

**ecom**

A PEPPERL+FUCHS BRAND

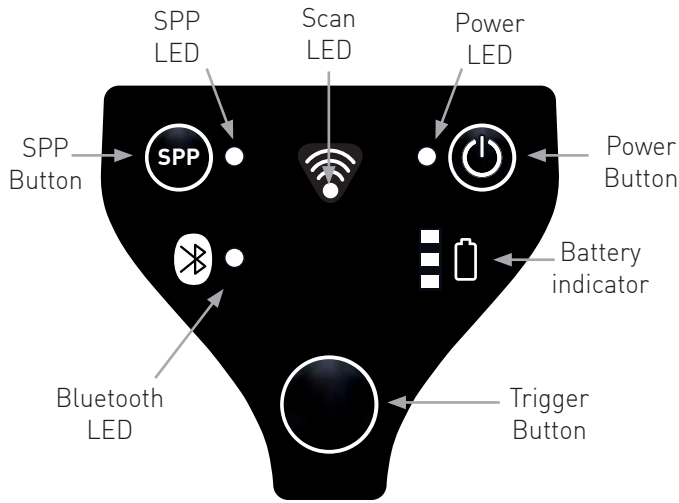


## Bluetooth Scanner **Ident-Ex<sup>®</sup> 01**

Software Manual

Content	
1 Description of buttons and LEDs (top of the Ident-Ex)	3
2 Description of buttons (bottom of the Ident-Ex)	3
3 Switching the Ident-Ex on and off via the On/Off button	3
4 Switching off the Ident-Ex after a certain time	3
5 Bluetooth	3
5.1 Automatic connection at startup	3
5.2 Deleting/establishing a connection	3
5.3 Loss of connection	3
6 Displaying firmware information	4
7 Battery display on the Ident-Ex	4
7.1 Description of battery status LEDs (in battery mode):	4
7.2 Description of battery status LEDs (in charge mode):	4
8 Settings for the Ident-Ex	5
8.1 General settings	5
8.2 Settings for the UNI900 head module	12
8.3 Settings for the EX25i head module	14
8.4 Settings for the TLB30 head module	14
8.5 Settings for the UNI13 head module	15
8.6 Settings for the SE955 head module	16
9 Resetting the settings	32
10 Reading with a head module	32
11 Bootloader	32
11.1 Introduction	32
11.2 Program requirements	32
11.3 Launching the bootloader on the Ident-Ex	32
11.4 Installing new firmware for the Ident-Ex (by using a PC)	33
11.4.1 Pairing the Ident-Ex and PC for Bluetooth connectivity	33
11.4.2 Bluetooth connection between Ident-Ex and HyperTerminal	33
11.4.3 Installing new firmware	35
11.4.3.1 by pressing the trigger button (button on the top of the device)	35
11.5 Installing new firmware for the Ident-Ex (by using a mobile device)	39
11.5.1 Bluetooth connection between Ident-Ex and a mobile device	39
11.5.2 Installing new firmware	40
12 Appendix A	

## 1 Description of buttons and LEDs (top of the Ident-Ex)



## 2 Description of buttons (bottom of the Ident-Ex)

Only one button is located on the underside of the Ident-Ex, namely the main trigger.

## 3 Switching the Ident-Ex on and off via the On/Off button

To switch the Ident-Ex on or off, press and hold the On/Off button for 2 seconds. Please note that the Ident-Ex will only switch off when it is being operated in its battery mode and not when it is located in the docking station/being charged.

## 4 Switching off the Ident-Ex after a certain time

The settings options for the Ident-Ex include a time setting (see Switch off time), after which the Ident-Ex will switch off automatically if there is no Bluetooth connection. If there is no Bluetooth connection available, the time that has been set for this function will start to run. If a Bluetooth connection is not established within this time, the Ident-Ex will switch off. The Ident-Ex will only switch off when it is in its battery mode, and not when it is located in the docking station/being charged.

## 5 Bluetooth

### 5.1 Automatic connection at startup

When the Ident-Ex is switched on, it will attempt to establish a Bluetooth connection with the device it was last connected to.

### 5.2 Deleting/establishing a connection

If you press and hold the SPP button for 2 seconds, an existing Bluetooth connection can be deleted or a new Bluetooth connection can be established with one of the 5 saved Bluetooth addresses (if a Bluetooth connection is not available).

### The following 3 scenarios are possible:

#### Initial state – there is no Bluetooth connection

If you press and hold the SPP button for 2 seconds, the Ident-Ex will attempt to establish a connection with the device to which it was last connected. If you continue to hold the SPP button and a Bluetooth connection cannot be established to the device it was last connected to, it will attempt to connect to the next of the 5 saved Bluetooth address. This will continue to happen every 5 seconds for as long as the SPP button is depressed and a Bluetooth connection cannot be established.

#### Initial state – a Bluetooth connection (HID) has been established between the Ident-Ex and a terminal

If the SPP button is depressed for 2 seconds, the Bluetooth connection to the device will be deleted.

