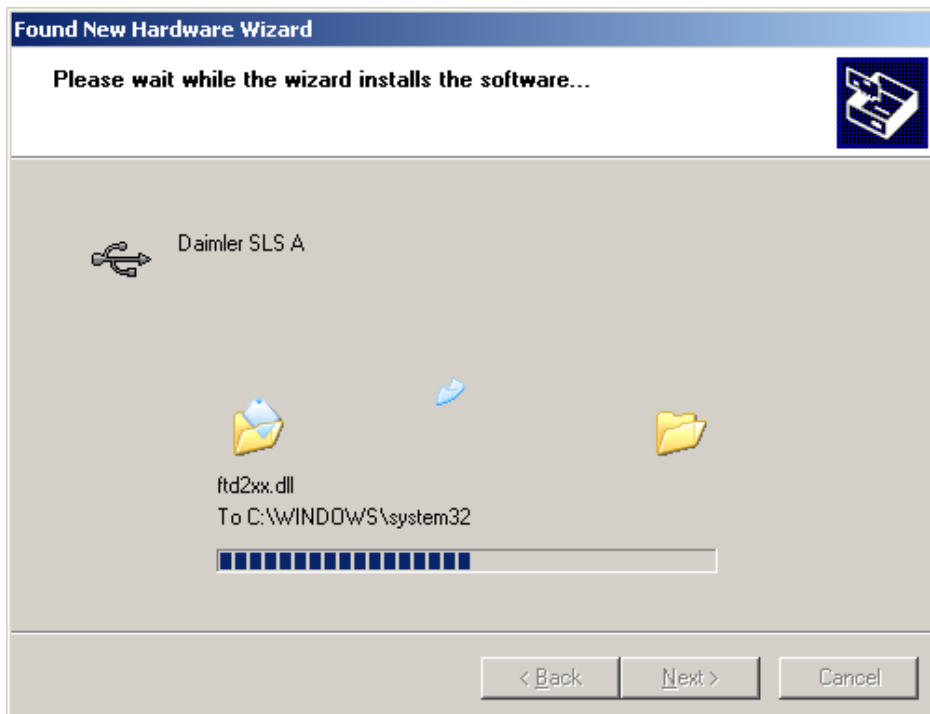


Fig. 6: Installation screen

After completion click on: **Finish**

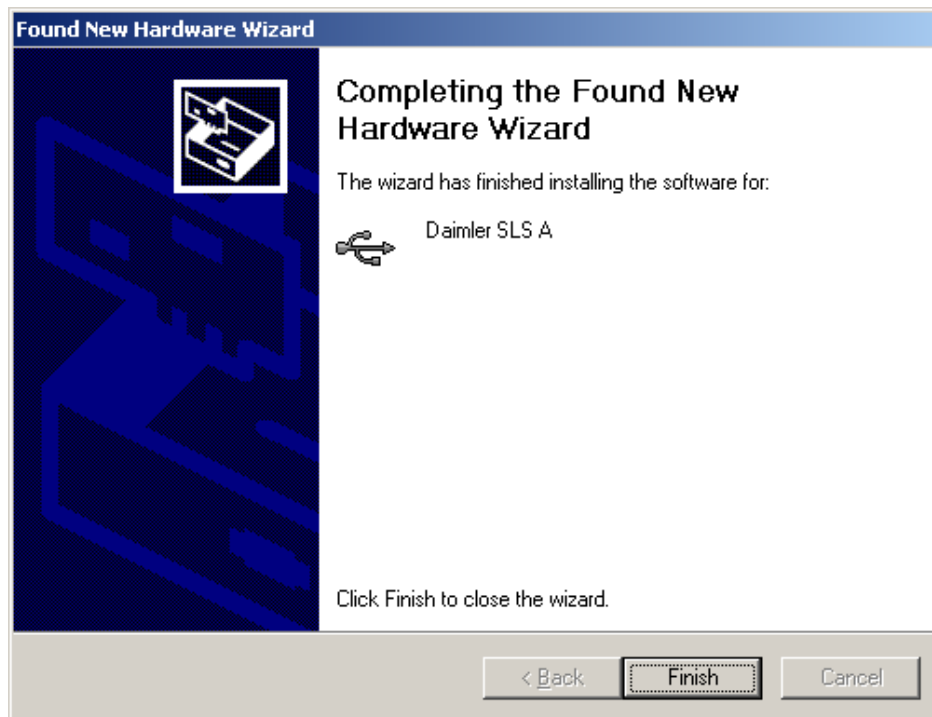


Fig. 7: Completing the installation

Installation is complete now.

