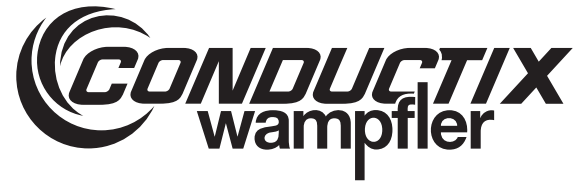


Software description



FB-8

FB Configurator



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Translation of the original
SWB_0013, 1, en_GB

Information on the description

Foreword

In addition to meeting current standards and requirements, it is our objective to employ state of the art technology to provide the greatest possible protection to people, machines and the environment.

This description provides user information about the product, and enables the user to handle the product safely and efficiently.

How to use and store the description

To work safely with the product, it is necessary to observe the safety notes and action instructions. All persons working with the product must have understood the user information in this description and apply it conscientiously. The operator must fulfil his duty of care and ensure that all persons working with the product have read and understood the user information and are implementing it.

This description forms part of the product and must be accessible to all persons working with the product at all times.

Copyright protection

The contents, texts, drawings, pictures and other illustrations of this description are protected by copyright and subject to intellectual property rights. Any misuse is punishable by law.

Reproduction in whole or in part of this description is only permitted within the limits of the legal provisions of the copyright law. Any modification or shortening of the text is prohibited without the explicit written consent of LJU Automatisierungstechnik GmbH.

Trademarks

The popular names, trade names, production descriptions, etc. used in this description may constitute trademarks even without special designations and as such may be subject to legal requirements.

Disclaimer

The contents of this description have been checked for compliance with the product described. Nevertheless, it is not possible to rule out deviations, and therefore we cannot guarantee full compliance. Any necessary corrections are included in subsequent versions.

Limitation of liability

All information and notes in this description have been compiled taking into account the applicable standards and regulations, the state of the art and our many years of knowledge and experience.

LJU Automatisierungstechnik GmbH assumes no liability for damage and malfunctions during operation due to:

- Failure to comply with the description
- Non-intended use
- Use by untrained personnel
- Unauthorised alteration or modification
- Use of the product, despite negative transport inspection

Furthermore, LJU Automatisierungstechnik GmbH's warranty obligation will cease to exist in case of a failure to comply with the description.





Warning concept

This description contains notes that must be observed for your own personal safety and to avoid property damage. Notes regarding your personal safety are highlighted by a warning triangle; notes regarding property damage do not have a warning triangle.

When several hazard levels occur, the warning always refers to the highest level. If a warning of injury to persons is indicated with a warning triangle, the same warning might include an additional warning of property damage.

Signal words


Warnings are indicated using signal words based on hazard levels.

Signal word	Meaning
 	This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious injury if it is not avoided.
 	This combination of symbol and signal word indicates a possible dangerous situation that can result in material damage if it is not avoided.

Hazard symbols

Warnings of the groups 'danger' and 'warning' are content-based. They are presented with clear danger symbols.

Warnings of the 'caution' group do not have a specific danger symbol.

Warning signs	Type of danger
	Warning – danger zone.

Structure of warnings

- **SIGNAL WORD**
- ↳ Type of danger and its source
- ↳ Possible consequences, if not observed
- ↳ Danger avoidance measures
- ↳ Preventive measures

Arrangement of warnings

If warnings refer to an entire section, they are placed at the beginning of the section (e.g. chapter start).

If warnings refer to a specific action instruction, they are placed in front of the respective action instruction.

Suggestions and recommendations

In this description, the suggestions and recommendations are identified by the following symbol.

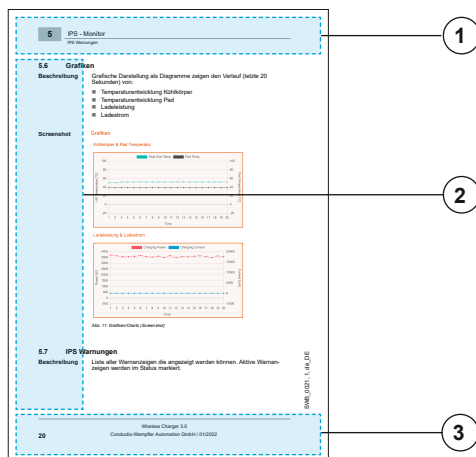


This symbol indicates important information to help you handle the product.

Text markup

Text	Markup	in front of
Continuous text		Descriptive text
Headers	1 1.1 1.1.1 1.1.1.1	Main section Second level subsection Third level subsection Fourth level subsection
Action instruction	1. ↳	Action in particular sequence
Action result	↳	Result of an action
Unsorted list	■	First list level
Second list level	□	Second list level
Reference	↳	A reference to further information

Arrangement elements



- 1 Header (nomenclature, section name, section number)
- 2 Margin column (icons, indicators and key points)
- 3 Footer (name, version date, page number)

Headers The headers in the description serve as navigation aids. In this description, information follows the product life cycle.

Cross-references This description has cross-references that lead to further information on the relevant topic (chapter number/page number).

Illustrations The illustrations that accompany this description have been purposely selected. They are provided for basic understanding and may differ from the actual design. No claims shall be accepted for possible discrepancies.

Table of contents

1	General information	10
1.1	Revision history	10
1.2	Scope of delivery	10
1.3	Customer service	10
2	Licence agreement	11
3	Safety instructions	14
3.1	Foreseeable incorrect use	14
3.2	Personnel and qualifications	14
3.3	Safety devices	15
4	Product description	16
4.1	FB-8 remote control	16
4.2	DCS-8 DataCom stick	17
4.3	Software Suite	18
5	Installation	20
5.1	System requirements	20
5.1.1	Software Suite	20
5.1.2	FB Configurator	20
5.2	Installing software	20
5.3	Start software	22
6	Basic principles	23
6.1	User level	23
6.2	User administration	25
6.2.1	Create users	26
6.2.2	Changing user data	26
6.2.3	Delete users	27
6.3	Change user password	28
6.4	Bluetooth identifier	29
6.5	UUID of the remote control	29
6.6	UUID of the DataCom stick	30
6.7	Setting the Basic UUID	31
7	Using projects	33
7.1	Project views	33
7.2	Create project	36
7.3	Open project	37
7.4	List of devices	38
7.5	DCS List	39

7.6	Setting the remote control number.....	40
7.7	Examples of use.....	41
7.7.1	Creating a new project.....	41
7.7.2	Assigning a remote control number and transmitting it to the remote control.....	43
7.7.3	Exporting a device list.....	44
7.7.4	Importing a device list.....	44
7.7.5	Exporting the DCS list.....	45
7.7.6	Importing a DCS list.....	45
7.7.7	Importing a DCS list from the remote control.....	46
7.7.8	Adding, modifying or deleting a DCS-UUID.....	47
8	Configuring the remote control.....	49
8.1	Connecting the remote control.....	50
8.2	Disconnecting the remote control.....	51
8.3	Transmitting the FB UUID.....	51
8.4	Transmit configuration.....	52
8.5	Transmitting the DCS list.....	54
8.6	Examples of use.....	55
8.6.1	Configuring the remote control in the project.....	55
8.6.2	Defining the selection of configurations to be transmitted.....	56
8.6.3	Transmitting the configuration to the remote control.....	56
8.6.4	Importing the FB configuration and DCS list from the remote control.....	57
8.6.5	Assigning the Basic UUID.....	58
8.6.6	Transmitting the FB UUID to the remote control.....	59
8.6.7	Deleting the remote control from devices UUID.....	60
9	Service functions.....	61
9.1	Testing Bluetooth.....	61
9.1.1	Bluetooth test.....	61
9.1.2	Testing sequence.....	62
9.1.3	Interpreting the results.....	63
9.2	Test remote control.....	63
9.2.1	FB test.....	64
9.2.2	Testing sequence.....	64
9.2.3	Interpreting the results.....	65
9.3	Testing the keypad.....	65
9.4	Testing the display.....	66
9.5	Firmware.....	66

	9.6	Product information.....	67
10		Faults.....	69
	10.1	FB Configurator.....	69
	10.2	FB-8.....	69
11		Customer service and addresses.....	72
12		Index.....	73

1 General information

1.1 Revision history

Subject to changes We reserve the right to make changes to the information present in this document, which result from our constant effort to improve our products.

Version	Date	Comment/reason for change
1	11.2019	Basic version

1.2 Scope of delivery

Scope of delivery	Amount	Designation
	1	LJU Software Suite - installation file (ZIP file)
	1	FB Configurator - software description (PDF file)

1.3 Customer service

Our service team is available to provide technical information.

You can find information about your relevant contact by phone, fax, e-mail or online.



Service forms

Service forms are available for download under www.ljuonline.de. Please send completed service forms to service.lju@conductix.com.

2 Licence agreement

Licence agreement regarding the use of software or a software package of Conductix-Wampfler Automation GmbH

End User Licence Agreement (EULA) for the transfer of the present software or software package (hereinafter referred to as "software"). Please read the following software usage agreement carefully before using the supplied software. By downloading and installing the software you agree to respect the regulations stated in these licensing agreements.

The following software user agreement applies between you – hereinafter referred to as *'the user'* and the company Conductix-Wampfler Automation GmbH, 14476 Potsdam – hereinafter referred to as *'the manufacturer.'* This licence agreement gives you permission to use one piece of software (e.g. from www.conductix.com).

If you disagree to the following licence agreements, you are not allowed to save and/or install the software. If you have already installed the software but disagree to the licence agreement, please delete or uninstall the software immediately.

1. Object of the licence agreement

The object of the licence agreement is the software which you receive either directly or through the website. This software package provides you with various programs, which you support during the commissioning and operation of systems that have components and equipment of the company Conductix-Wampfler Automation GmbH.

2. Geographical restrictions

None

3. Rights of use

All rights of use pursuant to this Agreement are subject to the terms and conditions stated in Section 2 "Geographical restrictions". The software is licensed and may be subject to charges. If a piece of software is marked as "Free" on the website, it contains no automated checking of licences by the manufacturer.

The user can order a limited and non-transferable demo licence of the supplied software, depending on availability. The demo licence is free and time-restricted and/or runs with reduced functionality. The user has the option of purchasing a full licence at the currently applicable prices. He is thereby granted a temporally unrestricted, single and non-transferable user licence for the supplied software.

It is prohibited to edit/alter, modify, disassemble, decompile or to apply other methods of reverse engineering to the provided software, to circumvent its licensing mechanism or to engage third parties to perform these tasks, as far as this is not absolutely necessary for exercising rights resulting from the licences of any included Open Source components.

This software may include components with an Open Source licence. These components are subject to the contents of the respective Open Source licences, as also stated in the software. The list of installed components and their associated licence terms can be seen before purchasing and is included in the software. The licence holder of the Open Source software used is provided with a single right of use by the respective right holders under the conditions provided in the applicable licence terms. These licence terms apply exclusively to those components which are not subject to an Open Source licence.

The manufacturer holds all further rights to the use and implementation of the software.

4. Guarantee

4.1 The manufacturer essentially guarantees the functionality described in the product help or in the data sheet for the installed software. The following limitations apply. There is no specific guarantee that the software meets the requirements of the user, fulfils the purpose of his intention or that it is compatible with all other programs of his choice, unless interfaces to these programs are explicitly agreed to in writing.

4.2 As agreed to and recognized by the user, the current state of knowledge and technology does not permit the creation of software that operates error-free under all application conditions. A negative deviation of the agreed nature of the contractual object only exists if there is a substantial impairment in a normal operating situation. On the other hand, there is no negative deviation of the agreed nature of the contractual object if there is an impairment in an exceptional situation.

4.3 The user must examine the software provided immediately, ensure that it is properly suitable and report all initial or later occurring faults immediately to the manufacturer with enough details to allow the error to be reproduced. He undertakes to provide documentation on the nature and occurrence of the error and thus to assist in isolating and correcting errors. The user assumes all responsibility for the selection, installation, use, and for the intended results.

4.4 The manufacturer accepts no liability for errors caused by the following circumstances:

- a. Improper or inadequate maintenance or assignment of parameters
- b. Operation outside the software specifications
- c. Improper preparation and maintenance of the installation location
- d. Compatibility with other hardware and software not approved by the manufacturer.

4.5 The manufacturer shall remedy any software defects (including missing information in the supplied program description) reported by the user in a reasonable time frame. This is done at the manufacturer's discretion by improving or replacing it free of charge.

4.6 The liability and warranty provisions in these licence terms apply to the software as a whole in relation to the manufacturer. The liability and warranty provisions of Open Source licences apply between users and Open Source right holders.

5. Liability

The software can be used for a variety of applications. However, the user has to check himself whether it is also suitable for his intended application. After installation, the user is solely responsible for ensuring that the software functions according to his specifications.

The manufacturer is liable for intent and gross negligence. In case of slight negligence, the manufacturer is only liable for breaching an essential contractual obligation (cardinal obligation), which is essential for the proper fulfilment of the contract and on which compliance the customer may regularly rely on, and for damages arising from injury to life, body and health. The manufacturer owes the diligence customary to its field.

When determining whether the manufacturer is at fault, one has to take into account that technically speaking, no software can be produced without errors. In case of slight negligence, the liability is restricted to a sum reflecting the typical foreseeable damage; however not higher than a maximum total liability of EUR 100,000 from the contractual relationship. The manufacturer is not liable for other damages, consequential damages or damages resulting from lost profits.

The above provisions also apply to agents working on behalf of the manufacturer. Liability as per product liability law remains unaffected. The manufacturer is not liable for loss of data and/or programs if the damage results from the fact that the user failed to keep backups and thus to ensure that lost data can be restored at a reasonable cost. The user must carry out sufficient tests in a safe environment before commissioning the device and launching applications created with the software.