#### Initial state – a Bluetooth connection (SPP) has been established between the Ident-Ex and a terminal

If the SPP button is depressed for 2 seconds, the Bluetooth connection (SPP) will be deleted and the device will attempt to establish a Bluetooth connection (HID) with the device to which it was last connected.

### 5.3 Loss of connection

If Bluetooth connection is lost (e.g. if the connected device is out of range), the Ident-Ex will attempt to reconnect every 5 seconds until the connection is reestablished, the Ident-Ex has been switched off or an attempt is made to connect to a device via the SPP button.

## 6 Displaying firmware information

If the **main trigger** (trigger button on the underside), **Trigger** (trigger button on the top) and **SPP** buttons are pressed during operation, firmware information will be sent to a device that has been connected to the Ident-Ex via Bluetooth (HID), where it is displayed. It must be ensured that the SPP button is depressed first, followed by the main trigger and the trigger button; when releasing, the SPP button must be released before the main trigger and trigger buttons.

The following information is currently transmitted:

- Bootloader version
- Firmware version
- Version of the Bluetooth module used by the Ident-Ex
- Address of the Bluetooth module used by the Ident-Ex
- The 5 saved Bluetooth addresses of devices which have already been connected to the Ident-Ex via Bluetooth.
- Firmware information of the head module

## 7 Battery display on the Ident-Ex

### 7.1 Description of battery status LEDs (in battery mode):

LED	Battery status
Green LED permanently illuminated	Battery level of the Ident-Ex at 100-60%
Yellow LED permanently illuminated	Battery level of the Ident-Ex at 59-30%
Red LED permanently illuminated	Battery level of the Ident-Ex at 29-5%
Red LED flashing	The battery in the Ident-Ex is almost flat (5-0%) and needs to be charged; if not, the device could switch off at any time

### 7.2 Description of battery status LEDs (in charge mode):

LED	Battery status
Green LED permanently illuminated	The Ident-Ex is fully charged and can be removed from the charger (battery level at 100%)
Red and yellow LEDs permanently illuminated and green LED flashing	Charging progress of the Ident-Ex at 99-60%
Red LED permanently illuminated and yellow LED flashing	Charging progress of the Ident-Ex at 59-30%
Red LED flashing	Charging progress of the Ident-Ex at 29-0%

## 8 Settings for the Ident-Ex

### 8.1 General settings

Setting	Options	Default value	Description
Head module	<ul style="list-style-type: none"> <li>10 SN SE955 Barcode Scanner</li> </ul>	SN SE955 Barcode Scanner	Selection of a head module to be used for reading.
	<ul style="list-style-type: none"> <li>20 EN Ex25 Barcode Imager</li> <li>01 NL/NF TLB30 LF RFID Reader</li> <li>02 NH UNI13 HF RFID Reader</li> <li>03 NE/NU UNI900 UHF RFID Reader</li> <li>11 SL/SF SE955 TLB30 Dual</li> <li>12 SH SE955 UNI13 Dual</li> </ul>		In order to be able to read with the selected head module, a selection must be implemented for the <b>Trigger Buttons</b> .
Enable Beep	<ul style="list-style-type: none"> <li>off</li> <li>soft</li> <li>middle</li> <li>loud</li> <li>resounding</li> </ul>	middle	Setting for the beep sound that is emitted when a reading is successful. If this is set to <b>off</b> , a beep sound will not be emitted when a reading is successful.
Signal duration (in milliseconds)	100-2000	500	Setting for how long the Scan LED is illuminated and how long the beep sound is emitted when a reading is successful.  Specified in milliseconds.
<b>Trigger Buttons</b>			
Main Trigger	<ul style="list-style-type: none"> <li>No Device</li> <li>Barcode</li> <li>RFID</li> <li>bulk reading erase read</li> </ul>	Barcode	Setting for the type of head module that is to be used for a read operation when pressing the main trigger button (trigger button on the underside).  The process for reading with a head module can be disabled for this button by selecting <b>No Device</b> .
Trigger	<ul style="list-style-type: none"> <li>No Device</li> <li>Barcode</li> <li>RFID</li> <li>bulk reading erase last read</li> </ul>	RFID	Setting for the type of head module that is to be used for a read operation when pressing the trigger button (trigger button on the top).  The process for reading with a head module can be disabled for this button by selecting <b>No Device</b> .