## 3.3.2. Installing the USB driver on Windows 7

After connecting the LF-SPG to the computer for the first time it will be recognized automatically by Windows. A message is shown on the screen, that the driver will be installed.

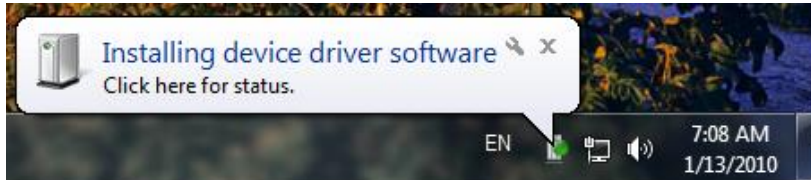


Fig. 8: Windows install message

After a short time an error message appears, indicating the driver was not installed.

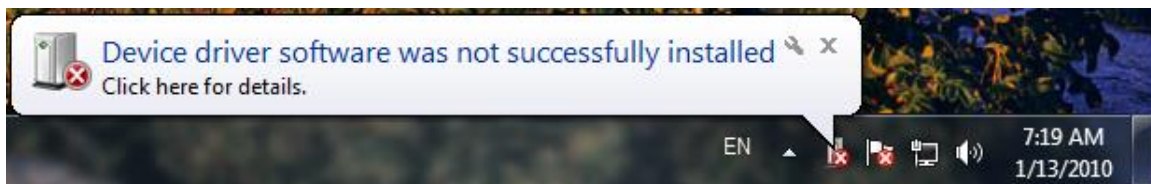


Fig.9: Error Message

The driver has to be installed manually. Please open the device Manager. The device Manager is a component of the operating system. To obtain more information about the device manager, please refer to the Help of the operating system. Now there is displayed the unknown device with a *Daimler LF SPG* description. Right click on the device and choose **Update Driver Software**.