6. Termination of the Agreement

This usage agreement does not require termination, but ends with immediate effect as soon as the user uninstalls the manufacturer's software described here from the device and deletes all existing copies.

7. Governing law

This usage agreement underlies German law under exclusion of the UN purchase law. The place of performance and jurisdiction for all disputes arising from or in connection with this Agreement is 14478 Potsdam, Germany. Each contracting party may also bring claims before its general court of jurisdiction.

8. Severance clause

Should any provision of this Agreement be or become invalid, or should the Agreement contain a loophole, the validity of the remaining provisions shall remain unaffected. The invalid provisions or loophole shall be replaced by an appropriate provision that comes as close as possible to what the contracting parties intended originally or would have intended if they had considered the point.

3 Safety instructions

This section contains information on all safety aspects for optimum protection of personnel and for safe operation without malfunctions.

To prevent dangers, these notes must be read and followed by personnel. Only then can safe operation be guaranteed.

Of course, all legally applicable general safety and accident prevention regulations must be complied with.

LJU Automatisierungstechnik GmbH assumes no liability for damage or accidents that were caused by non-observance of these safety notes.

3.1 Foreseeable incorrect use

Any use that goes beyond this description is forbidden.

3.2 Personnel and qualifications

The product / system belonging to this description may only be handled by personnel qualified for the respective task. This is done taking into account the descriptions associated with the particular task, especially the safety and warning information contained therein.

Due to their training and experience, qualified personnel are able to recognize risks and avoid possible hazards when dealing with this product / system.



⚠ WARNING!

Injury hazard from insufficient qualification!

Improper handling can cause substantial bodily harm or material damage.

3.3 Safety devices



⚠ WARNING!

Danger to life from non-functioning safety devices!

Security devices ensure a maximum degree of safety during operation. Never override safety devices, even if they obstruct work processes. Safety can only be guaranteed if the safety devices are intact.

- Before starting work, check whether the safety devices are fully functional and connected properly to the controller.
- Report any faulty safety devices immediately.
- Bring vehicles with defective safety equipment to a standstill immediately.
- Get safety devices repaired immediately.

4 Product description

The FB Configurator program is used to synchronise the FB-8 remote control and the DCS-8 DataCom-Stick of the vehicle control system.

- The remote control can be configured on the PC. Here you can select the communication method or configure display settings. The current remote control settings can be read out.
- The program captures the remote controls used in the project and exports them for transmission to the DataCom stick.
- Tests are made available in a service area to test the functionality of the remote control.

4.1 FB-8 remote control

Product description

The FB-8 remote control is used for manual remote control of LJU vehicle control systems. Both the remote control and the vehicle control systems are equipped with the corresponding LJU software and have an LJU infrared and/or Bluetooth interface.

The vehicle control system is addressed directly via infrared. In Bluetooth mode, it communicates with the vehicle via a DataCom stick (DCS) attached to the vehicle control system.

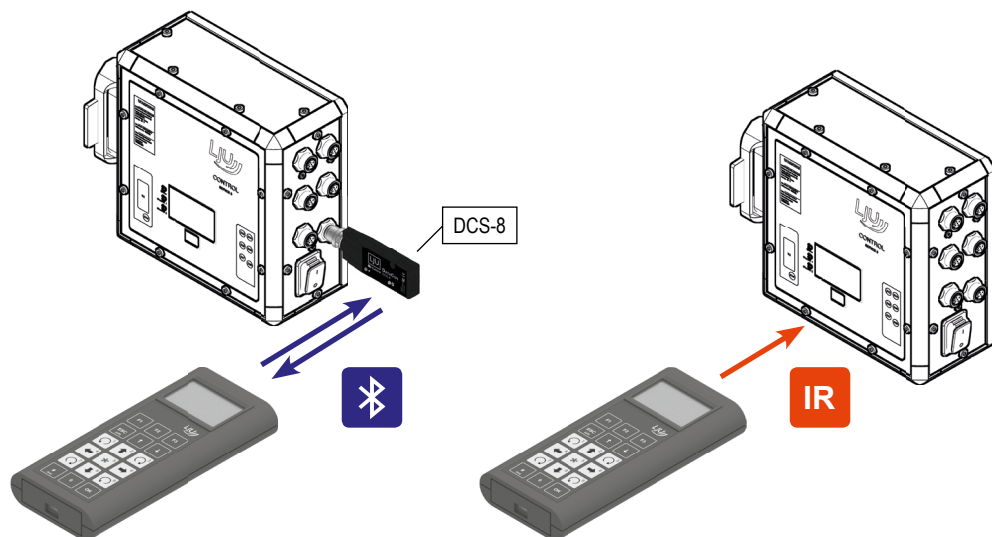


Fig. 1

Infrared communication is unidirectional. Data is only sent to the control system. Bluetooth communication is bidirectional. In this case, data can also be received from the control system or the DataCom stick.

Structure

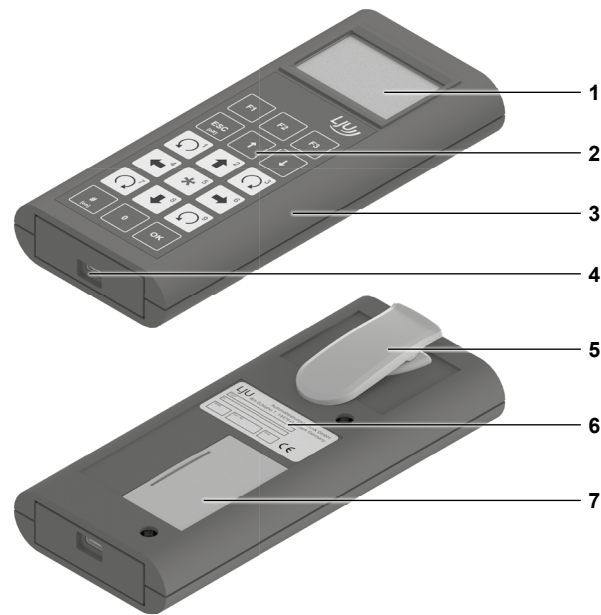


Fig. 2: FB-8

- 1 LCD display
- 2 Membrane keypad
- 3 Housing
- 4 USB-C interface
- 5 Belt clip
- 6 Type label
- 7 Battery compartment

4.2 DCS-8 DataCom stick

The DataCom stick (Fig. 3) resembles a USB stick and is located on the LJU vehicle control systems (Fig. 4) in transport systems.



Fig. 3: DCS-8

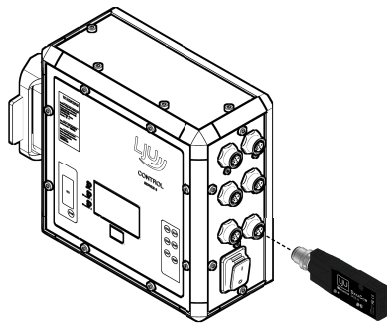


Fig. 4: Control system with DCS-8

The DCS-8 DataCom stick is an electronic accessory for Series 8 LJU vehicle control systems.


The compact design of the DCS-8 includes:

- USB interface
- Bluetooth module
- Internal antenna
- Data storage




The data communication between the vehicle control system and the DCS-8 takes place via a USB 2.0 interface. If the DCS-8 is used, every vehicle controller is equipped with a DCS-8. The DCS-8 is connected to the vehicle control system via an M12 plug-in connection.







Wireless connections to the DCS-8 can be established with suitable LJU devices over a distance of up to 50 m. These are based on the Bluetooth 4.0 Low Energy Standard. The connection is set up in Advertise Mode. In other words, the DCS-8 as the master only establishes a connection to a device if its identifier corresponds with the identifier requested by the device. If the DCS-8 is not addressed, it operates as a receiver. The transmit function is disabled.

4.3 Software Suite

The LJU software suite  is an installation package comprising coordinated programs for the administration and configuration of LJU hardware and software.

Programs in the LJU software suite

 Software suite	
 DCS configurator	Configures the DataCom Stick DCS-8
 FB configurator	Configures the remote control FB-8

 Software suite	
 SyMa	System Manager
 Loop Compensation	Calculates loop compensation
 MCU system update	Updates the MCU with the hardware and software configuration provided
 TCU configurator	Configures Track Control Units
 TCU logging	Records selected TCU results

5 Installation



Installing the FB Configurator

The FB Configurator is part of the installation package of the LJU Software Suite.

5.1 System requirements

5.1.1 Software Suite

System requirements - software suite		
Operating system		from Microsoft® Windows 7
Video presentation		1280 X 768 true colour
Software		Microsoft® .NET Framework 4.5 Microsoft® SQLSysClrTypes * Microsoft® ReportViewer 2012 *

* The software is included in the installation package and is installed automatically if required.

5.1.2 FB Configurator

System requirements - FB Configurator	General	Requirement
	Specifications	Corresponding LJU Software Suite ↗ 'System requirements - software suite' on page 20
	Special	Requirement
	Hardware	USB port

5.2 Installing software



Installing the FB Configurator

The FB Configurator is part of the installation package of the LJU Software Suite.



Installation as administrator


Administrator rights for the PC used may be necessary when installing the software.



Installation on PC

Do not use any PC with equipment which is operationally important and/or relevant to safety.

Installing the LJU software suite

The LJU software suite  is included or can be downloaded from www.ljuonline.de.

1. ➤ Open the [LJU software suite] folder.
2. ➤ Run the file [LJU Software Suite.exe].
3. ➤ If you have not installed 'Microsoft® SQLSysClrTypes' and 'Microsoft® ReportViewer 2012', they will be automatically installed. This installation step is automatically skipped if the same or a more recent version of these program components is already installed on your computer.

Click on [Install] to install the software.



An internet connection is required to install the programs.

4. ➤ Confirm the following prompt.
Click on [Next] to proceed with the installation.
5. ➤ Read and confirm the license agreement.
Click on [Next] to proceed with the installation.
6. ➤ Select a destination folder for the installation.
Click on [Next] to continue.
7. ➤ Finally, check the information.
Then click on [Install].
Follow the single steps in the InstallShield Wizard until the installation completes.
8. ➤ Click on [Finish] to complete the installation.



9. ▶ An [LJU software suite] link will appear in the Windows Start menu.



Fig. 5: LJU software suite

5.3 Start software

Starting the FB Configurator

1. ▶ Start the [LJU Software Suite] .
 2. ▶ Select [FB Configurator] .
- ⇒ The [FB Configurator] starts.

6 Basic principles

6.1 User level

User level

Level	Type	Description	
1	Expert	<ul style="list-style-type: none"> ■ Administrator ■ Highest access rights □ Configuration of devices □ User administration 	User has full knowledge of the project.
2 *			
3	Super User	<ul style="list-style-type: none"> ■ Mid-level access rights □ Access to frequently needed settings 	User has extended knowledge of the project.
4 *			
5	User	<ul style="list-style-type: none"> ■ Lowest access rights □ Ability to transmit pre-configured settings 	User has task-related knowledge of the project.

* Level not assigned

An overview of the user level can be opened in *[User] → [Rights]*. This overview is solely for information. The rights of the individual user levels cannot be changed.

id	Description	Expert/Lvl1	Super user/Lvl3	User/Lvl5
1	User management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	base configuration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	control	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15	test	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Fig. 6: User rights

User level rights

Authorisations	Level		
	1	3	5
FB project			
Create project	✓	✓	
Process project	✓	✓	
Open project	✓	✓	✓
Save project	✓	✓	✓

Authorisations	Level		
	1	3	5
Export remote control/device UUID list	✓	✓	✓
Print remote control/device UUID list	✓	✓	✓
Import remote control/device UUID list	✓	✓	
Delete remote control/device UUID	✓	✓	
Export DCS UUID list	✓	✓	✓
Print DCS UUID list	✓	✓	✓
Import DCS UUID list or import from remote control	✓	✓	
Add, change or delete a DCS UUID	✓	✓	
Configure transmission	✓	✓	
Remote control information			
Read product information and software version	✓	✓	✓
Remote control configuration			
Set remote control number	✓	✓	✓
Set the display language, switch-off time, brightness and contrast	✓	✓	✓
Set key hold time, switch-off time	✓	✓	✓
Set diagnostic information	✓	✓	
Setting the battery type	✓	✓	
Set communication method/parameters	✓	✓	
Set basic UUID	✓		
Import DCS UUID list from remote control, edit	✓	✓	
Import remote control configuration	✓		
Transmit remote control/device UUID	✓		
Transmit remote control configuration	✓		
Transmit DCS UUID list	✓		
Transmit configuration	✓	✓	✓
Remote control service			
Test Bluetooth	✓	✓	✓
Test remote control	✓	✓	✓
Test remote control keypad and display	✓	✓	✓

Authorisations	Level		
	1	3	5
Updating the firmware	✓		
User administration			
Create users	✓		
Delete users	✓		
Process users	✓		
Change personal password	✓	✓	✓
Print			
Print	✓	✓	✓

6.2 User administration

User administration

User administration can be found in [User] → [User administration].

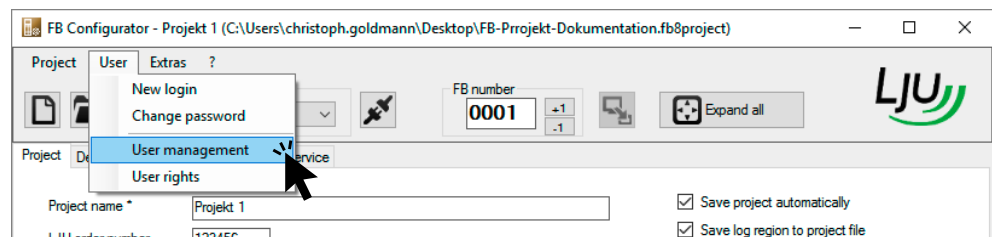


Fig. 7: User administration

6.2.1 Create users

Create users

1. Click *[New]*.

⇒ A new user has been set up.