	<ul style="list-style-type: none"> <li>• 20 EN Ex25 Barcode Imager</li> <li>• 01 NL/NF TLB30 LF RFID Reader</li> <li>• 02 NH UNI13 HF RFID Reader</li> <li>• 03 NE/NU UNI900 UHF RFID Reader</li> <li>• 11 SL/SF SE955 TLB30 Dual</li> <li>• 12 SH SE955 UNI13 Dual</li> </ul>		<p>reading.</p> <p>In order to be able to read with the selected head module, a selection must be implemented for the <b>Trigger Buttons</b>.</p>
Enable Beep	<ul style="list-style-type: none"> <li>• off</li> <li>• soft</li> <li>• middle</li> <li>• loud</li> <li>• resounding</li> </ul>	middle	Setting for the beep sound that is emitted when a reading is successful. If this is set to <b>off</b> , a beep sound will not be emitted when a reading is successful.
Signal duration (in milliseconds)	100-2000	500	<p>Setting for how long the Scan LED is illuminated and how long the beep sound is emitted when a reading is successful.</p> <p>Specified in milliseconds.</p>
<b>Trigger Buttons</b>			
Main Trigger	<ul style="list-style-type: none"> <li>• No Device</li> <li>• Barcode</li> <li>• RFID</li> <li>• bulk reading erase read</li> </ul>	Barcode	<p>Setting for the type of head module that is to be used for a read operation when pressing the main trigger button (trigger button on the underside).</p> <p>The process for reading with a head module can be disabled for this button by selecting <b>No Device</b>.</p>
Trigger	<ul style="list-style-type: none"> <li>• No Device</li> <li>• Barcode</li> <li>• RFID</li> <li>• bulk reading erase last read</li> </ul>	RFID	<p>Setting for the type of head module that is to be used for a read operation when pressing the trigger button (trigger button on the top).</p> <p>The process for reading with a head module can be disabled for this button by selecting <b>No Device</b>.</p>



BT			
BT name	0-140 characters	Ident-Ex 01	Setting for the Bluetooth name of the Ident-Ex.
Additional Keys			
Modifier1	<ul style="list-style-type: none"> <li>• None</li> <li>• LEFT CTRL</li> <li>• LEFT SHIFT</li> <li>• LEFT ALT</li> <li>• LEFT GUI</li> <li>• RIGHT CTRL</li> <li>• RIGHT SHIFT</li> <li>• RIGHT ALT</li> <li>• RIGHT GUI</li> </ul>	None	<p>These 3 settings only work in conjunction with one or more of the settings for <b>Key 1, Key 2, Key 3, Key 4, Key 5</b> or <b>Key 6</b>.</p> <p>The process of actuating 6 different keys can be simulated with the Key Codes. These Key Codes are transferred to the Bluetooth module and appended to the data that is read with a head module (after possible output of <b>Postamble</b> data).</p> <p>The modifiers 1, 2 and 3 are used to modify the result of the keystroke that is simulated by a Key Code. If, for example, LEFT SHIFT is selected for Modifier1 and Left Arrow is selected for Key Code1, this would result in highlighting the character that is located at the current cursor position.</p>
Modifier2	<ul style="list-style-type: none"> <li>• None</li> <li>• LEFT CTRL</li> <li>• LEFT SHIFT</li> <li>• LEFT ALT</li> <li>• LEFT GUI</li> <li>• RIGHT CTRL</li> <li>• RIGHT SHIFT</li> <li>• RIGHT ALT</li> <li>• RIGHT GUI</li> </ul>	None	
Modifier3	<ul style="list-style-type: none"> <li>• None</li> <li>• LEFT CTRL</li> <li>• LEFT SHIFT</li> <li>• LEFT ALT</li> <li>• LEFT GUI</li> <li>• RIGHT CTRL</li> <li>• RIGHT SHIFT</li> <li>• RIGHT ALT</li> <li>• RIGHT GUI</li> </ul>	None	
Key 1	<ul style="list-style-type: none"> <li>• None</li> <li>• Return</li> <li>• Escape</li> <li>• Delete</li> <li>• Tab</li> <li>• Spacebar</li> <li>• Caps Lock</li> <li>• F1</li> <li>• F2</li> <li>• F3</li> <li>• F4</li> <li>• F5</li> <li>• F6</li> <li>• F7</li> <li>• F8</li> <li>• F9</li> </ul>	None	Setting of a Key Code for simulating a keystroke.

	<ul style="list-style-type: none"> <li>• F10</li> <li>• F11</li> <li>• F12</li> <li>• Print Screen</li> <li>• Scroll Lock</li> <li>• Pause</li> <li>• Insert</li> <li>• Home</li> <li>• PageUp</li> <li>• Delete Forward</li> <li>• End</li> <li>• Page Down</li> <li>• Right Arrow</li> <li>• Left Arrow</li> <li>• Down Arrow</li> <li>• Up Arrow</li> </ul>		
Key 2	<ul style="list-style-type: none"> <li>• None</li> <li>• Return</li> <li>• Escape</li> <li>• Delete</li> <li>• Tab</li> <li>• Spacebar</li> <li>• Caps Lock</li> <li>• F1</li> <li>• F2</li> <li>• F3</li> <li>• F4</li> <li>• F5</li> <li>• F6</li> <li>• F7</li> <li>• F8</li> <li>• F9</li> <li>• F10</li> <li>• F11</li> <li>• F12</li> <li>• Print Screen</li> <li>• Scroll Lock</li> <li>• Pause</li> <li>• Insert</li> <li>• Home</li> <li>• PageUp</li> <li>• Delete Forward</li> <li>• End</li> <li>• Page Down</li> <li>• Right Arrow</li> <li>• Left Arrow</li> <li>• Down Arrow</li> <li>• Up Arrow</li> </ul>	None	Setting of a Key Code for simulating a keystroke.
Key 3	<ul style="list-style-type: none"> <li>• None</li> <li>• Return</li> <li>• Escape</li> <li>• Delete</li> <li>• Tab</li> <li>• Spacebar</li> <li>• Caps Lock</li> <li>• F1</li> <li>• F2</li> <li>• F3</li> </ul>	None	Setting of a Key Code for simulating a keystroke.



