

**Software Manual** 

# Transponder Coding 2 TC2

**Application Software** 

EN

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### 1. General notes

#### 1.1. Use of the manual

This manual describes the function and use of the Transponder Coding 2 TC2 application software (order no. 8000151), version 1.X.X.X.

#### 1.2. Requirement for the user

Proper use of the software requires knowledge about handling the Identification System CIS and/or the Electronic-Key-System EKS.

#### 1.3. System requirements

Hardware:	Standard PC
Operating system:	Windows® 10, 32-bit
	Windows® 10, 64-bit

#### 1.4. Use of brand names

 ${\it Microsoft}\ {\it Windows}^{\it (\! R\!)}$  is a registered trademark of  ${\it Microsoft}\ {\it Corporation}.$ 

## 2. General function of the application

The Transponder Coding 2 TC2 application software is used for reading and writing CIS data carriers or EKS Electronic-Keys on a standard PC. The software is used in conjunction with a read/write station with serial interface or USB interface.

The following transponders can be written:

System	Transponder
	CIS3(A) with 16-byte read/write memory
Identification System CIS	CIS3A-Mini with 116-byte read/write memory
	CIS3A-Mini with 5-byte read-only memory
Electronic-Key-System EKS	Electronic-Key with 116-byte read/write memory

### 3. Installing the program and starting it for the first time

- 1. Use the supplied link to download the ZIP folder Euchner\_Transponder\_Coding\_2\_8000151-....zip. Unzip the folder and save it to a local directory on the PC.
- 2. Run the *TC2*.exe application.
- The start window appears.

😌 CIS3A - Transponder Coding 2		-	×
EUCHNER	Language Choose your language. English ‡		
Project	COM port Select a suitable read/write station.		_
i) Help	÷		
	⊘Advanced settings		
Settings			
Port: 😣	Transponder: Status:		

- 3. Select the language.
- 4. Connect the read/write station with the PC.
- 5. Select the COM port where the read/write station is connected.
- The connection to the read/write station is set up only after a project has been selected (see chapter 4. Selecting project on page 5).

i	Important!
	• Whenever the program is started again, the <i>Edit transponder data</i> menu item will display the most recently used window.
	If you would like to change the settings after starting the program for the first time, select the Settings menu item in the navigation area.

## 4. Selecting project

Prerequisite:

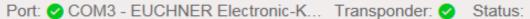
•

A read/write station is connected.

- 1. Click Project in the navigation area.
- 2. Select a project using the *All* tab or the tab for the corresponding system. The following selection options are available:

© EKS structure EU000 - Transponder Coding 2		-	×
EUCHNER	Select a suitable project.		
📎 Edit transponder data	CIS3(A)		I.
Project	Identification System CIS3(A) for transponder with 16-byte read/write memory.		
① Help	Open		
	CIS3A-Mini Identification System CIS3A-Mini for transponder with 116-byte read/write memory.		
	Open		
	CIS3A-Mini unique Identification System CIS3A-Mini for transponder with 5-byte read-only memory. Open		
	EKS structure EU000 Electronic-Key-System EKS for transponder with 116-byte read/write memory. Structure EU000 is used.		
Settings			
Port: OCOM3 - EUCHNER Electronic-K	. Transponder: 🥑 Status:		

- The corresponding hex/ASCII editor in the *Edit transponder data* menu item is loaded. The transponder data can be edited.
  - The status bar at the bottom of the screen displays the COM port used and the selected system:



If the connection to the read/write station is interrupted, this is indicated in the Status field.

### 5. Editing transponder data

The following options are available for editing the transponder data:

	1	2	
😌 EKS structure EU000 - Transponder Coding 2			
EUCHNER	Read Write	Edit V	
Section Edit transponder data	Identification Serial number (UID)	Clear Input Mask Load Template	
	02 87 5F 7F 7B 00 10 32	Save Template	
Project	Additional data		

	Transponder data Prerequisite: a transponder is located in the read/write station's actuating range.							
1	Read	The data of the transponder are read.						
	Write	The data from the hex/ASCII editor are written directly to the transponder.						
	Editing template							
	Clear Input Mask	The hex/ASCII editor fields are cleared.						
	Load Template	The most recently saved template is loaded.						
2	Save Template	<ul> <li>The data in the hex/ASCII editor are saved as a template. This can simplify the following tasks:</li> <li>Writing additional transponders with the same characteristics.</li> <li>Writing several transponders with similar characteristics.</li> <li>Only the currently filled hex/ASCII editor can be saved as a template. One template can be saved per project.</li> </ul>						

The transponder's unique serial number (UID – unique identifier) is factory defined and cannot be edited.

A hex/ASCII editor corresponding to the selected project is displayed.

CIS3(A) - Transponder Coding 2		-	>
EUCHNER	Read Write Edit V		
<ul> <li>Edit transponder data</li> <li>Project</li> </ul>	Data         #       Hex       ASCII         00       00       00       00       00       00       00       00         08       00       00       00       00       00       00       00       00       00		
i Help			
හි Settings			
Port: 🤣 COM3 - EUCHNER Electr	onic-K Transponder: 🥑 Status:		

The following project is available for the Electronic-Key-System EKS:

• EKS structure EU000 (see chapter 8. Electronic-Key-System EKS project and data structure on page 9)

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## 6. Writing transponder

Prerequisites:

- A read/write station is connected.
- The data to be written were prepared in the corresponding hex/ASCII editor.
- 1. Bring a transponder into the read/write station's actuating range.
- → The *Write* button is active.
- 2. Click the Write button.
- ➡ The data are written to the transponder. The data in the hex/ASCII editor change from red to black.