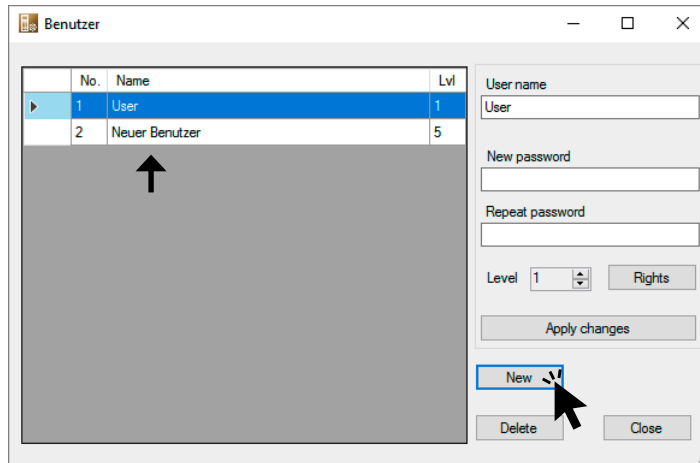


Fig. 8: Create a new user

2. You can then change the user data.



Create users

New users can only be set up by the [Expert] level.



User names

The user names are not case-sensitive.



Password

The password is case-sensitive.

6.2.2 Changing user data

Changing user data

1. Select a user that you wish to change.

2. Changed the properties as required:

- User name
- Password
- User level

3. Click [Accept changes].

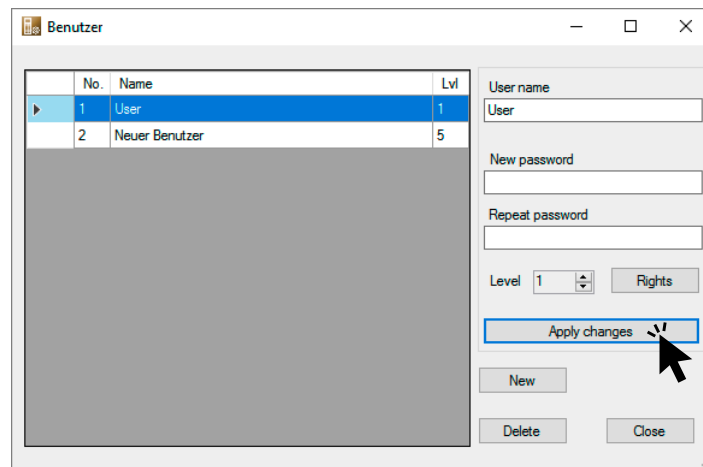


Fig. 9: Changing user data

4. Confirm the message that the changes will be applied by clicking [OK].



Changing user data

User data can only be changed by users at [Expert] level.

6.2.3 Delete users

Delete users

1. Select a user that you wish to delete.
⇒ The line is highlighted in colour.

2. Click *[Delete]*.

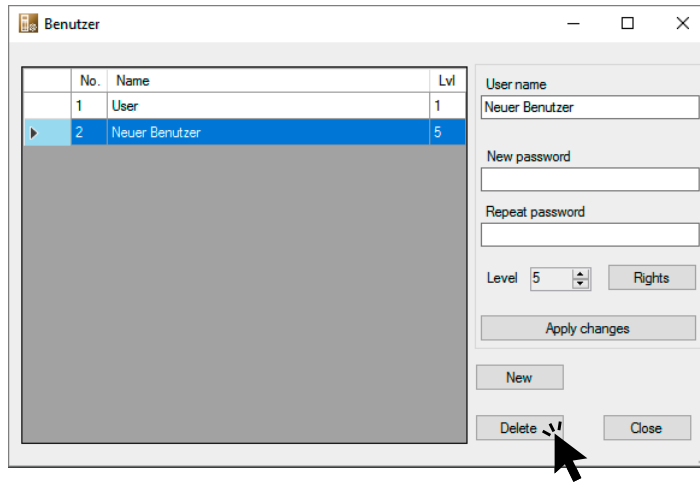


Fig. 10: Delete users

3. Confirm the security prompt.

⇒ User will be deleted.



Delete users

Users can only be changed by deleted by users at the *[Expert]* level.

6.3 Change user password

Change user password

1. Click *[User]* → *[Change password]*.

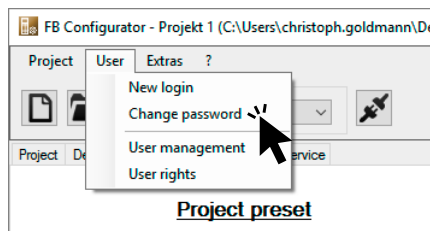


Fig. 11: FB-8 Configurator - screenshot - changing the password

2. Enter previous password.

3. Enter a new password and repeat the new password.

4. Confirm the entry with *[OK]*.

⇒ The password has now been changed.

If you click *[Cancel]*, the changed data will not be applied.



Password

The password is case-sensitive.

6.4 Bluetooth identifier

Bluetooth IDs

Identifiers or short IDs are required for Bluetooth communication. It is important that the identifier clearly identifies each device and that this is recognised by the communication partner. That is because the separate devices establish connections only to those devices whose identifier has been stored.

UUIDs (Universally Unique Identifiers) are used with important identifiers. These are time-dependent and chosen randomly, so that it is nearly impossible for them to be assigned twice.

6.5 UUID of the remote control

UUID of the remote control

The remote control has a 14-character long identifier or UUID. The first 10 characters form the Basic UUID. All remote controls of the project are based on this Basic UUID.

The following 4 characters determine the remote control number. The Basic UUID together with this individual remote control number, such as "0001", gives the Device UUID or FB UUID.

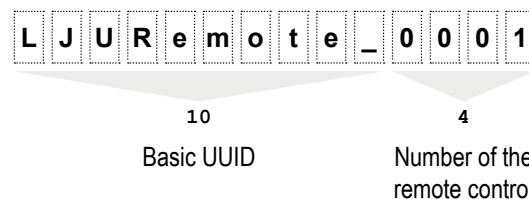


Fig. 12: Basic UUID and remote control number using LJU as an example

A remote control can be uniquely identified from the Device UUID or FB UUID.



Basic UUID

When you start, select the Basic UUID for the entire project. Make sure that the identifier is unique and unambiguous everywhere and at all times in order to avoid wrong assignments.

The basic UUID may only be modified with an [Expert] user level.

Avoid special characters and umlauts such as äöÜÄÜß when assigning the FB UUID. They often lead to problems.

6.6 UUID of the DataCom stick

UUID of the DataCom stick

The UUID identifier of a DCS requires a special format: The first 20 characters are selected from the hexadecimal system. Then 3 freely selected characters and the 3-digit vehicle number complete the DCS UUID.

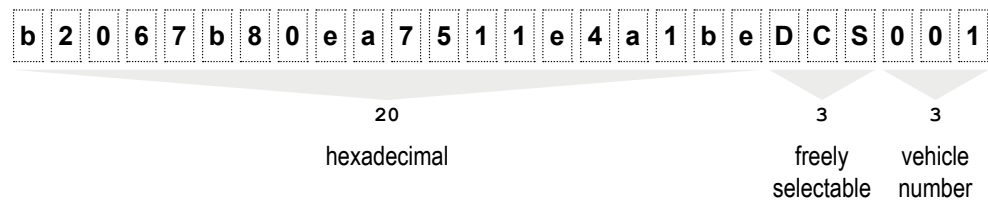


Fig. 13: DCS UUID example

6.7 Setting the Basic UUID

Setting the Basic UUID of the remote control

1. In the Project **Project** tab, open the *[Basic UUID]* section.
2. Define a Basic UUID that will apply to all remote controls used in the project.

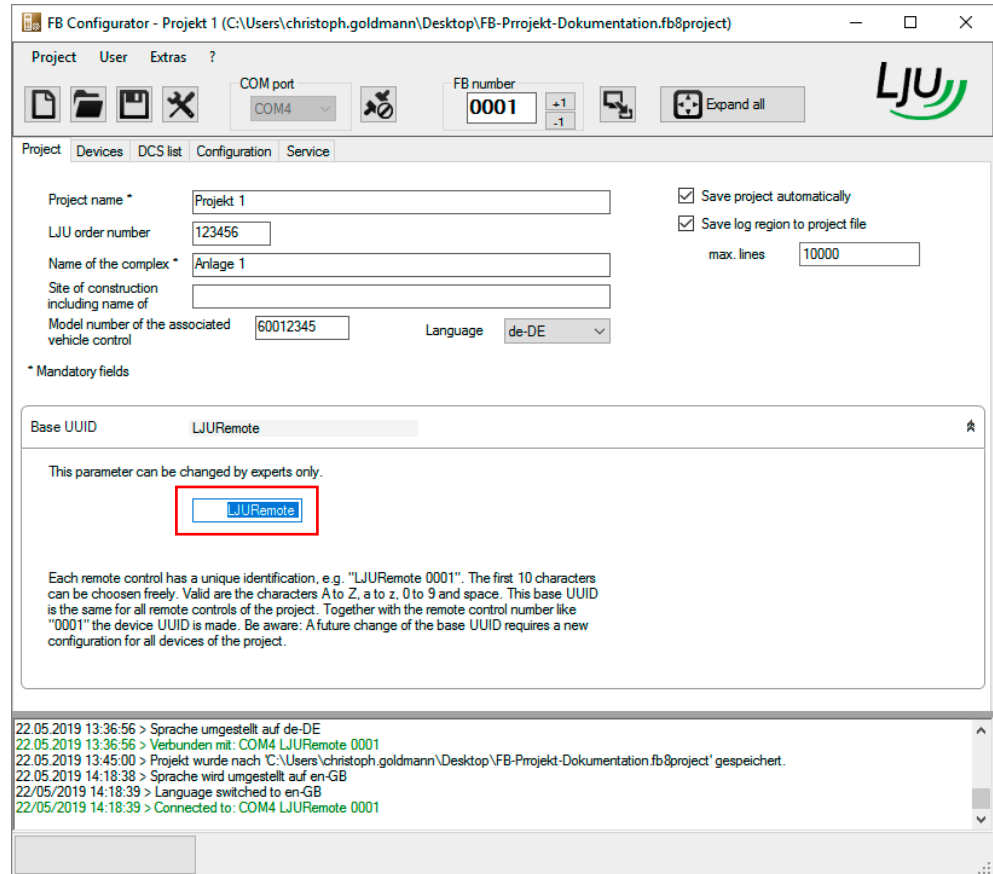


Fig. 14: Basic UUID

3. Save changes to the project.

If you change the Basic UUID in the project again at a later date, you will be warned of possible consequences when saving.

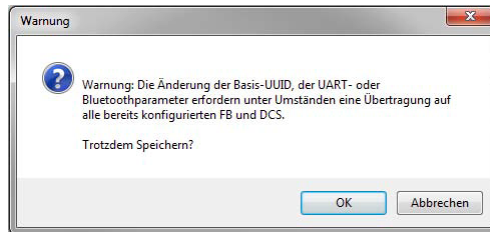


Fig. 15: Warning when changing the Basic UUID



Please note that every subsequent change to the Basic UUID requires re-configuration of all remote controls included in the project. Only then can a clear assignment and communication between the individual counterparts be ensured.

7 Using projects

Project

A project is required to be able to use the remote control with the DataCom stick of a vehicle control system.

A project collects general data and remote control settings that are necessary for operation and interaction with the vehicle control system. All remote controls and DataCom sticks assigned to the project are stored there in lists. The DCS lists and FB settings can be transmitted directly to the connected remote control or stored in a file. FB and DCS lists can be exported from the project and imported into other projects.

Lists of remote controls that are allowed to communicate with a DataCom stick can be exported from the project and stored in a file for later use with the DataCom stick of the vehicle control system.

7.1 Project views

View after program start

The first project view after starting the program shows various entry or key fields.