	<ul style="list-style-type: none"> <li>• F4</li> <li>• F5</li> <li>• F6</li> <li>• F7</li> <li>• F8</li> <li>• F9</li> <li>• F10</li> <li>• F11</li> <li>• F12</li> <li>• Print Screen</li> <li>• Scroll Lock</li> <li>• Pause</li> <li>• Insert</li> <li>• Home</li> <li>• PageUp</li> <li>• Delete Forward</li> <li>• End</li> <li>• Page Down</li> <li>• Right Arrow</li> <li>• Left Arrow</li> <li>• Down Arrow</li> <li>• Up Arrow</li> </ul>		
Key 4	<ul style="list-style-type: none"> <li>• None</li> <li>• Return</li> <li>• Escape</li> <li>• Delete</li> <li>• Tab</li> <li>• Spacebar</li> <li>• Caps Lock</li> <li>• F1</li> <li>• F2</li> <li>• F3</li> <li>• F4</li> <li>• F5</li> <li>• F6</li> <li>• F7</li> <li>• F8</li> <li>• F9</li> <li>• F10</li> <li>• F11</li> <li>• F12</li> <li>• Print Screen</li> <li>• Scroll Lock</li> <li>• Pause</li> <li>• Insert</li> <li>• Home</li> <li>• PageUp</li> <li>• Delete Forward</li> <li>• End</li> <li>• Page Down</li> <li>• Right Arrow</li> <li>• Left Arrow</li> <li>• Down Arrow</li> <li>• Up Arrow</li> </ul>	None	Setting of a Key Code for simulating a keystroke.
Key 5	<ul style="list-style-type: none"> <li>• None</li> <li>• Return</li> <li>• Escape</li> <li>• Delete</li> </ul>	None	Setting of a Key Code for simulating a keystroke.

	<ul style="list-style-type: none"> <li>• Tab</li> <li>• Spacebar</li> <li>• Caps Lock</li> <li>• F1</li> <li>• F2</li> <li>• F3</li> <li>• F4</li> <li>• F5</li> <li>• F6</li> <li>• F7</li> <li>• F8</li> <li>• F9</li> <li>• F10</li> <li>• F11</li> <li>• F12</li> <li>• Print Screen</li> <li>• Scroll Lock</li> <li>• Pause</li> <li>• Insert</li> <li>• Home</li> <li>• PageUp</li> <li>• Delete Forward</li> <li>• End</li> <li>• Page Down</li> <li>• Right Arrow</li> <li>• Left Arrow</li> <li>• Down Arrow</li> <li>• Up Arrow</li> </ul>		
Key 6	<ul style="list-style-type: none"> <li>• None</li> <li>• Return</li> <li>• Escape</li> <li>• Delete</li> <li>• Tab</li> <li>• Spacebar</li> <li>• Caps Lock</li> <li>• F1</li> <li>• F2</li> <li>• F3</li> <li>• F4</li> <li>• F5</li> <li>• F6</li> <li>• F7</li> <li>• F8</li> <li>• F9</li> <li>• F10</li> <li>• F11</li> <li>• F12</li> <li>• Print Screen</li> <li>• Scroll Lock</li> <li>• Pause</li> <li>• Insert</li> <li>• Home</li> <li>• PageUp</li> <li>• Delete Forward</li> <li>• End</li> <li>• Page Down</li> <li>• Right Arrow</li> <li>• Left Arrow</li> </ul>	None	Setting of a Key Code for simulating a keystroke.

	<ul style="list-style-type: none"> <li>• Down Arrow</li> <li>• Up Arrow</li> </ul>		
Preamble	0-20 characters		<p>Specification of characters that are appended to the front of data read with a head module.</p> <p>HEX values can also be specified here through the introduction of "\x". If, for example, "\x0D" is specified as preamble, a Carriage Return is appended to the front of data read with a head module.</p>
Postamble	0-20 characters		<p>Specification of characters that are appended to the end of data read with a head module.</p> <p>HEX values can also be specified here through the introduction of "\x". If, for example, "\x0D" is specified as postamble, a Carriage Return is appended to the end of data read with a head module.</p>
Language	<ul style="list-style-type: none"> <li>• german</li> <li>• english</li> <li>• french</li> </ul>	english	Setting for the keyboard language.
Switch off time (in minutes)	0-10	5	<p>Specification of a time after which the Ident-Ex will switch off automatically if a Bluetooth connection is not available and the Ident-Ex is not located in the docking station/being charged.</p> <p>Specification in minutes. Interval in 1 minute increments.</p>