# 7. Hex/ASCII editor

Edited data or data loaded from a template are displayed in red in the hex/ASCII editor. The data are displayed in black only after they have been written to the transponder.

Additionally, filling characters can be used to write transponder data uniformly from a defined byte.

The filling characters can be customized as follows:

- 1. Place the cursor on the corresponding hex field and then click the right mouse button.
- 2. Click the Filling characters button.
- 3. Enter a hexadecimal value in the dialog window as specified and confirm with OK.
- The hex fields are filled with the filling character from the cursor position to the end of the programmable character string.

Alternatively, the filling characters can also be adapted under Advanced settings in the Settings menu item.

## 8. Electronic-Key-System EKS project and data structure

The EKS structure EU000 project is available for the Electronic-Key-System EKS.

EUCHNER	Read Write Edit V		
Edit transponder	Identification		
Edit transponder data	Serial number (UID)		
	02 87 5F 7F 7B 00 10 32		
) Project			
<u></u>	Additional data		
_			
D Help	Data		
	# Hex ASCII		
	000 57 54 33 37 00 03 05 0F WT37		
	008 0F 00 00 00 00 00 00 00 016 00 00 00 00 00 00 00 00		
	032 00 00 00 00 00 00 00 00		
	040 00 00 00 00 00 00 00 00		
	048 00 00 00 00 00 00 00 00		
	056 00 00 00 00 00 00 00 00		
	064 00 00 00 00 00 00 00 00		
	072 00 00 00 00 00 00 00 00		
	080 00 00 00 00 00 00 00 00 088 00 00 00 00 00 00 00 00		
	096 00 00 00 00 00 00 00 00		
	112 00 00 00 00		
settings			
2, oottingo			

A typical example for the utilization of the freely programmable memory for an EKS with data interface could be as follows:

- Department (here: WT)
- Personnel number (here: 37)
- Reserve block
- Access rights for process 1, e.g. milling (here: 3)
- Access rights for process 2, e.g. turning (here: 5)
- Mode of safe operation MO 0 (here: 0F0F)
- Unused memory (freely available)
- Fixed serial number (here: 02...32)

Byte no.	0	1	2	3	4	5	6	7	8		112	113	114	115	116		123	
Value [hex]	57	54	33	37	00	03	05	OF	OF						02		32	
Value [ASCII]	w	т	3	7														
Function Department			onnel iber	Res.	Rights	Rights	Selection of safe operating mode		safe operating		Freely available				Serial number			



### 9. Changing settings

The language and COM port can be selected under Settings in the navigation area.

EKS structure EU000 - Transponder Coding 2		-	$\times$
EUCHNER	Language Choose your language. English		
<ul><li>Project</li><li>Help</li></ul>	COM port Select a suitable read/write station. EUCHNER Electronic-Key-System USB (COM3)		
	<ul> <li>Advanced settings</li> <li>Filling characters</li> <li>Define the characters to be used to fill empty data areas in the hex/ASCII editor.</li> <li>00 The following characters can be defined: [0-9], [a-f], [A-F]</li> <li>Update</li> <li>Search for updates automatically</li> </ul>		
Settings Port: ♥ COM3 - EUCHNER Electronic-K	Transponder: 🖉 Status:		

The following configurations can be carried out in the Advanced settings drop-down menu:

- Define filling character (see chapter 7. Hex/ASCII editor on page 8)
- Search for updates automatically (see chapter 10. Updating software on page 11)

### 10. Updating software

1. Activate "Search for updates automatically" under Update in the Settings menu item in the navigation area:

😌 EKS structure EU000 - Transponder Coding 2		-	×
EUCHNER	Language Choose your language. English		
<ul> <li>Project</li> <li>Help</li> </ul>	COM port Select a suitable read/write station. EUCHNER Electronic-Key-System USB (COM3)		
	<ul> <li>Advanced settings</li> <li>Filling characters</li> <li>Define the characters to be used to fill empty data areas in the hex/ASCII editor.</li> <li>The following characters can be defined:         <ul> <li>[0-9], [a-f], [A-F]</li> </ul> </li> <li>Update</li> <li>Search for updates automatically</li> </ul>		
Settings Port: O COM3 - EUCHNER Electronic-K	. Transponder: 😋 Status:		

A yellow dot will appear next to the *Help* menu item when a new update becomes available:

🙄 EKS structure EU000 - Transponder Coding 2		-	×
EUCHNER	Language Choose your language. English		
Project	COM port Select a suitable read/write station.		-
Help     New version available!	EUCHNER Electronic-Key-System USB (COM3)		
	Advanced settings		

- 2. Click the Download new version button in the Help menu item.
- ➡ A ZIP file is downloaded.
- 3. Click the Start Transponder Coding 2 update button.
- 4. Open the ZIP file.
- ➡ The application is closed.
- ➡ The Windows input prompt opens automatically.
- 5. After the update is complete, click any button to close the Windows input prompt.
- ➡ The application is opened again.

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