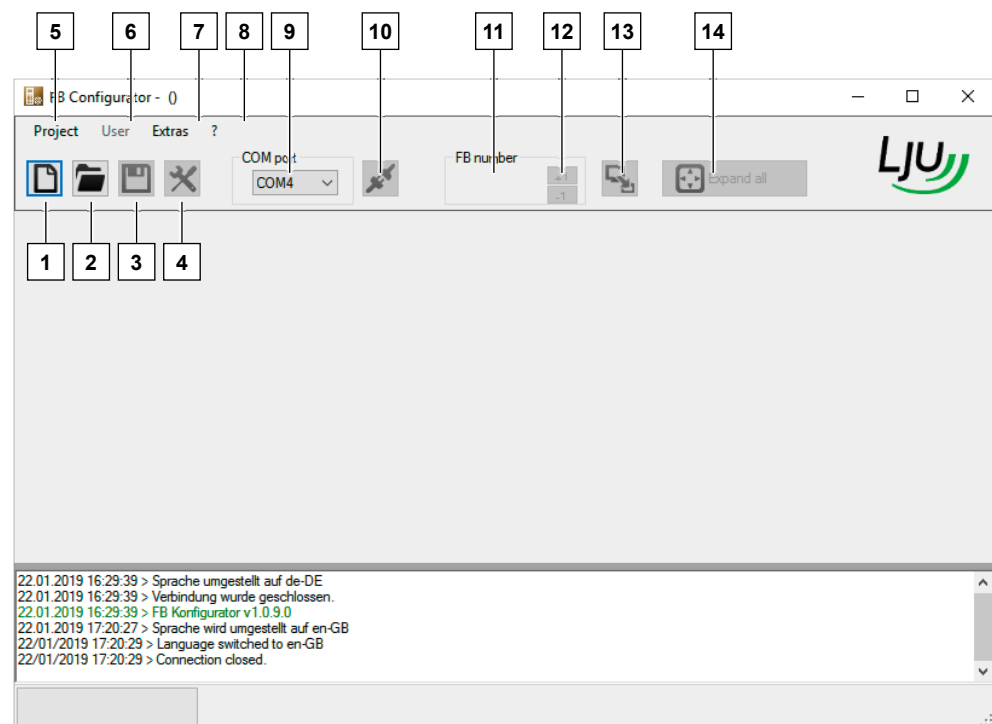


Fig. 16: Program view after opening the software

- 1 [New project]
- 2 [Open project]
- 3 [Save project]
- 4 [Project settings]
- 5 Project: [Create], [Open], [Save], [Change]
- 6 User: [Register], [Change password], [User administration]

- 7 Tools: [Language], [Extensions]
- 8 Info: [Manufacturer information]
- 9 [Select the COM port]
- 10 [Connect with remote control]
- 11 Entry field [Change FB number]
- 12 Counts up/down the number
- 13 Transmits selected parameters to the FB
- 14 Expands or collapses the section fields

View - new project

If you have created a new project, you must enter basic information such as project name, order number, etc. in the following project view.

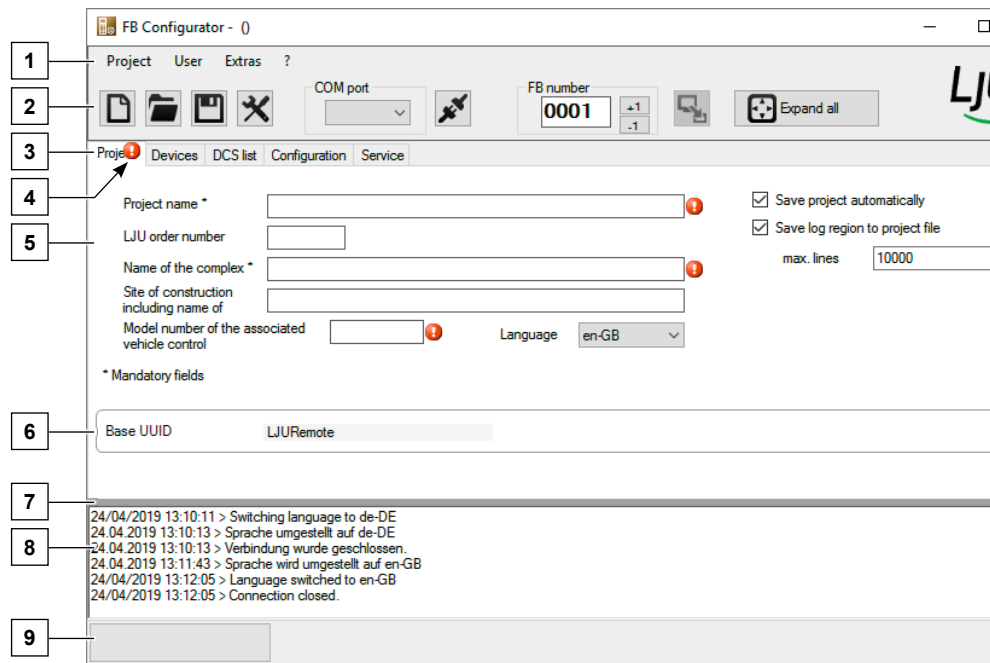


Fig. 17: Program view after creating a new project

- 1 Menus
- 2 Toolbar
- 3 Tab selection
- 4 Error messages: Select to display a message.
- 5 Work area
- 6 Section: By double clicking the heading, you expand/collapse the details.
- 7 Diagonal line can be moved to extend the section field or log area
- 8 Log and error report area
- 9 Status bar with progress bar, action status, connection status

View - existing project

If an existing project is opened, it is displayed in the [Configuration] tab. All configuration settings stored in the program are displayed here on the left side of the program. If a remote control is connected, its current settings appear on the right side. Data displayed in red indicates differences.

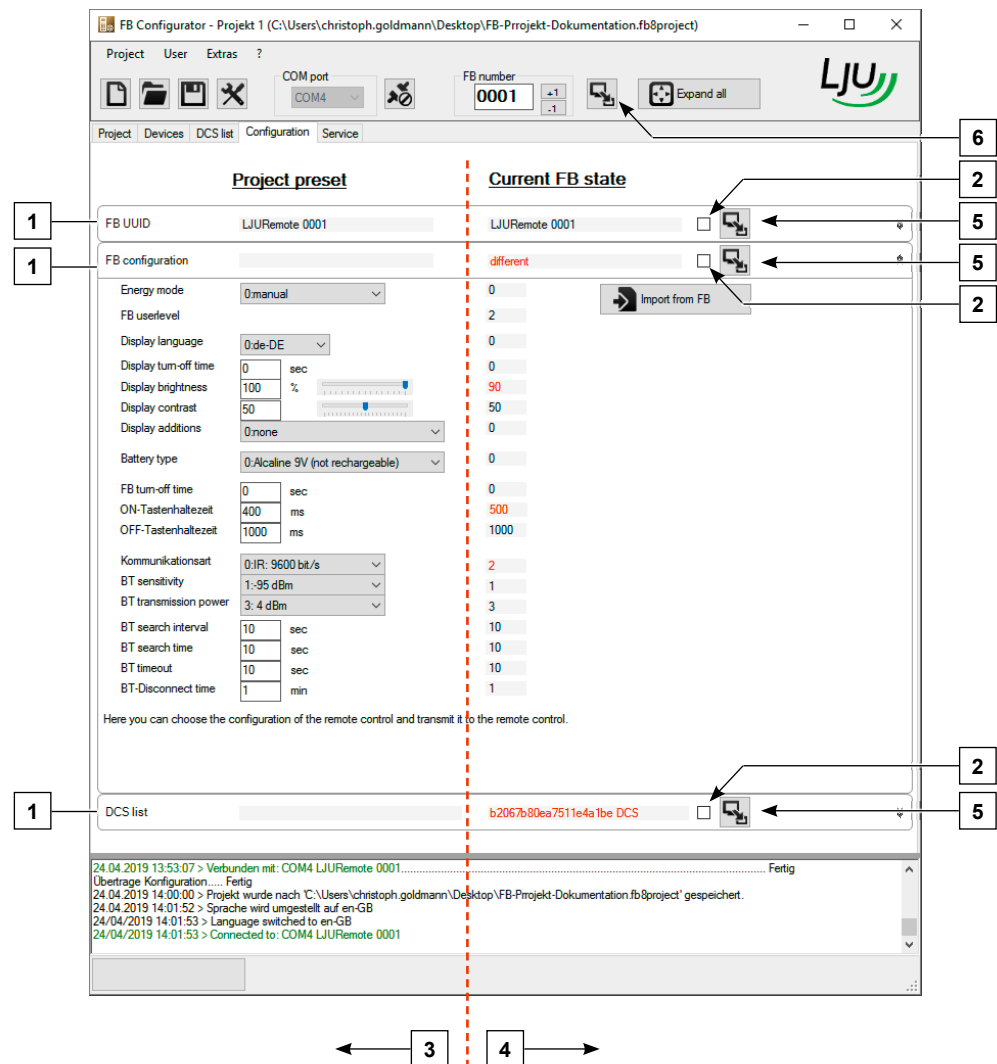


Fig. 18: Program view after opening an existing project and connecting it with the remote control

- 1 Section: By double clicking the heading, you expand/collapse the details
- 2 Tick box: not ticked = information is not transmitted when all parameters are transmitted
- 3 Settings in the project
- 4 Remote control settings
- 5 Key fields for transmitting the parameters of each individual section
- 6 Key field for transmitting all parameters

Tab-related function keys

Project	Devices	DCS list	Configuration	Service
Project	Devices	DCS list	Configuration	Service
[F4]	[F5]	[F6]	[F7]	[F8]

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7.2 Create project

Create project

1. Click the *[Project]* menu item and select *[New Project]*.

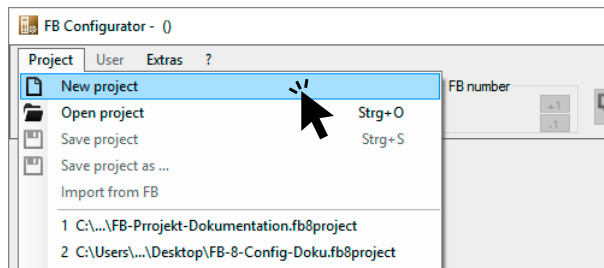


Fig. 19: Create a new project

2. Set up an Administrator for the project and click *[OK]*.



Automatic user creation

When a project is set up, a Level 1 user is automatically created.

If you click *[Cancel]* you create an open project without user name and password. To do this click the security questions that follow with *[Yes]*. If you want to exit the entire process, click *[Cancel]* in the security prompt. You are taken back to the home screen.

3. A new project has been set up. The *[Project]* tab opens.

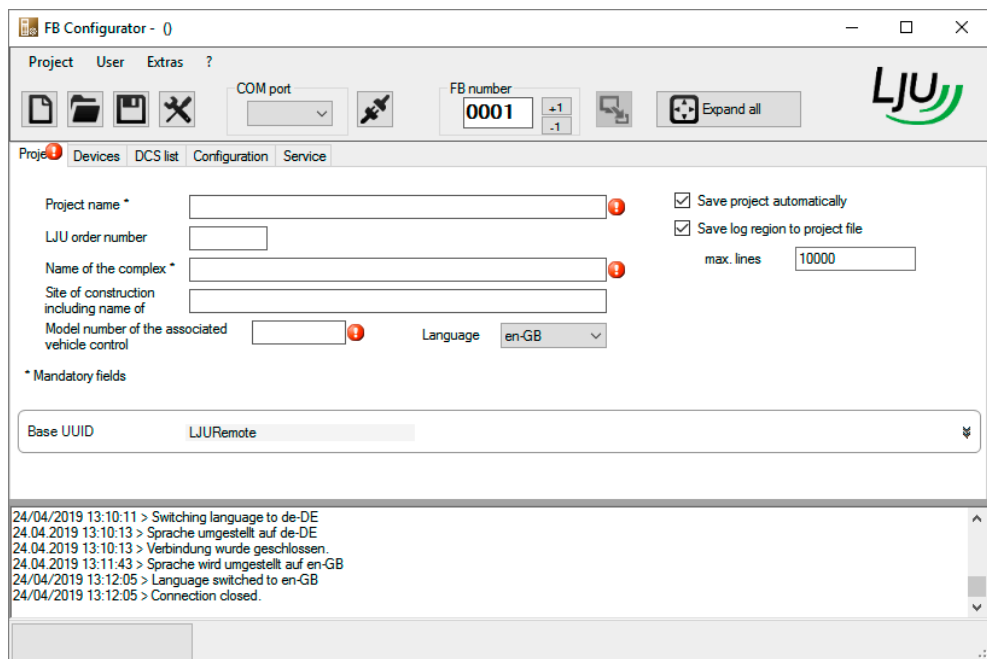


Fig. 20: Newly created project

⇒ Marked fields are mandatory fields and must be filled in. ↪ 'Project information' on page 37

4. ➤ If you leave this project, a dialogue box appears asking whether you want to save the changes. Click *[Yes]*.



NOTICE!

Open projects

Risk of damage from unauthorised use.

- Exclude misuse by third parties.
- Set up open projects only for specific purposes (e.g. training).

Project information

The following information is required to create a new project:

- **Project name**
Give the project a name of your choice.
- **LJU order number**
The order number always has 6 digits.
- **System name**
A clear assignment of the system or workshop is recommended in order to avoid mix-ups or duplications.
- **Factory number of the associated vehicle control system**
Works numbers always have 8 digits beginning with the number 6.
- **Automatic project saving**
If the box is ticked, the project will be saved automatically every fifteen minutes.
- **Saving the log area**
You have the option to save the log area in the project. 10,000 lines are set as standard and can be increased if necessary.

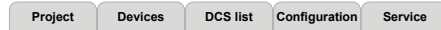
7.3 Open project

Open project

1. ➤ Click the *[Project]* menu item and select *[Open Project]*.
2. ➤ A window with the file path and project opens in the current folder. Select the desired project and click *[Open]*.
3. ➤ Enter the user name and password.


With an "Open project", this entry is not required. The project is opened via the *[Configuration]* tab.

- Click the corresponding tab to view or transmit the data.



Only the [Expert] user can change the project settings. If the fields are greyed out or cannot be changed, you may not have the required user rights.

7.4 List of devices

The [Devices]  tab contains an overview of all remote controls assigned to this project. Up to 30 devices can be assigned to a project. If you have set up a new project, the list will initially be empty.



By configuring a remote control via the FB Configurator, it is automatically added to the device list during the [Transfer] process.

Importing a device list from a file


- Click the [Import]  button.

- Select a device list.

This device list can, for example, originate in another project. If this field is greyed out, you do not have the necessary rights.

- Save the changes to the project.

Exporting a device list

- To export an existing device list and save it in a file, click the [Export]  button.

⇒ A folder opens in Windows Explorer for a possible storage location.

Printing device lists

- To print the device list, click the [Print]  button.

Deleting Device UUIDs

- To delete the selected Device UUIDs from the list, click the [Delete selection]  button.