## 8.2 Settings for the UNI900 head module

Setting	Options	Default value	Description
set EPC in front	Enable/disable	Enabled	<p>If this setting is enabled, the EPC of a read RFID TAG will be appended to the front of the read data and transmitted with it.</p> <p>If this setting is disabled, the setting for <b>Data length</b> must be greater than 0, otherwise no data will be read or transmitted for an RFID TAG.</p> <p>If this setting is enabled and the setting for <b>Data length</b> is 0, only the EPC of a read RFID TAG will be transmitted.</p>
add CR after each EPC	Enable/disable	Disabled	<p>This setting can be used to specify whether or not a Carriage Return is to be appended and output after each EPC if a UNI900 head module identifies several RFID TAGs during a reading process.</p>
From block	0-9999	2	<p>Specification of the block from which the data of an RFID TAG is to be read.</p> <p>This setting does not have an effect if several RFID TAGs are identified when reading with a UNI900 head module. In this case, only the EPC data is transmitted, without any block data from the TAG (<b>set EPC in front</b> must be enabled).</p>
Data length (in bytes)	0-9999	8	<p>Specification of the length (in bytes) of data that is to be read from an RFID TAG.</p>

			<p>This setting should only be set to 0 if the <b>set EPC in front</b> setting is enabled. Otherwise, no data from an RFID TAG will be read or transmitted.</p> <p>This setting does not have an effect if several RFID TAGs are identified when reading with a UNI900 head module. In this case, only the EPC data is transmitted, without any block data from the TAG (<b>set EPC in front</b> must be enabled).</p>
Timeout for reading (in seconds)	1-25	3	<p>Timeout setting for reading with a UNI900 head module. If an RFID TAG cannot be read during this time, the reading process is aborted and must be restarted.</p> <p>Specification in seconds. Interval in 1 second increments.</p>
Output Data	<ul style="list-style-type: none"> <li>• HEX</li> <li>• ASCII</li> </ul>	HEX	This setting can be used to specify the format of the read data.
High <-> Low Byte	Enable/disable	Disabled	This setting can be used to specify whether or not the higher bytes are to be exchanged with the low bytes of a read data block.
Power adjustment	<ul style="list-style-type: none"> <li>• 06 dB</li> <li>• 07 dB</li> <li>• 08 dB</li> <li>• 09 dB</li> <li>• 10 dB</li> <li>• 11 dB</li> <li>• 12 dB</li> <li>• 13 dB</li> <li>• 14 dB</li> <li>• 15 dB</li> <li>• 16 dB</li> <li>• 17 dB</li> </ul>	25 dB	The output of the UNI900 head module can be adjusted here.

	<ul style="list-style-type: none"> <li>• 18 dB</li> <li>• 19 dB</li> <li>• 20 dB</li> <li>• 21 dB</li> <li>• 22 dB</li> <li>• 23 dB</li> <li>• 24 dB</li> <li>• 25 dB</li> <li>• 26 dB</li> <li>• 27 dB</li> </ul>		
--	--	--	--

### 8.3 Settings for the EX25i head module

For further information about the settings for the EX25i, please refer to the ISCP Command Protocol from Intermec.

### 8.4 Settings for the TLB30 head module

Setting	Options	Default value	Description
From block	0-9999	2	<p>Specification of the block from which the data of an RFID TAG is to be read.</p> <p>Does not have an effect on Unique, Zoodiac, Tiris (read-only) or Tiris (read/write) TAGs.</p>
Data length (in bytes)	0-9999	8	<p>Specification of the length (in bytes) of data that is to be read from an RFID TAG.</p> <p>Does not have an effect on Unique, Zoodiac or Tiris (read-only) TAGs.</p>
Unique	Enable/disable	Enabled	This setting can be used to specify whether or not a Unique TAG is to be read.
Hitag S	Enable/disable	Enabled	This setting can be used to specify whether or not a Hitag S TAG is to be read.
Zoodiac	Enable/disable	Disabled	This setting can be used to specify whether or not a Zoodiac TAG is to be read.
Tiris	Enable/disable	Disabled	This setting can be used to specify whether or not a Tiris TAG is to be read.
Timeout for reading (in	1-25	3	Timeout setting for

seconds)			reading with a TLB30 head module. If an RFID TAG cannot be read during this time, the reading process is aborted and must be restarted.  Specification in seconds. Interval in 1 second increments.
Output Data	<ul style="list-style-type: none"> <li>• HEX</li> <li>• ASCII</li> </ul>	HEX	This setting can be used to specify the format of the read data.