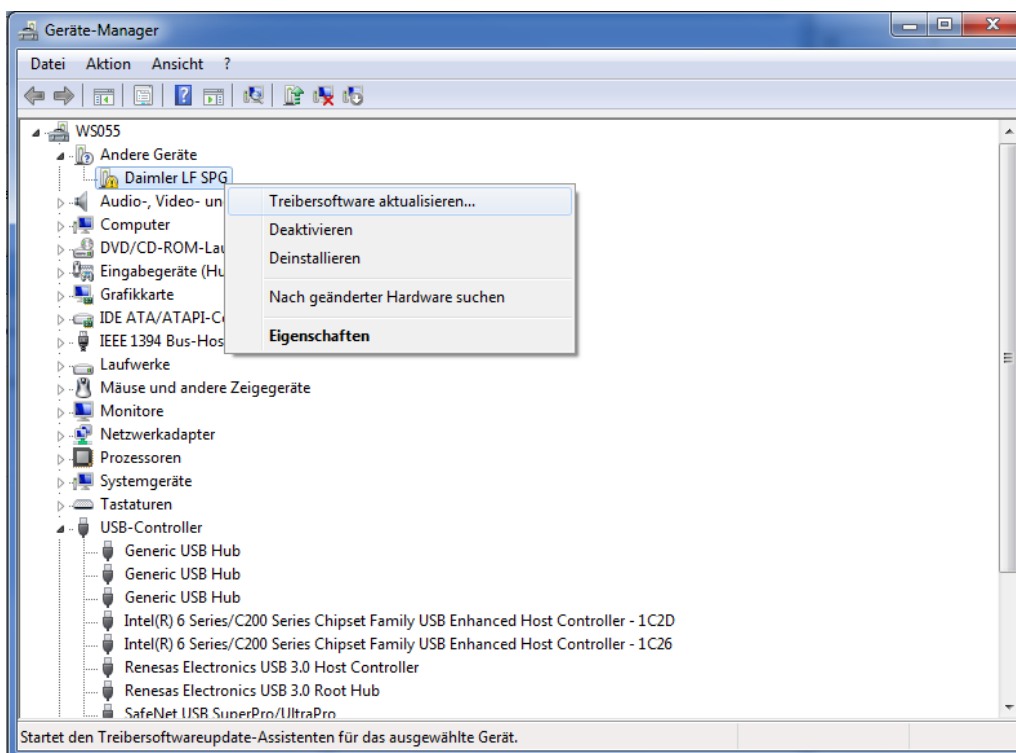


Fig. 10: Device Manager

In the next dialog click on: **Browse my computer for driver software.**

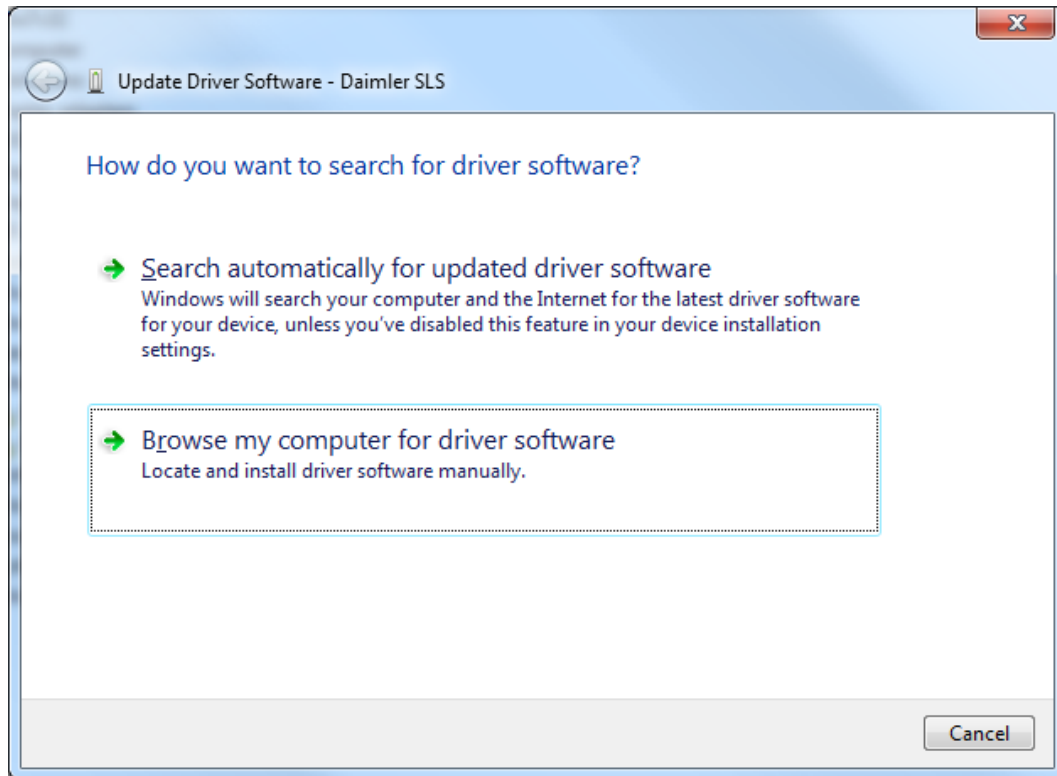


Fig.11: Selection of automatic or manual installation

The driver files are in the *USB Treiber* folder on the CD ROM. Choose the folder and press **Next**.