⇒ A security query will then be displayed.

- Confirm it by clicking [OK]. If this field is greyed out, you do not have the necessary rights.

- Save the changes to the project.

7.5 DCS List

For communication via Bluetooth, the remote control requires a unique identifier of the DataCom stick, which is affixed to the vehicle control system.

Like the remote control, even the DataCom stick receives a UUID.

The DCS UUIDs are saved in a *[DCS list]*. In the remote control, this list is called the "whitelist".

The overview of the vehicles assigned to a project can be found in the *[DCS list]* tab. Up to 500 DataCom sticks can be saved to the DCS list.

Editing a DCS list

1. Click the *[DCS list]* **DCS list** tab.

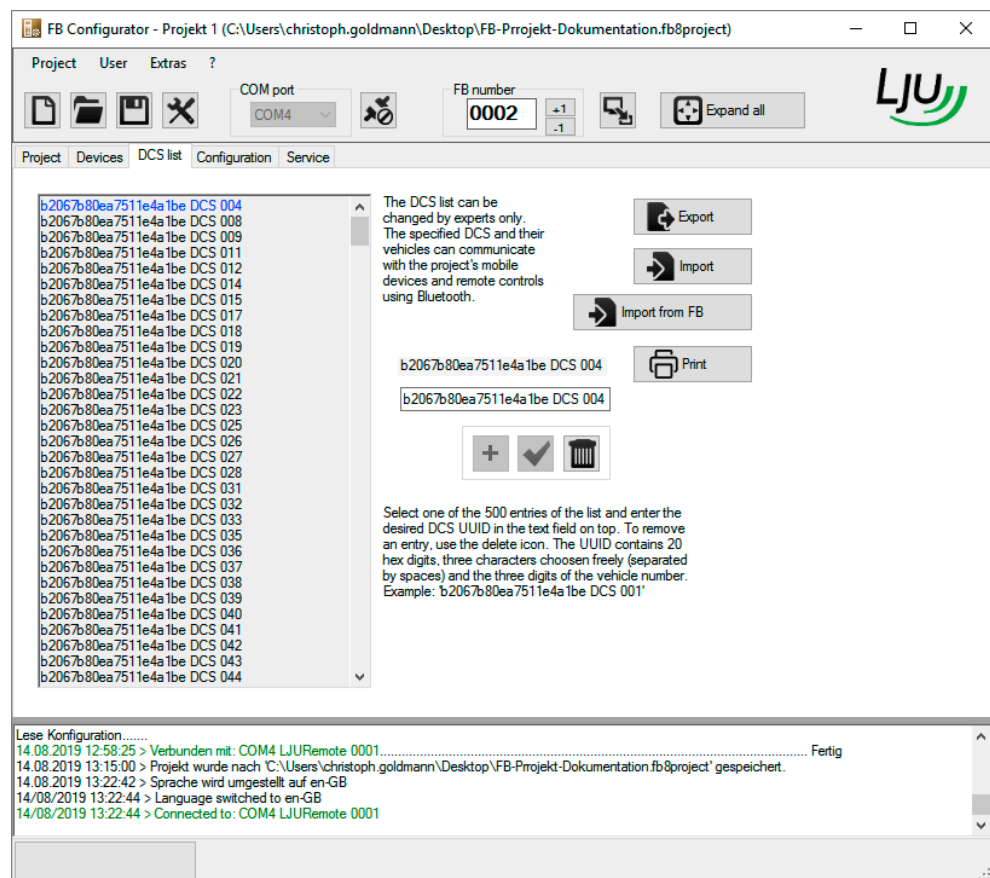








Fig. 21: *[DCS list]* tab

2. To export the DCS list and save it to a file, click the *[Export]* **Export** button.

The DCS list may only be modified with an [Expert] user level.



3. ▶ If you have set up a new project, the list will initially be empty.
Click the *[Import]*  **Import** button or *[Import from FB]*  **Import from RC** to import the DCS list from a file or from the remote control. The imported device list can, for example, originate in another project.
If individual or both key fields are greyed out, make sure that a remote control is connected or that you have the necessary access rights.
4. ▶ Press the *[Print]*  **Print** button to print the device list.
5. ▶ To delete or edit the entries in the DCS list, select the respective DCS in the list. You can then delete or process the entry.
 -  - Makes an additional entry.
 -  - Applies the changes.
 -  - Deletes the selected entry.

If these key fields are greyed out, the necessary access rights are missing.



Avoid special characters and umlauts such as äöÜÄÜß when assigning the DCS UUID. They often lead to problems. A distinction limited to upper and lower case can also lead to confusion.

7.6 Setting the remote control number

The remote control number (FB number) is part of the Bluetooth identifier of the remote control.



Fig. 22: Remote control number

There are several ways to change the remote control number:

- by direct entry in the text field
- using the key fields *[+1]* **+1** and *[-1]* **-1**




The remote control number cannot be transferred to the toolbar by itself but must always be transferred together with the prepared configuration.

7.7 Examples of use

7.7.1 Creating a new project

Create a new project

Authorisations: - Super User, Expert

1. Start the FB Configurator.
2. In the *[Project]*→ menu, click *[New project]* or the  symbol in the toolbar.
3. Assign an administrator. This person automatically receives the highest access rights. Enter the user name and password in the dialogue box.
Repeat the password and confirm with *[OK]*.
4. The new project is opened via the *[Project]* **Project** tab.

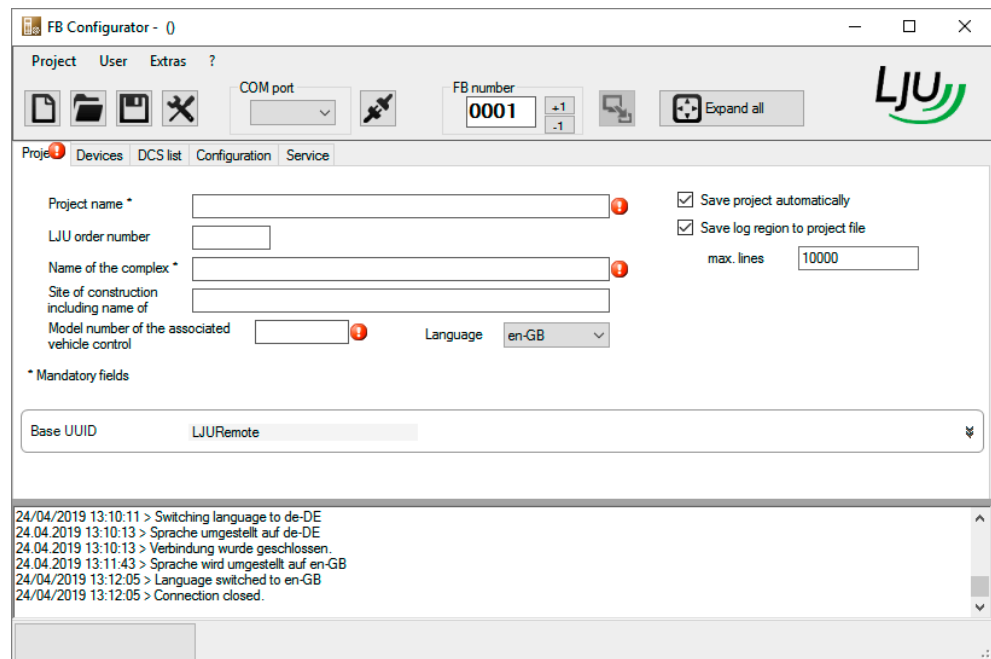


Fig. 23: New project in the *[Project]* tab

5. Fill in the fields with exclamation marks:
 - Give the project a unique name.
 - The LJU order number must have 6 digits.
 - The system name prevents confusion.
 - The factory number must have 8 digits and begin with a 6.

6. Assign the Basic UUID of the remote control.

In the **[Project]** **Project** tab, open the **[Basic UUID]** section

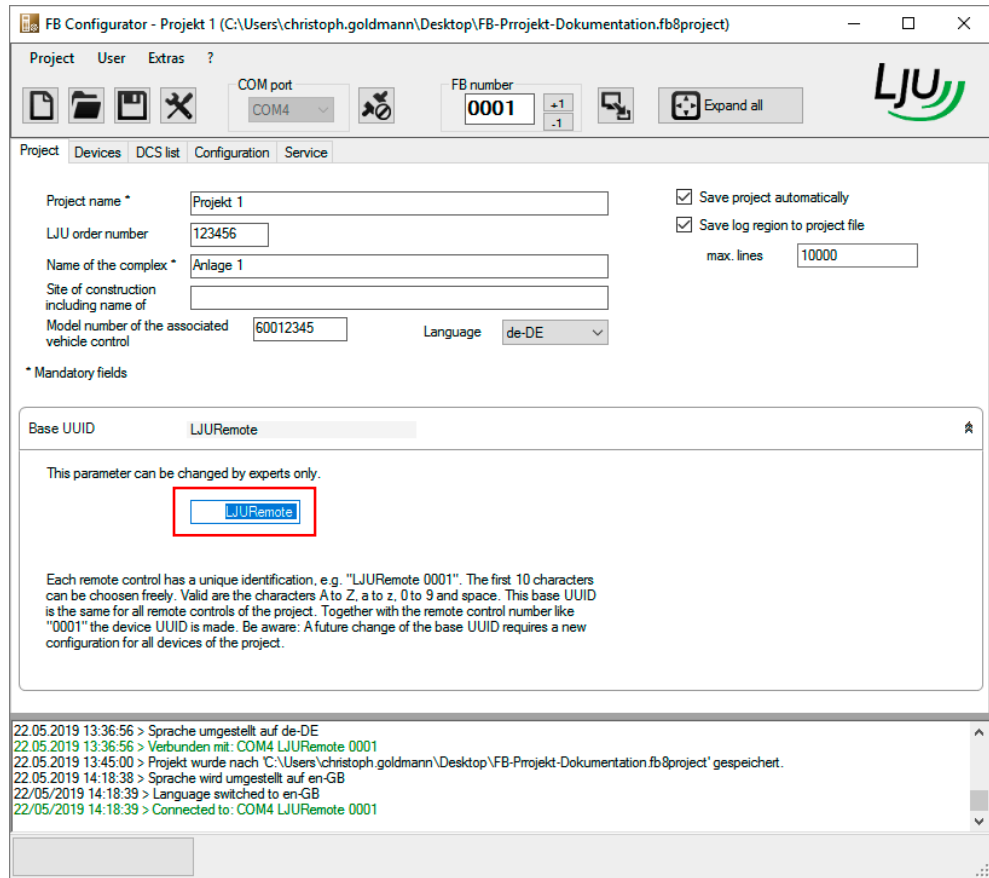


Fig. 24: Basic UUID

7. Enter the Basic UUID.



Note that all remote controls assigned to the project receive this Basic UUID.



Only when creating a project does not only the [Expert] user but also the [Super User] have the authorisation to assign the FB UUID. Only the [Expert] user level is allowed to change the FB UUID at a later stage.

8. Once you have registered all the data in the **[Project]** **Project** tab, save these changes in the project. In the **[Project]**→ menu bar, click **[Save project]** or on the symbol in the toolbar.

⇒ In Windows Explorer, the last folder used is opened.

9. Save the project.



Automatic project saving

When creating a new project, select whether you want the project to be saved automatically with each fifteen minutes that elapse. If you have changed data up to this point, you will be prompted to save.

- Click [OK] to save the project.
- By clicking on [No] or [Cancel], the project will not be saved for the time being. The project remains open and you can continue to enter data.



Automatic FB UUID saving

If you have changed the FB UUID and have not yet saved the project, you will be prompted to do so after fifteen minutes elapse.

- Confirm the change with [OK] to save the new FB UUID in the project.
- If you select [No] or [Cancel], the project will not be saved for the time being. The project remains open and you can continue to enter data.

7.7.2 Assigning a remote control number and transmitting it to the remote control

Assigning a remote control number and transmitting it to the remote control

Authorisations: - User, Super User, Expert

To add a remote control to a project and adapt it to the vehicle control, it must be connected to the FB Configurator. To do so, assign an FB number in a project and add the remote control to the device list. The FB number is then transmitted to the remote control.

1. In the FB Configurator, open an existing project from which you want to use the FB number.
2. To check which remote controls are currently saved in the project, check the remote controls registered in the [Devices] Devices tab.
3. Connect the remote control to the computer via USB cable and then to the FB Configurator.
4. Switch to the [Configuration] Configuration tab.
5. Open the [FB UUID] section.


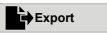
6. Enter the desired remote control number in the *[FB number]* field.
⇒ Now you have changed the specification in the project.

7.7.3 Exporting a device list

Exporting a device list from a project

Authorisations: - User, Super User, Expert

The remote controls saved in the device list of the current project are to be exported, i.e. saved from the project into a folder. A remote control does not have to be linked to the software.



1. Open an existing project from which you want to transfer the device list.
2. Click the *[Devices]*  tab to view the device list with the currently saved remote controls.
3. Click *[Export]*  to save the entire list using Windows Explorer.
4. Select a folder where you want to save the list, type a file name, and then click *[Save]*.




7.7.4 Importing a device list

Importing a device list into a Project

Authorisations: - User, Super User, Expert

The device list containing various remote controls, which is saved in a folder, is to be included in the device list of a project. A remote control does not have to be linked to the software.

1. Open the existing project or create a new project to which you want to import the device list.
2. Switch to the *[Devices]*  tab.
3. Click  *[Import]*. Windows Explorer opens a folder in which the previously saved files are stored.
4. Select the desired file to import the device list contained within into the new project and click *[Open]*.
5. Reply to the following dialogue prompt with *[OK]*. To exit the process of overwriting the device list, click *[Cancel]*.