### 8.5 Settings for the UNI13 head module

Setting	Options	Default value	Description
set UID in front	Enable/disable	Disabled	<p>If this setting is enabled, the UID of a read RFID TAG will be appended to the front of the read data and transmitted with it.</p> <p>If this setting is disabled, the setting for <b>Data length</b> must be greater than 0, otherwise no data will be read or transmitted for an RFID TAG.</p> <p>If this setting is enabled and the setting for Data length is 0, only the UID of a read RFID TAG will be transmitted.</p>
From block	0-9999	2	Specification of the block from which the data of an RFID TAG is to be read.
Data length (in bytes)	0-9999	8	<p>Specification of the length (in bytes) of data that is to be read from an RFID TAG.</p> <p>This setting should only be set to 0 if the <b>set UID in front</b> setting is enabled. Otherwise, no data from an RFID TAG</p>



			will be read or transmitted.
ISO15693	Enable/disable	Enabled	This setting can be used to specify whether or not an ISO15693 TAG is to be read.
ARIO 64bit	Enable/disable	Disabled	This setting can be used to specify whether or not an ARIO 64bit TAG is to be read.
ICODE 1	Enable/disable	Enabled	This setting can be used to specify whether or not an ICODE 1 TAG is to be read.
Mifare	Enable/disable	Disabled	This setting can be used to specify whether or not a Mifare TAG is to be read.
Timeout for reading (in seconds)	1-25	3	Timeout setting for reading with a UNI13 head module. If an RFID TAG cannot be read during this time, the reading process is aborted and must be restarted.  Specification in seconds. Interval in 1 second increments.
Output Data	<ul style="list-style-type: none"> <li>• HEX</li> <li>• ASCII</li> </ul>	HEX	This setting can be used to specify the format of the read data.
High <-> Low Byte	Enable/disable	Disabled	This setting can be used to specify whether or not the higher bytes are to be exchanged with the low bytes of a read data block.

### 8.6 Settings for the SE955 head module

Setting	Options	Default value	Description
Symbologies			
UPC/EAN			
Enable UPC-A	Enable/disable	Enabled	This setting can be used to specify whether or not UPC-A barcodes are to be read.
Enable UPC-E	Enable/disable	Enabled	This setting can be used

			to specify whether or not UPC-E barcodes are to be read.
Enable UPC-E1	Enable/disable	Disabled	This setting can be used to specify whether or not UPC-E1 barcodes are to be read.
Enable EAN-8	Enable/disable	Enabled	This setting can be used to specify whether or not EAN-8 barcodes are to be read.
Enable EAN-13	Enable/disable	Enabled	This setting can be used to specify whether or not EAN-13 barcodes are to be read.
Enable Bookland EAN	Enable/disable	Disabled	This setting can be used to specify whether or not Bookland EAN barcodes are to be read.
Decode UPC/EAN Supplementals	<ul style="list-style-type: none"> <li>• Ignore</li> <li>• Decode</li> <li>• Autodiscriminate</li> <li>• Smart Supplemental Mode</li> <li>• 378/379 Supplemental Mode</li> <li>• 978 Supplemental Mode</li> </ul>	Ignore	<ul style="list-style-type: none"> <li>• Ignore = UPC/EAN barcodes are decoded and the additional characters are ignored.</li> <li>• Decode = Only UPC/EAN barcodes with additional characters are decoded.</li> <li>• Autodiscriminate = see <b>Decode UPC/EAN Supplemental Redundancy</b></li> <li>• Smart Supplemental Mode = EAN-13 barcodes with additional characters and the prefix "378", "379" or "978" are decoded and the additional characters are not ignored. All other UPC/EAN barcodes are decoded, but the additional characters are ignored.</li> <li>• 378/379 Supplemental Mode = EAN-13 barcodes</li> </ul>

			<p>with additional characters and the prefix "378" or "379" are decoded and the additional characters are not ignored. All other UPC/EAN barcodes are decoded, but the additional characters are ignored.</p> <ul style="list-style-type: none"> <li>978 Supplemental Mode = EAN-13 barcodes with additional characters and the prefix "978" are decoded and the additional characters are not ignored. All other UPC/EAN barcodes are decoded, but the additional characters are ignored.</li> </ul>
Decode UPC/EAN Supplemental Redundancy	2-30	7	<p>This is only effective if the <b>Decode UPC/EAN Supplementals</b> setting is set to "Autodiscriminate".</p> <p>This setting can be used to specify how often a barcode with additional characters is decoded before it is transferred.</p>
Transmit UPC-A check digit	Enable/disable	Enabled	<p>This setting can be used to specify whether or not the check digits of a UPC-A barcode are to be transmitted.</p>
Transmit UPC-E check digit	Enable/disable	Enabled	<p>This setting can be used to specify whether or not the check digits of a UPC-E barcode are to be transmitted.</p>
Transmit UPC-E1 check digit	Enable/disable	Enabled	<p>This setting can be used to specify whether or not the check digits of a UPC-E1 barcode are to be transmitted.</p>
UPC-A Preamble	<ul style="list-style-type: none"> <li>No Preamble</li> </ul>	System Character	Preamble setting for