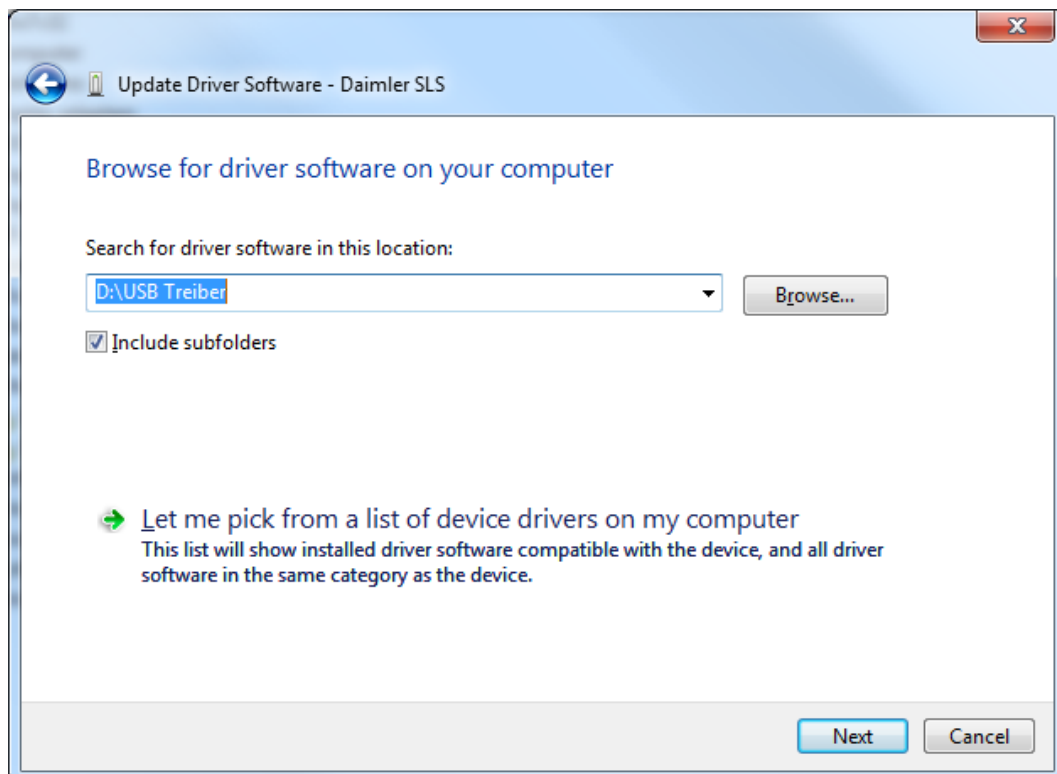


Fig.12: Search for the driver

When the following dialog appears, click on: **Install this driver software anyway.**

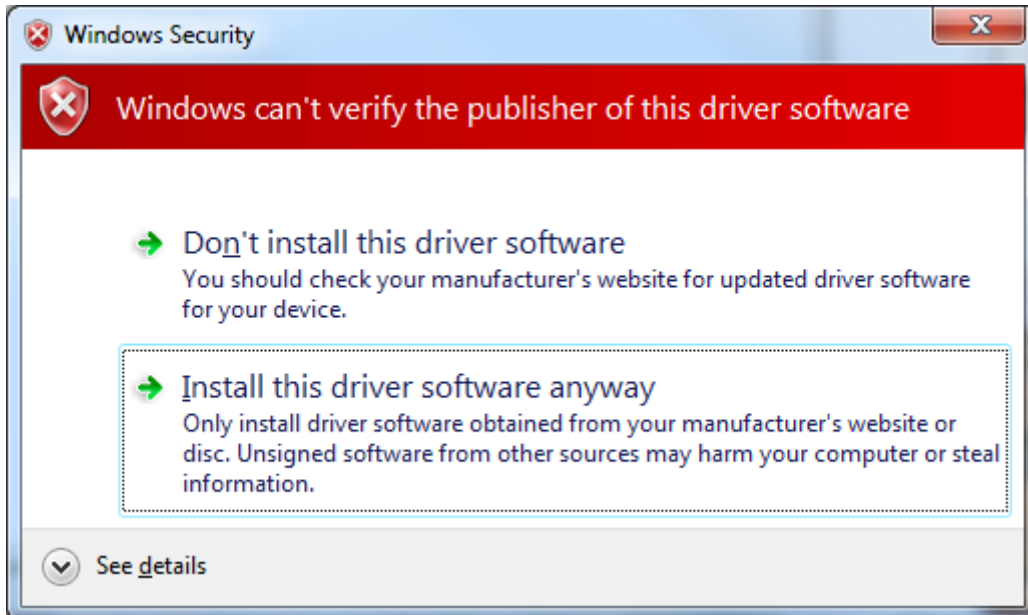


Fig.13: Installation warning

Wait for the files to be installed.