6.  An information box confirms the import. Click *[OK]*.
 - ⇒ The FB list has now been transmitted to the device list of the new project.
7.  Click *[Save]*  on the toolbar to save the changes to the project.

7.7.5 Exporting the DCS list

Exporting a DCS list from a project

Authorisations: - User, Super User, Expert

The DataCom sticks saved in the DCS list of the current project are to be exported, i.e., saved from the project into a folder. A remote control does not have to be linked to the software.








1.  Open an existing project from which you want to transfer the device list.
2.  Switch to the *[DCS list]*  tab.
3.  Click the key field  to save the list as a file in a folder using Windows Explorer.
4.  Select a folder where you want to save the list, type a file name, and then click *[Save]*.
 - ⇒ The list is now exported from the project.


7.7.6 Importing a DCS list

Importing a DCS list into a project

Authorisations: - User, Super User, Expert

The DCS list, which is saved in a folder, is to be included in the DCS list of a project. A remote control does not have to be linked to the software.

1.  Open in an existing project from which you want to transfer the device list.
2.  Switch to the *[DCS list]*  tab.
3.  Click . Windows Explorer opens a folder in which the previously saved files are stored.
4.  Select the desired file to import the DCS list contained within into the new project and click *[Open]*.
5.  Reply to the following dialogue prompt with *[OK]*. To exit the process of overwriting the DCS list, click *[Cancel]*.



6. ▶ An information box confirms the import. Click *[OK]*.
⇒ The DCS list has been transmitted to the project.
7. ▶ Click *[Save]*  on the toolbar to save the changes to the project.

7.7.7 Importing a DCS list from the remote control

Importing a DCS list from the remote control

Authorisations: - User, Super User, Expert

If the desired DataCom sticks are stored in the whitelist of a remote control, they can be imported into the DCS list of a project using the FB Configurator. To transfer the data, a remote control must be connected to the software via a USB cable.

1. ▶ In the FB Configurator, open an existing project to which you want to transfer the DCS list of the remote control.
2. ▶ Use the FB Configurator to connect the remote control from which you want to import the DCS list into the opened project.
3. ▶ Switch to the *[DCS list]* tab and click the *[Import from FB]*  key field.
4. ▶ A dialogue box opens. Check that only *[Import DCS list from FB]* is ticked to import only the DCS list from the remote control. Any existing DCS list in the project will be overwritten. Click *[OK]* to overwrite the list. The *[Cancel]* key field terminates the process without importing data.
5. ▶ An information box confirms the import. Click *[OK]*.
⇒ The DCS list has been imported into the project from the remote control.
6. ▶ Click *[Save]*  on the toolbar to save the changes to the project.

7.7.8 Adding, modifying or deleting a DCS-UUID

Adding, modifying or deleting a DCS-UUID

Authorisations: - User, Super User, Expert

The UUIDs of the DataCom sticks can be changed manually in the DCS list of a project or by importing them from other projects. A remote control does not have to be linked to the software.

1. In the FB Configurator, open an existing project in which you want to modify the DCS list.
2. Switch to the *[DCS list]* DCS list tab.



The UUID of a DataCom stick has a defined structure, which must be adhered to with all DCS used.

Adding a DCS UUID

For example, you want to add another vehicle control system to the project with a DCS UUID that has not been saved in any other project.

1. Click in the entry field and create the UUID of a DataCom stick you want to include in the project for the DCS list.

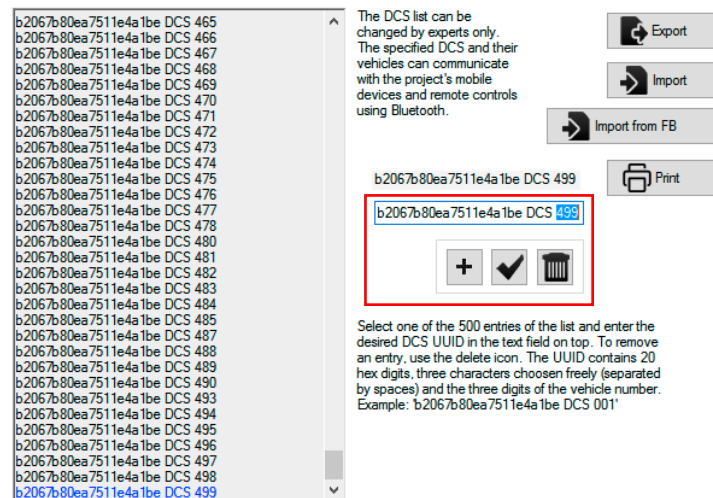





Fig. 25: DCS UUID with defined number of characters

- ⇒ Make sure you use the correct number of hexadecimal characters and place a space between each of the freely selectable characters. Otherwise, an exclamation mark will appear indicating where an error has occurred.
2. Click the *[Add Entry]* + symbol to add the new DCS UUID to the DCS list.
 - ⇒ The new DCS UUID is immediately added to the DCS list.

3. Click **[Save]**  on the toolbar to add the modified DCS list to the project.



Modifying a DCS UUID

You have imported a DCS list from another project. In the new project, however, one DCS UUID will be replaced by another.

1. Select the DCS UUID in the DCS list that is no longer to be used in the current project.
2. In the entry field, change the existing DCS UUID with the new designation. Make sure that the number of characters is correct.
3. Click the **[Change entry]**  symbol to overwrite the current designation of the DCS UUID in the DCS list with the new identifier.
4. Click **[Save]**  on the toolbar to add the modified DCS list to the project.

Deleting a DCS UUID

You have imported a DCS list from another project but do not need all DCS UUIDs in the new project.

1. Select the DCS UUID in the DCS list that is no longer to be used in the current project.
2. Click the **[Delete entry]**  symbol to remove the DCS UUID from the DCS list.
3. Click **[Save]**  on the toolbar to add the modified DCS list to the project.

8 Configuring the remote control

After opening a project, the configuration view is displayed as long as the project view has been filled in successfully. Here, it is possible to select configuration settings that can be transmitted to the remote control individually or as an entire selection.

If you click the *[Configuration]* **Configuration** tab, you will find a subdivision of three sections:

- FB UUID
- FB configuration
- DCS list

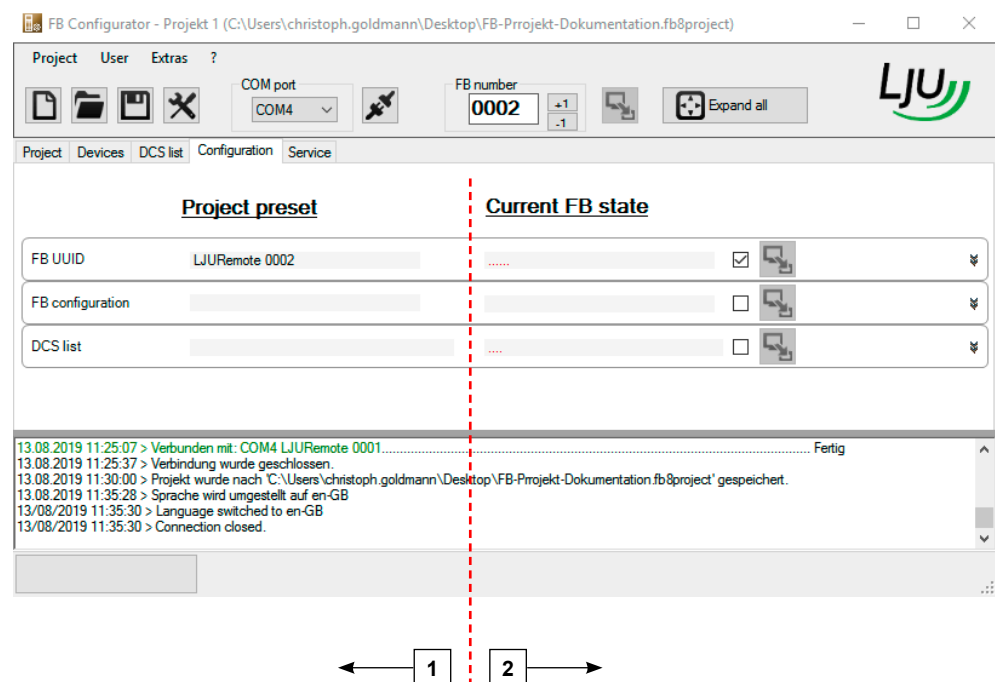


Fig. 26: *[Configuration]* tab

- 1 Specification in the project
- 2 Current remote control settings

In every section, the project specifications are displayed on the left-hand side (target side) and the current parameters of the remote control are on the right-hand side (actual side). Differences are highlighted in colour. By setting tick marks within the sections, it is possible to transmit parameters in a targeted manner.



If you cannot change fields or key fields are greyed out, you do not have user rights.



If information is missing on the actual side (right), there is probably no remote control connected or the information has not been read.

8.1 Connecting the remote control

To connect the remote control using the FB Configurator, you must connect it both physically, i.e., with a cable and adapter, and logically to the program.

Connecting the remote control using FB Configurator

1. ▶ Start the FB Configurator and open a project.
2. ▶ Connect the remote control to the PC.
3. ▶ Select the correct connection from the *[COM port]* drop-down list in the toolbar.

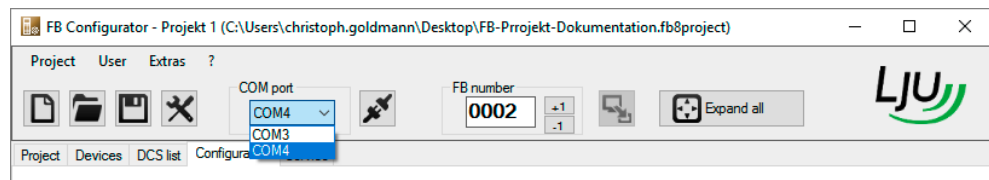



Fig. 27: Select the COM port

4. ▶ Click the *[Connect with remote control]*  symbol in the toolbar.
 - ⇒ The connection status in the status bar has now changed to “Connected to”. If this is not the case, check the log area for any faults that may have occurred.

As soon as it is connected, the most important information will be read from the remote control. In particular, the remote control ID appears in the connection status. Further information will be read when the configuration is read. Under certain circumstances, this can take several seconds.



No connection


If your remote control cannot be connected, you may have selected the wrong COM port. Try again, following the previously described steps.

- Select the COM port** If you are unsure which COM port the operating system has assigned to your remote control, the following approach can help:
1. ▶ Open the *[COM port]* selection list. Every time it is opened the software requests the list of currently available COM ports from the system.
 2. ▶ Now connect your remote control to the PC and wait for 2 or 3 seconds.
 3. ▶ Reopen the *[COM port]* selection list. The currently plugged in remote control should now also appear. The last device to be plugged in is usually given the highest number by the operating system, e.g. COM4.

8.2 Disconnecting the remote control

Disconnecting the remote control

The connection between the remote control and the software will be disconnected if:



- You click *[Connect to FB]* . Use this variant to disconnect the remote control from the software and to avoid error messages or transmission errors.
- You open a new or existing project. The remote control is immediately disconnected. A dialogue box opens to save the current project.
- FB Configurator is terminated.

8.3 Transmitting the FB UUID

The *[Configuration]* tab allows you to transmit just the FB UUID to the remote control.

1. ▶ In the *[Configuration]* tab, expand the *[FB UUID]* section by double-clicking it.
2. ▶ Modify the remote control number as required.
3. ▶ If a remote control is connected, you can transmit the FB UUID directly.

You can do this in two ways:

- Click either on the *[Transmit]*  key field in the section heading.
- Otherwise, click the *[Transmit]*  key field on the toolbar. In this case, you must tick the box in the section title to include the FB UUID as the parameter to be transmitted.

4. ▶ After transmitting the FB UUID the remote control will be applied in the project FB list of the project.
 - ⇒ The registration of the remote control in the project is confirmed in the log area.
5. ▶ Save the changed parameters in the project.

8.4 Transmit configuration

The configuration parameters of the remote control can be set and transmitted via the FB Configurator.

The configuration parameters can also be individually adjusted on the remote control.