	<ul style="list-style-type: none"> <li>• System Character</li> <li>• System Character and Country Code</li> </ul>		transmitting UPC-A barcode data.
UPC-E Preamble	<ul style="list-style-type: none"> <li>• No Preamble</li> <li>• System Character</li> <li>• System Character and Country Code</li> </ul>	System Character	Preamble setting for transmitting UPC-E barcode data.
UPC-E1 Preamble	<ul style="list-style-type: none"> <li>• No Preamble</li> <li>• System Character</li> <li>• System Character and Country Code</li> </ul>	System Character	Preamble setting for transmitting UPC-E1 barcode data.
Convert UPC-E to A	Enable/disable	Disabled	This setting can be used to specify whether or not the data of a UPC-E barcode is to be converted into the format of a UPC-A barcode. When the conversion process is complete, the settings for the UPC-A barcode have an effect on the data to be transmitted.
Convert UPC-E1 to A	Enable/disable	Disabled	This setting can be used to specify whether or not the data of a UPC-E1 barcode is to be converted into the format of a UPC-A barcode. When the conversion process is complete, the settings for the UPC-A barcode have an effect on the data to be transmitted.
Security Level	<ul style="list-style-type: none"> <li>• Level 0</li> <li>• Level 1</li> <li>• Level 2</li> <li>• Level 3</li> </ul>		There are 4 levels of security for decoding UPC/EAN barcodes. The higher the level the lower the quality of the barcode.
UCC Coupon Extended Code	Enable/disable	Disabled	This setting can be used to specify whether or not a USS Coupon Extended Code is to be read.
<b>Code 128</b>			
Enable Code 128	Enable/disable	Enabled	This setting can be used to specify whether or not Code 128 barcodes are to be read.

UCC/EAN 128	Enable/disable	Enabled	This setting can be used to specify whether or not UCC/EAN 128 barcodes are to be read.
ISBT 128	Enable/disable	Enabled	This setting can be used to specify whether or not ISBT 128 barcodes are to be read.
<b>Code 39</b>			
Enable Code 39	Enable/disable	Enabled	This setting can be used to specify whether or not Code 39 barcodes are to be read.
Trioptic Code 39	Enable/disable	Disabled	This setting can be used to specify whether or not Trioptic Code 39 barcodes are to be read.
Convert Code 39 to Code 32	Enable/disable	Disabled	This setting can be used to specify whether or not a Code 39 is to be converted to a Code 32.
Code 32 Prefix	Enable/disable	Disabled	This setting can be used to specify whether or not an "A" is to be set as a preamble before a Code 32 barcode.
Length options	<ul style="list-style-type: none"> <li>• One discrete length</li> <li>• Two discrete lengths</li> <li>• Lengths within a range</li> <li>• Any length</li> </ul>	Lengths within a range	<p>Setting lengths for Code 39 barcodes.</p> <p>If Code 39 barcodes of any length are to be read, this setting must be set to "Any length".</p>
One discrete length	1-255	1	<p>This setting can be used to specify that only Code 39 barcodes which correspond to the length set here will be read.</p> <p>This setting is only effective when <b>Length options</b> is set to "One discrete length".</p>
Two discrete lengths (lower)	1-255	1	<p>This setting can be used to specify that only Code 39 barcodes will be read whose length corresponds to one of the two settings.</p> <p>This setting is only</p>
Two discrete lengths (larger)	1-255	255	

			effective when <b>Length options</b> is set to "Two discrete lengths".
Lengths within a range (from)	0-255	2	This setting can be used to specify that only Code 39 barcodes will be read whose length is located within the set range.  This setting is only effective when <b>Length options</b> is set to "Length within a range".
Lengths within a range (until)	0-255	55	
Check digit verification	Enable/disable	Disabled	This setting can be used to specify whether or not the data of a Code 39 barcode is to be checked with regard to its validity.
Transmit check digit	Enable/disable	Disabled	This setting can be used to specify whether or not the check digits of a Code 39 barcode are to be transmitted.
Full ASCII Conversion	Enable/disable	Disabled	This setting can be used to specify whether or not Code 39 Full ASCII barcodes are to be read.
<b>Code 93</b>			
Enable Code 93	Enable/disable	Disabled	This setting can be used to specify whether or not Code 93 barcodes are to be read.
Length options	<ul style="list-style-type: none"> <li>• One discrete length</li> <li>• Two discrete lengths</li> <li>• Lengths within a range</li> <li>• Any length</li> </ul>	Lengths within a range	Setting lengths for Code 93 barcodes.  If Code 93 barcodes of any length are to be read, this setting must be set to "Any length".
One discrete length	1-255	1	This setting can be used to specify that only Code 93 barcodes which correspond to the length set here will be read.  This setting is only effective when <b>Length options</b> is set to "One discrete length".
Two discrete lengths (lower)	1-255	1	This setting can be used to specify that only Code