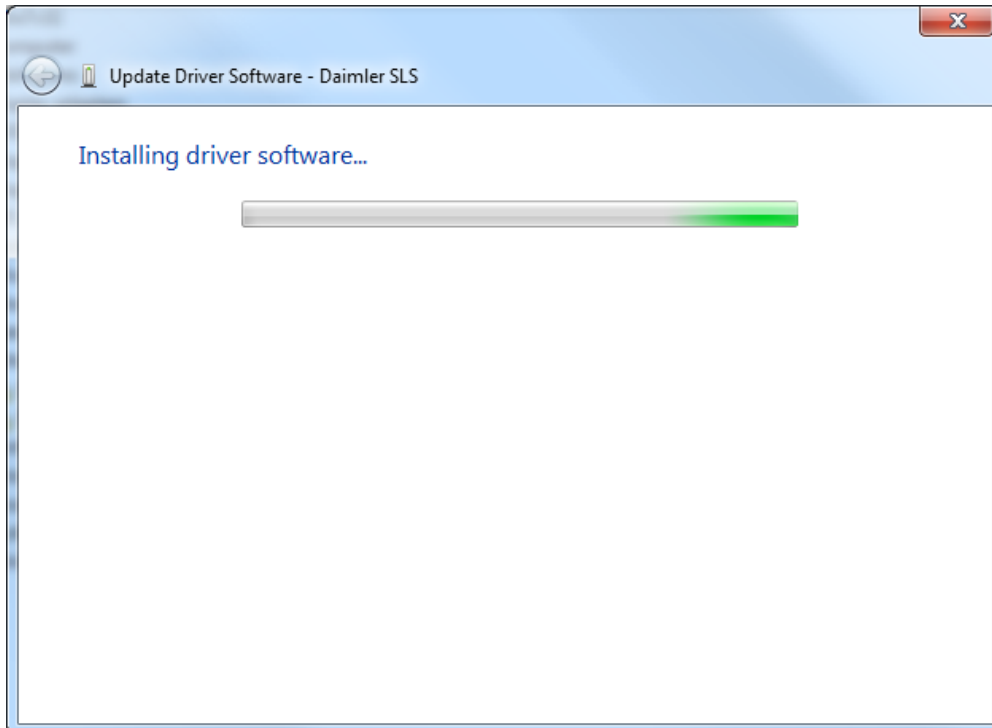


Fig. 14: Installation screen

After completion click on: **Close**

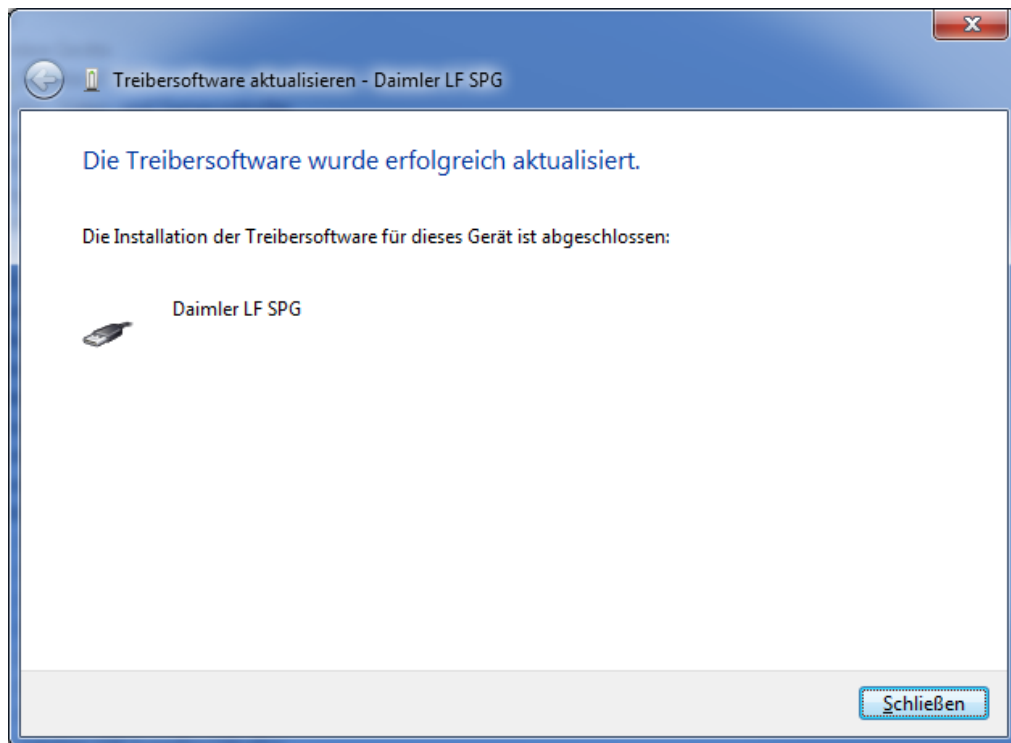


Fig. 15: Completing the installation

Now installation is complete.