**Transmitting
FB-8 configura-
tion param-
eters**

1. In the [Configuration] tab, expand the [FB configuration] section.

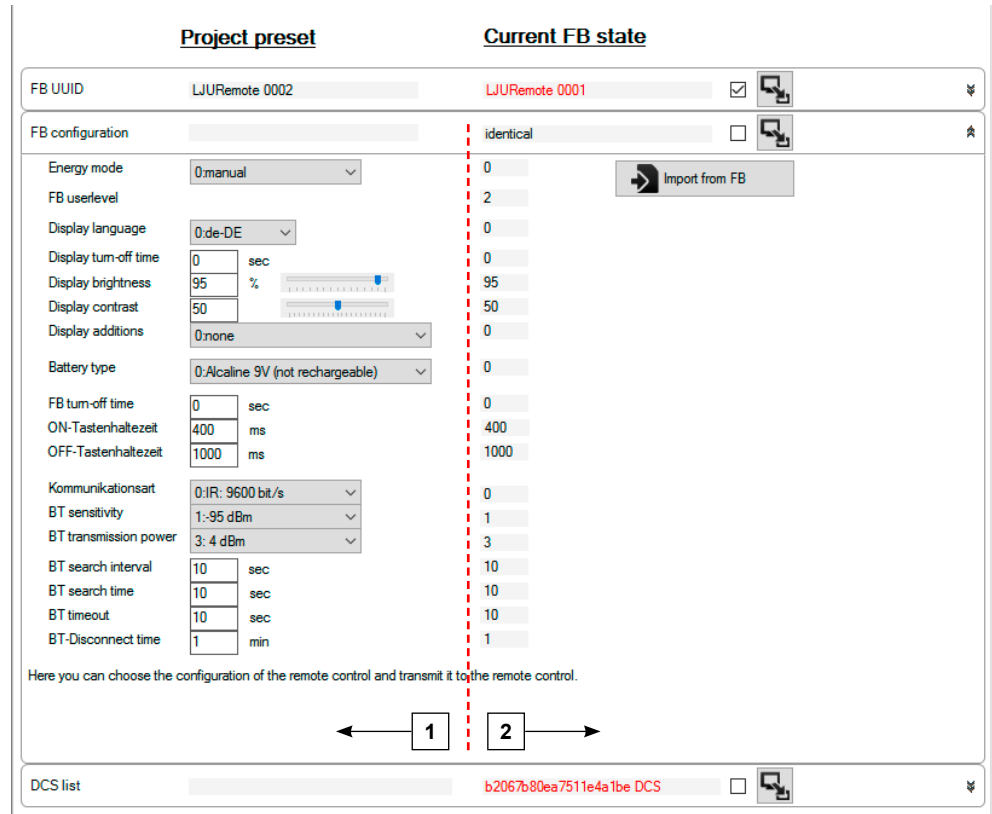



Fig. 28: Remote control configuration


- 1 Settings (values) in the project
- 2 Settings (values) in the remote control

⇒ The values represent the parameter selection. If a remote control with other settings is connected, the deviating value of the remote control is highlighted in red. The project settings are evaluated with priority.

2. Modify the FB configuration as required. For some parameters there are selection boxes, which open by clicking on the arrow.

- Energy mode:
 - [Manual] - [Energy saving mode] - [Maximum power]
- Display indicator:
 - [Language] - [Switch-off time] - [Brightness] - [Contrast]
- Battery type
- Switch-off time when not in use
Hold time for switching on or off
- Communication method
Bluetooth parameters

3. ▶ If you want to transmit the set remote control parameters directly to the project, click the *[Import from FB]*  *Import from RC* symbol on the right side of the window.




If you want to transmit the supplied project parameters to the remote control, click the *[Transmit]*  key field in the section heading.

4. ▶ After importing the parameters from the remote control, they are applied to the project. You should therefore save the project.

8.5 Transmitting the DCS list

Transmitting the FB-8 DCS list

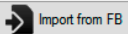
1. ▶ In the *[Configuration]* tab, expand the *[DCS list]* section.

Project preset	Current FB state
FB UUID LJURemote 0002	LJURemote 0001 <input checked="" type="checkbox"/> 
FB configuration	identical <input type="checkbox"/> 
DCS list b2067b80ea7511e4a1be DCS	b2067b80ea7511e4a1be DCS <input type="checkbox"/> 

1

- b2067b80ea7511e4a1be DCS 004
- b2067b80ea7511e4a1be DCS 008
- b2067b80ea7511e4a1be DCS 009
- b2067b80ea7511e4a1be DCS 011
- b2067b80ea7511e4a1be DCS 012
- b2067b80ea7511e4a1be DCS 014
- b2067b80ea7511e4a1be DCS 015
- b2067b80ea7511e4a1be DCS 017
- b2067b80ea7511e4a1be DCS 018
- b2067b80ea7511e4a1be DCS 019
- b2067b80ea7511e4a1be DCS 020
- b2067b80ea7511e4a1be DCS 021
- b2067b80ea7511e4a1be DCS 022
- b2067b80ea7511e4a1be DCS 023
- b2067b80ea7511e4a1be DCS 025 **3**
- b2067b80ea7511e4a1be DCS 026
- b2067b80ea7511e4a1be DCS 027
- b2067b80ea7511e4a1be DCS 028
- b2067b80ea7511e4a1be DCS 031
- b2067b80ea7511e4a1be DCS 032
- b2067b80ea7511e4a1be DCS 033
- b2067b80ea7511e4a1be DCS 035
- b2067b80ea7511e4a1be DCS 036
- b2067b80ea7511e4a1be DCS 037
- b2067b80ea7511e4a1be DCS 038
- b2067b80ea7511e4a1be DCS 039
- b2067b80ea7511e4a1be DCS 040
- b2067b80ea7511e4a1be DCS 041
- b2067b80ea7511e4a1be DCS 042

2

 Import from FB

- b2067b80ea7511e4a1be DCS 004
- b2067b80ea7511e4a1be DCS 008
- b2067b80ea7511e4a1be DCS 009
- b2067b80ea7511e4a1be DCS 011
- b2067b80ea7511e4a1be DCS 012
- b2067b80ea7511e4a1be DCS 014
- b2067b80ea7511e4a1be DCS 015
- b2067b80ea7511e4a1be DCS 017
- b2067b80ea7511e4a1be DCS 018
- b2067b80ea7511e4a1be DCS 019
- b2067b80ea7511e4a1be DCS 020
- b2067b80ea7511e4a1be DCS 021
- b2067b80ea7511e4a1be DCS 022
- b2067b80ea7511e4a1be DCS 023
- b2067b80ea7511e4a1be DCS 025 **4**
- b2067b80ea7511e4a1be DCS 026
- b2067b80ea7511e4a1be DCS 027
- b2067b80ea7511e4a1be DCS 028
- b2067b80ea7511e4a1be DCS 031
- b2067b80ea7511e4a1be DCS 032
- b2067b80ea7511e4a1be DCS 033
- b2067b80ea7511e4a1be DCS 035
- b2067b80ea7511e4a1be DCS 036
- b2067b80ea7511e4a1be DCS 037
- b2067b80ea7511e4a1be DCS 038
- b2067b80ea7511e4a1be DCS 039
- b2067b80ea7511e4a1be DCS 040
- b2067b80ea7511e4a1be DCS 041
- b2067b80ea7511e4a1be DCS 042

The DCS list can be changed by experts for the project.


Fig. 29: DCS list section


- 1 DCS UUID of the project list
- 2 DCS UUID of the connected remote control
- 3 List of all the DCS UUIDs of the project
- 4 List of all the DCS UUIDs of the connected remote control

2. ➤ Select the tick box from the section heading to apply the DCS list in the prepared configuration. In this category only the tick box can be changed with a tick. Changes to the DCS list are made in the *[DCS list]* tab.



If the tick box is greyed out, the necessary access data is missing.

3. ➤ Users at *[Expert]* level have the option of transmitting the DCS list directly. To do this, a remote control must be linked to the program.
4. ➤ If you want to transmit the DCS list of the remote control directly into the project, click the *[Import from FB]*  symbol on the right side of the window.

If you want to transmit the supplied project parameters to the remote control, click the *[Transmit]*  key field in the section heading.




8.6 Examples of use

8.6.1 Configuring the remote control in the project

Configuring the remote control in the project

Authorisations: - User, Super User, Expert

In addition to configuring the actual remote control, you can also use the FB Configurator to adjust display and key settings for the remote control and save them to the project. Even the communication method and communication parameters can be altered. There is no need to connect a remote control.

1. ➤ In the FB Configurator, open an existing  project in which you want to change the configuration.
2. ➤ Expand the *[Configuration]*  section.
3. ➤ Modify the desired parameters.
If the remote control is connected, the differences are immediately displayed in red.
⇒ These parameter changes are applied when the configuration is transmitted to the remote control.
4. ➤ Save the project .



If you change individual parameters on the remote control when it is connected to the program, the changes are not automatically displayed in the program. For these changes to apply, you have to disconnect the remote control from the program and reconnect it.



Selection keys are enabled or displayed in grey depending on the level of authorisation. Only users with the [Expert] user level can select which parameters are to be transmitted to or from the remote control.

8.6.2 Defining the selection of configurations to be transmitted

Defining the selection of configurations to be transmitted

Authorisation - Expert

In the [Expert] user level, you decide which parameters (even by Users and Super Users) are transmitted to the remote control. A remote control does not have to be linked to the software.

1. In the FB Configurator, open an existing project in which you want to define the configuration parameters.
2. The project is opened via the [Configuration] tab.
3. Decide which project parameters should be transmitted to the remote control and tick the box in the corresponding section. The transmission is activated by ticking the boxes. If they are not set, the configuration parameters are excluded from the transmission.
4. Save the project .

8.6.3 Transmitting the configuration to the remote control

Transmitting the configuration to the remote control


- 'Predefined and general transmission' on page 56
- 'Targeted transmission' on page 57

Predefined and general transmission

Authorisations - User, Super User, Expert

The configuration defined by the user level [Expert] is transmitted from an existing project to the remote control. A remote control must be connected in order to transmit the data.




1. In the FB Configurator, open an existing project from which you want to transmit the configuration to the remote control.
2. The project is opened via the [Configuration] tab.
3. Connect the remote control. The differences to the parameters in the opened project are immediately displayed in red.

4. ➤ Click the *[Transmit]*  symbol on the toolbar to transmit the predefined parameters.
 - ⇒ The configuration of the project has been transmitted to the remote control. This process is confirmed in the log area.

Targeted transmission

Authorisations - Expert





In the [Expert] user level, you have the authorisation to transmit the configuration parameters in a targeted manner. A remote control must be connected in order to transmit the data.



1. ➤ In the FB Configurator, open an existing  project from which you want to transmit the configuration to the remote control.
2. ➤ The project is opened via the *[Configuration]*  tab.
3. ➤ Connect the remote control. The differences to the parameters in the opened project are immediately displayed in red.
4. ➤ Click the *[Transmit]*  symbol in the section containing the configuration you want to transmit to the remote control. It is not necessary to activate the function by ticking the boxes in the respective section bar.
 - ⇒ The configuration of the project has been transmitted to the remote control.

8.6.4 Importing the FB configuration and DCS list from the remote control

Importing the FB configuration and DCS list from the remote control

You have the option of including the settings of a remote control and the vehicle control systems stored in the *[whitelist]* in an existing project or a new one. A remote control must be connected in order to transmit the data.

1. ➤ Open the FB Configurator for an existing  project or create a new  project to which you want to transmit the configuration from the remote control.
 - ⇒ The existing project is opened via the *[Configuration]*  tab.
2. ➤ Once you have created a new project, select the *[Configuration]*  tab and expand the *[FB Configuration]* section.
3. ➤ Connect the remote control with the configuration you want to use. The differences to the parameters in the opened project are immediately displayed in red.

4. Click the *[Import from FB]*  button to apply the remote control setting to the project.
 - ⇒ A dialogue box with a transmission selection is displayed.
5. Activate the parameters you want to include in the project and press *[OK]* to confirm.
 - ⇒ The remote control configuration and/or the DCS list has/have been applied to the project. This process is confirmed in the log area.
6. Save the project .






8.6.5 Assigning the Basic UUID


Assigning the Basic UUID

Authorisations - Expert

The remote controls assigned to a project have the same Basic UUID. Together with the individual remote control number, it gives the Device UUID. A remote control does not have to be linked to the software.

To assign the Basic UUID, proceed as follows:

1. Open an existing  project or create a new  project in the FB Configurator.
2. Switch to the *[Project]*  tab.
 - As soon as you create a new project, the *[Project]*  tab opens automatically.
3. Open the *[Basic UUID]* section.
4. Change the Basic UUID as required.
 - Enter exactly 10 characters (Fig. 30). Otherwise, an exclamation mark appears in the line indicating which characters and how many of them may be used. On the other hand, the number of missing characters in the display field of the Basic UUID is replaced with question marks.
5. Select the *[Configuration]*  tab and open the *[FB UUID]* section.
 - ⇒ As soon as you assign a new Basic UUID, it appears immediately together with the remote control number (FB number) as the current FB UUID of the project.

6. Save the project .

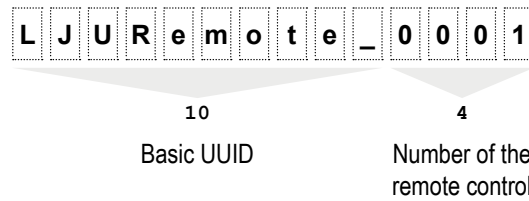



Fig. 30: Basic UUID and remote control number using LJU as an example




8.6.6 Transmitting the FB UUID to the remote control



Transmitting the FB UUID to the remote control Authorisations - Expert

Each remote control requires a unique FB UUID. The FB UUID is assigned and transmitted to the remote control using the FB Configurator. To transfer the data, the remote control must be connected via USB cable.

As part of the general transmission, even the user levels *[User]* and *[Super User]* can perform the assignment by pressing the button *[Transmit]*  in the toolbar. However, the configuration must have been activated for transfer by the *[Expert]* user

If the FB UUID is transmitted separately in the *[Configuration]* tab, you need the user level *[Expert]*.

1. Open an existing  project or create a new  project in the FB Configurator.
2. Connect the remote control.
3. Click *[Transmit]*  in the FB UUID section to transmit the FB UUID stored in the project to the remote control.
 - ⇒ The Basic UUID was transmitted in conjunction with the remote control number as a new FB UUID to the remote control.



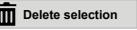

At the same time, the remote control with its new label was transmitted to the device list of the opened project.
4. Go to the *[Devices]*  tab to display the remote controls currently stored in the project.
5. Save the project .

8.6.7 Deleting the remote control from devices UUID

Deleting the remote control from devices UUID

Authorisations - Super User, Expert

You want to delete a remote control stored in the project from the device list. A remote control does not have to be linked to the software.

1. ▶ In the FB Configurator, open a project  from which you want to delete the remote control.
2. ▶ Switch to the *[Devices]*  tab and select the device that you no longer need in the project.
3. ▶ Select this remote, then click *[Delete selection]* .
⇒ The remote control is now removed from the list and the project.
4. ▶ Save the project .