## 3.4. Installation of SPG.DLL

The SPG.DLL represents the software interface between an application program and the SPG. You must be present on the target system, so that Daimler can access applications on their functions. The path where the SPG.DLL must reside is different for 32-bit and 64-bit operating system versions.

### 3.4.1. 32bit operating system

When using the 32-bit DLL which SPG.DLL must be copied into the Windows System32 subdirectory.

### 3.4.2. 64bit operating system

The 32-bit DLL must be copied to the Windows subdirectory SysWOW64.

The 64-bit DLL must be copied into the Windows System32 subdirectory.

## 4. Status Indication by LED

Two status indicating LED's are integrated in the LF-SPG. The upper LED indicates the status of the device hardware, the second LED indicates the status of communication between the LF-SPG and car key.

Both LED's can be illuminated in different colours and show the states described hereafter:



	Description	Upper LED	Lower LED
<b>SLS-Status</b>  	LF-SPG not working	off	off
	LF-SPG in working condition	green	X
	Firmware Download in progress	blue	off
<b>Mercedes Car Key Communication Status</b>  	Communication with the key	X	blue
	Car key recognized	X	green
	Error while communicating with car key	X	red

Table 1: LED's color indication

## 5. Flashing Firmware

To change the firmware of the device a separate Windows program (Flash Tool) is used. Before starting the Flash Tool, any programs that access the key programmer, must be terminated.

Any firmware version can be copied to the key programmer, thus also downgrade the firmware is possible at any time. The current firmware version on the SPG can not be saved.

To Flash the firmware, the Flash Tool needs to be launched. The execution location is irrelevant. No additional files are required.

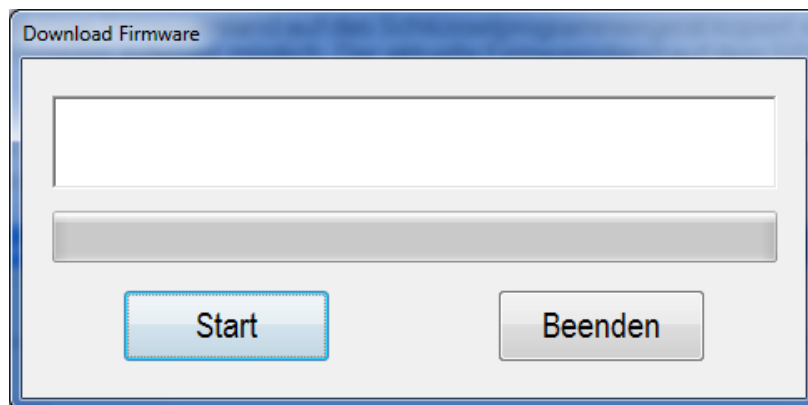


Fig. 16: User Interface of Flash Tool

With "Start", a file dialog is opened, so you can select the firmware file to Flash into the LF-SPG. The Flash-process is started by pressing the Open button.

The top LED of the SPS lights blue for the duration of the operation.