9 Service functions

9.1 Testing Bluetooth

The Bluetooth test checks the correct function of Bluetooth transmission. As a counterpart you need a DataCom stick with an adapter and cable for connection to the PC.

The configurations of your remote control and your DCS are modified for the test.



Backup

By creating a backup of the most important data from your remote control and DCS, you can back up your data and restore it after the test. Save the last backup in the project file.



Prior to testing, take note of the serial number and remote control or vehicle number of your remote control and DCS as a precaution. Check the configuration view of your remote control so that your devices are quickly up and running after the test. Take note of the COM port of your remote control and DCS in order to avoid confusion.



Unsolicited Bluetooth connections

Always ensure that your DCS cannot establish any unintentional Bluetooth connection to other DCSs. If in doubt, remove all DCSs and mobile and remote control devices within radio range or disconnect them from the power supply.

9.1.1 Bluetooth test

FB-8 Bluetooth test

1. ➤ Open an existing project
2. ➤ Connect the remote control to the program
3. ➤ In the [Service] tab, expand the [Test Bluetooth] section.
4. ➤ Connect the DataCom stick with adapter to the PC via a USB cable.
5. ➤ Now, connect the DCS to the program.
 - To do this, go to the [Test Bluetooth] section, click the [DCS port] selection key and select a port.
 - Click the [Connect to DataCom Stick] button.
6. ➤ Start the test by pressing the [Start test] button.
7. ➤ Confirm the dialogue box with [OK] .

8. After the test is complete, a symbol in the category heading and a message in the log area will inform you of the success or failure of the test.

9.1.2 Testing sequence

Step	Prior to testing	
1	Check	Check whether the ports are recognised and whether the connected DCS contains operating/testing firmware. If a backup of a cancelled test is available, it can be transmitted.
2	Back up	The EEPROM of the remote control and DCS is backed up.
3	Configure	The UUID and DCS list required for the test is transmitted to the remote control. The UUID and FB list required for the test is transmitted to the DCS.
Step	During the test	
4	Connect	The program waits until a Bluetooth connection has been established between the remote control and DCS.
5	Execute	Round trip test A character chain is sent from the PC to the remote control. This sends it to the DataCom stick via Bluetooth. The DCS then sends it back to the remote control, which returns it to the PC.
Step	After the test	
6	Restore	The backup from step 2 is transmitted back to DCS and remote control.

Faults

If a fault occurs during one of these steps, the test will stop immediately. This gives you the opportunity to carry out tests with greater precision.

When you restart the Bluetooth test, the program will offer you the option to restore the original configuration.

**Test configuration**

After aborting, the remote control and DataCom stick can still be configured for the current test. In this case, the settings must be reset.

9.1.3 Interpreting the results

The Bluetooth test ends with the output of results.

Single transmission faults are normal and do not affect operation. Check the transmission conditions and carry out the test again.

Check the log area for anomalies.

If a time-out is indicated during this transmission, maybe another DCS is connected to your remote control. Remove all Bluetooth devices from the reception range or disconnect them from the power supply.

If the Bluetooth test takes much longer than a few minutes, your PC may be overloaded. Check the CPU capacity in Task Manager. Close all unnecessary programs. Restart the program. Delete the log area. A long log area can slow down the program. Carry out the test again.

If, despite good reception conditions, two out of three Bluetooth tests show transmission faults, there is probably a fault on the remote control, DCS or the PC and interfaces used. To isolate the error, use a different remote control or DCS that will safely operate faultlessly. Change to another PC that functions faultlessly.

If problems persist, please contact LJU Automatisierungstechnik GmbH Services.

9.2 Test remote control

The FB test checks that the Bluetooth transmission functions correctly. All the important memory areas are tested.

The remote control is specially configured prior to the test. The previous state is restored after the test.

After the test, you will have the option of automatically transmitting the complete configuration.



The configuration of your remote control will be modified for the test. All data will be overwritten.



Prior to testing, take note of the serial number and remote control number. Check the configuration view so that you can put your remote control back into operation quickly after the test.

9.2.1 FB test

1. ▶ In the [Service] tab, expand the [Test FB] section.
2. ▶ Connect the remote control to the program.
3. ▶ After the test, activate the tick box for the complete configuration as required.
4. ▶ Start the test by pressing the [Start test] button.
5. ▶ Confirm the dialogue box with [OK].
6. ▶ After the test is complete, a symbol in the category heading and a message in the log area will inform you of the success or failure of the test.



The [Test FB] function overwrites all data on the remote control!

9.2.2 Testing sequence

Step	Prior to testing	
1	Check	The appropriate dialogue box is displayed depending on the result of this test. If a backup of a cancelled test is available, it can be transmitted.
2	Back up	EEPROM is backed up.
3	Configure	The remote control is set to a predefined state.
Step	During the test	
4	Execute	Memory test All memory areas are overwritten.
Step	After the test	
5	Restore	The backup from step 2 is transmitted back to the remote control.

Faults

If a fault occurs during one of these steps, the test will stop immediately. This gives you the opportunity of carrying out more specific testing.



Please keep in mind that your remote control may have an incomplete configuration after an interruption. Use the noted configuration data to check this.

When you then restart the FB test, the program will offer you the option to restore the original configuration.



9.2.3 Interpreting the results

The FB test ends with the output of results.

Check the log area for anomalies.

9.3 Testing the keypad

Connect the remote control to the program.

1. In the [Service]  tab, expand the [FB keypad and display] section.
2. Start the test by pressing the [Test keypad]  button.
3. A new window with an illustration of the remote control appears. The key fields have a grey background and do not show any labels at first.
4. Press any button on the remote control. The screen displays the designation of keys or possible conflicts.
5. Once you have tested all the push buttons, close the keypad window.
 - ⇒ When the test completes, a message shows up to inform you if the test was successful or not.

An error message appears if you have not pressed all keys or if two keys have a conflict.

Faults

If the designation of the keys displayed in grey is not displayed correctly during the keypad test, press the tested key repeatedly to exclude the possibility of incorrect handling.



In case of persistent problems with the display or if individual keys fail, please contact LJU Automatisierungstechnik GmbH Services.

9.4 Testing the display

Connect the remote control to the program.

1. ▶ In the *[Service]* Service tab, expand the *[FB keypad and display]* section.
2. ▶ Start the test by pressing the *[Test display]* Check display button.
3. ▶ A new window opens, allowing you to test display settings such as brightness and contrast directly on the remote control.

Faults

Permanently active pixels are particularly easy to identify if you select *[Empty display]*. Errors due to inactive pixels are preferably shown under display *[Full display]*.

Since no information is output in the log area, take note of the errors if necessary.



In case of persistent problems with the screen display, contact LJU Automatisierungstechnik GmbH Services.

9.5 Firmware

In the *[FB Firmware]* category you have these options:


- Obtain information about the remote control firmware
- Select the firmware file and save it for use in the project
- Select the firmware file and transfer it to the remote control



The [FB Firmware] section is only available for the [Expert] user level.

Connect the remote control to the program.


1. ▶ In the *[Service]* Service tab, expand the *[FB firmware]* section.
 - ⇒ The data of the remote control's firmware is displayed.

2. ➤ To load a new firmware file, click the *[Select firmware file]*  symbol. Then follow the dialogue for file selection.



FB firmware files usually end in [.hex].

⇒ The newly-opened firmware is displayed in a column to the right of the existing firmware. Differences to the existing firmware are shown in red text.

3. ➤ To transfer the new firmware to the remote control, click the *[Transmit firmware]*  symbol in the *[FB firmware]* section.

⇒ The firmware is transmitted to the remote control.

The firmware information on the remote control on the right is now also shown in black because it matches the selected version.

4. ➤ Save the project to back up the selected firmware file as a project specification.



For safety reasons, check the configuration before reusing your remote control with the DCS.

Faults

If errors occur while you update the firmware, check the cable connection between the remote control and the computer; disconnect the connection and reconnect it if necessary.

If the remote control does not connect to the program after the update, either reconnect the remote control or briefly disconnect the cable from the computer and reconnect the remote control.



If problems persist, contact LJU Automatisierungstechnik GmbH Services.

9.6 Product information

The product information can only be retrieved if a remote control is connected to the computer. It is purely for information purposes and cannot be processed.

The following remote control information is displayed:

- Name
- Item number (factory number)

- BG (Federal Legislation) No. (model number) of circuit board
- Battery capacity
- Serial number
- Production date

Connect the remote control to the program.

—▶ In the *[Service]* tab, expand the *[Product information]* section

⇒ The remote control data is displayed.

10 Faults

We apologise for any problems that may occur with our product. Possible errors and their causes are explained in the following section. Please inform us if you are still unable to determine the cause of the error.

10.1 FB Configurator

Trouble-shooting

Fault description	Cause	Remedy
Program fails to install	Missing user rights	Check user rights
	Unsuitable hardware	Check hardware requirements
Menu entries are not available	Missing user rights	Change user

10.2 FB-8

Trouble-shooting

Fault description	Cause	Remedy
Remote control does not start	Rechargeable battery is discharged	Charge the battery
	Faulty display	Contact LJU Service.
Rechargeable battery does not charge	Faulty rechargeable battery	Replace rechargeable battery
	Charging current of the USB port too low	Use another USB port
	Charging switch in battery compartment in wrong position	Check/change switch position
Remote control does not charge / No communication with computer	Connection cable is not connected	Check connection cable
	Faulty connection cable	Replace connection cable
	Driver not installed	Install driver
	Several remote controls connected to the hub	Disconnect other USB connections
	Remote control is not detected by PC	Check entries in the device manager

Fault description	Cause	Remedy
Remote control only starts until the bootloader loads	Error when importing the firmware or firmware is missing	Re-install firmware
	Faulty bootloader	Contact LJU Service.
Display does not work after starting	Display is not recognised at start-up or is defective	Contact LJU Service.
Rechargeable battery does not fully charge	Rechargeable battery capacity no longer sufficient	Replace the rechargeable battery
	Rechargeable battery type used is not recommended	Use suitable rechargeable battery type
	Incorrect rechargeable battery type specified in energy settings.	Check/change settings
Rechargeable battery gets very warm when charging	Rechargeable battery capacity no longer sufficient	Replace rechargeable battery
	Wrong rechargeable battery type set	Check the selection switch in the remote control Check settings in the <i>FB Configurator</i>
	Standard battery was used instead of a rechargeable battery	Check the selection switch in the remote control Check settings in the <i>FB Configurator</i>
	Incorrect rechargeable battery type specified in energy settings.	Check/change settings
No Bluetooth connection established	Bluetooth deactivated in remote control settings	Activate Bluetooth
	DCS/FB UUID is invalid	Check project settings in the <i>FB Configurator</i>
	DCS is not listed in the whitelist of the remote control	Use <i>FB Configurator</i> to add the DCS to the remote control whitelist
	Remote control is not listed in the whitelist of the DCS	Use <i>DCS Configurator</i> to add the remote control to the DCS whitelist
	Transmission and reception power is too low	Check transmission and reception power in the remote control settings
	Transmission path disturbed	Reduce distance to receiver

Fault description	Cause	Remedy
No Bluetooth connection established	Transmission path disturbed	Remove sources of interference
	Bluetooth module was not initialised at start-up	Check details in the 'Bluetooth Info' menu
	Auto-time-out has disconnected Bluetooth	Check energy settings
No infrared connection established	Dirt in front of infrared unit on the remote control	Remove soiling
	Dirt in front of infrared unit on the receiver	Remove soiling
	Infrared function deactivated	Activate infrared function
	Transmission disrupted	Establish optical contact Decrease distance Check angle of incidence
	Wrong vehicle number selected	Change vehicle number
	"Fast" or "Slow" infrared not set	Check settings
Menu entries not available	Missing user rights	Change user
Menu dialogue cannot be confirmed	Serious problem cannot be solved via <i>[Confirm]</i> . Internal problem is further repeated.	Contact LJU Service.
Keypad not working	Fault in the membrane keypad	Perform a keypad test with <i>FB Configurator</i>
Inaccurate keystroke	Fault in the membrane keypad	Perform a keypad test with <i>FB Configurator</i>
Keypad test with <i>FB Configurator</i> fails	Faulty keypad	Contact LJU Service.
DataCom-Stick (DCS) not found	DCS not listed in the whitelist of the remote control	Check whitelist with <i>FB Configurator</i>
	DCS not within range	Change distance
	Receiving sensitivity (RX) too low	Increase receiving sensitivity

11 Customer service and addresses

Customer service

Our service team is available to provide technical information.

- **Conductix-Wampfler Automation - Service**

Phone: +49 331 887344-15 | Fax: +49 331 887344-19

E-mail: service.potsdam@conductix.com



Service forms

Service forms are available for download under www.conductix.com (www.ljuonline.de).

Please send completed service forms to service.potsdam@conductix.com.

Further contacts

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12 Index

A

Addresses..... 72

B

Basic UUID..... 31

Bluetooth..... 16, 18, 29

C

COM port..... 50, 51

Customer service..... 72

D

DCS list..... 39

DCS UUID..... 30

F

Faults

 FB-8..... 69

 FB-8 Configurator..... 69

FB UUID..... 29

Function keys..... 35

I

Infrared..... 16

L

Level..... 23

P

Password..... 28

Personnel..... 14

Project..... 33

Q

Qualification..... 14

S

Safety notes..... 14

Scope of delivery..... 10

U

User rights..... 23

Users

 Changing user data..... 26

 Create users..... 26

 Delete users..... 27

UUID..... 29, 30, 31, 39