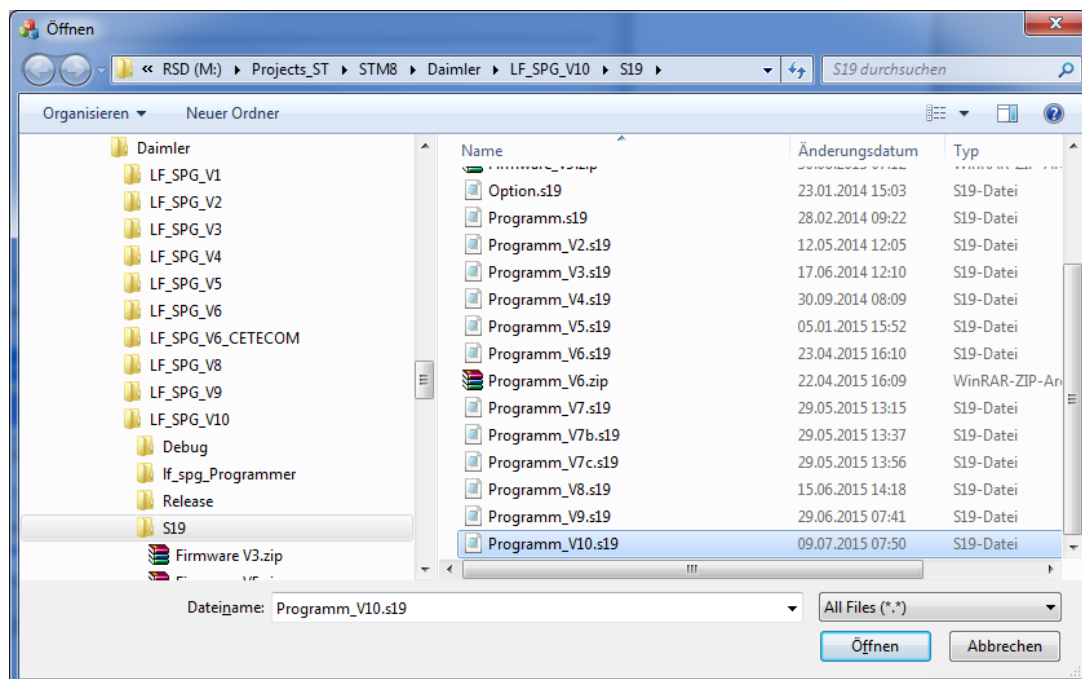


Fig. 17: File Dialog to choose the Firmware



The LF-SPG is restarted after successful Flash process and the new firmware is active.

After closing the program, the LF-SPG can be used again by another application program.

If the Flash process was not completed correctly or the LF-SPG is not working anymore, restart the Flash process.

## 6. Error list

Possible errors are listed in the table below :

Description	Actions
Upper LED doesn't light	SLS might be not correctly connected. Check the USB connection and the Power supply connection
	Hardware Error, return the device
No connection to the LF-SPG	Download interrupted. Start Download again
	LF-SPG might be not correctly connected. Check the USB connection and if your PC is working
	Driver not installed, please install the driver
	Application not installed, please install the application
	Check power supply, properly connected?
	Hardware Error, please return the device
Communication with the car key not successful	IR connection disturbed, insert key all the way into the receptacle
	IR connection disturbed, Key defect? Please try another car key.
	LF connection disturbed, please hang up key again
	LF connection disturbed, defect key? Please try a different key.
	Hardware Error, please return the device

Table 2: Error list



## 7. Declaration of Conformity

**Huf Tools**

Automation · Prüftechnik · Formenbau · Kunststofftechnik · RFID Systeme · Lasertechnik

### Declaration of Conformity

We declare that the product:

Type:	Daimler LF-SPG
Model	LFSPG125218
Intended use:	Key reading device

Complies with the essential requirements of Article 3 of the R&TTE 1999/5/EC Directive, if used for its intended use and that the following standards have been applied:

<p>Safety (R&amp;TTE, Article 3.1a):</p> <ul style="list-style-type: none"> <li>- EN 60950-1:2006</li> <li>- A11:2009/A1:2010/A2:2013</li> <li>- /AC:2011/A12:2011</li> </ul>	<p>Issued: 30.06.2015</p>
<p>EMC (R&amp;TTE, Article 3.1b)</p> <ul style="list-style-type: none"> <li>- EN 301 489-1 V1.9.2</li> <li>- EN 301 489-3 V1.6.1</li> </ul>	<p>Issued: 15.07.2015</p> <p>Issued: 15.07.2015</p>
<p>Radio Spectrum (R&amp;TTE, Article 3.2)</p> <ul style="list-style-type: none"> <li>- EN 300 330-1 V1.8.1</li> <li>- EN 300 330-2 V1.6.1</li> </ul>	<p>Issued: 02.06.2015</p> <p>Issued: 02.06.2015</p>

Velbert, 03.11.2015

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Fig. 18: Declaration of Conformity



## Le modèle d'homologation au Canada pour notre modèle LFSPG125218

*Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio*

*exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:*

- (1) l'appareil ne doit pas produire de brouillage, et*
- (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

IC ID: 4008A-LFSPG125218

Avec plaisir,

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