Two discrete lengths (larger)	1-255	255	93 barcodes will be read whose length corresponds to one of the two settings.  This setting is only effective when <b>Length options</b> is set to "Two discrete lengths".
Lengths within a range (from)	0-255	4	This setting can be used to specify that only Code 93 barcodes will be read whose length is located within the set range.  This setting is only effective when <b>Length options</b> is set to "Length within a range".
Lengths within a range (until)	0-255	55	
<b>Code 11</b>			
Enable Code 11	Enable/disable	Disabled	This setting can be used to specify whether or not Code 11 barcodes are to be read.
Length options	<ul style="list-style-type: none"> <li>• One discrete length</li> <li>• Two discrete lengths</li> <li>• Lengths within a range</li> <li>• Any length</li> </ul>	Lengths within a range	Setting lengths for Code 11 barcodes.  If Code 11 barcodes of any length are to be read, this setting must be set to "Any length".
One discrete length	1-255	1	This setting can be used to specify that only Code 11 barcodes which correspond to the length set here will be read.  This setting is only effective when <b>Length options</b> is set to "One discrete length".
Two discrete lengths (lower)	1-255	1	This setting can be used to specify that only Code 11 barcodes will be read whose length corresponds to one of the two settings.  This setting is only effective when <b>Length options</b> is set to "Two
Two discrete lengths (until)	1-255	255	



			discrete lengths".
Lengths within a range (from)	0-255	4	This setting can be used to specify that only Code 11 barcodes will be read whose length is located within the set range.  This setting is only effective when <b>Length options</b> is set to "Length within a range".
Lengths within a range (until)	0-255	55	
Check digit verification	<ul style="list-style-type: none"> <li>• Disable</li> <li>• One check digit</li> <li>• Two check digits</li> </ul>	Disable	<p>This setting can be used to allow the data of a Code 11 barcode to be checked with regard to its validity.</p> <p>The check digit mechanism for the data of a Code 11 barcode can be selected.</p>
Transmit check digit(s)	Enable/disable	Disabled	This setting can be used to specify whether or not the check digits of Code 11 barcodes are to be transmitted.
<b>Interleaved 2of5</b>			
Enable Interleaved 2of5	Enable/disable	Enabled	This setting can be used to specify whether or not Interleaved 2of5 barcodes are to be read.
Length options	<ul style="list-style-type: none"> <li>• One discrete length</li> <li>• Two discrete lengths</li> <li>• Lengths within a range</li> <li>• Any length</li> </ul>	One discrete length	<p>Setting lengths for Interleaved 2of5 barcodes.</p> <p>If Interleaved 2of5 barcodes of any length are to be read, this setting must be set to "Any length".</p>
One discrete length	1-255	14	<p>This setting can be used to specify that only Interleaved 2of5 barcodes which correspond to the length set here will be read.</p> <p>This setting is only effective when <b>Length options</b> is set to "One discrete length".</p>

Two discrete lengths (lower)	1-255	1	This setting can be used to specify that only Interleaved 2of5 barcodes will be read whose length corresponds to one of the two settings.  This setting is only effective when <b>Length options</b> is set to "Two discrete lengths".
Two discrete lengths (larger)	1-255	255	
Lengths within a range (from)	0-255	0	This setting can be used to specify that only Interleaved 2of5 barcodes will be read whose length is located within the set range.  This setting is only effective when <b>Length options</b> is set to "Length within a range".
Lengths within a range (until)	0-255	255	
Check digit verification	<ul style="list-style-type: none"> <li>• Disable</li> <li>• USS check digit</li> <li>• OPCC check digit</li> </ul>	Disable	This setting can be used to specify whether the validity of the data of an Interleaved 2of5 barcode is to be checked and which algorithm is to be used.
Transmit check digit	Enable/disable	Disabled	This setting can be used to specify whether or not the check digits of Interleaved 2of5 barcodes are to be transmitted.
Convert Interleaved 2of5 to EAN13	Enable/disable	Disabled	This setting can be used to specify whether or not a 14-character Interleaved 2of5 barcode is to be converted to an EAN-13. The barcode must have a length of 14 characters, a leading 0 and a valid EAN-13 check digit.
<b>Discrete 2of5</b>			
Enable Discrete 2of5	Enable/disable	Disabled	This setting can be used to specify whether or not Discrete 2of5 barcodes

			are to be read.
Length options	<ul style="list-style-type: none"> <li>• One discrete length</li> <li>• Two discrete lengths</li> <li>• Lengths within a range</li> <li>• Any length</li> </ul>	One discrete length	<p>Setting lengths for Discrete 2of5 barcodes.</p> <p>If Discrete 2of5 barcodes of any length are to be read, this setting must be set to "Any length".</p>
One discrete length	1-255	12	<p>This setting can be used to specify that only Discrete 2of5 barcodes which correspond to the length set here will be read.</p> <p>This setting is only effective when <b>Length options</b> is set to "One discrete length".</p>
Two discrete lengths (lower)	1-255	1	<p>This setting can be used to specify that only Discrete 2of5 barcodes will be read whose length corresponds to one of the two settings.</p> <p>This setting is only effective when <b>Length options</b> is set to "Two discrete lengths".</p>
Two discrete lengths (larger)	1-255	255	
Lengths within a range (from)	0-255	0	<p>This setting can be used to specify that only Discrete 2of5 barcodes will be read whose length is located within the set range.</p> <p>This setting is only effective when <b>Length options</b> is set to "Length within a range".</p>
Lengths within a range (until)	0-255	255	
<b>Chinese 2of5</b>			
Enable Chinese 2of5	Enable/disable	Disabled	This setting can be used to specify whether or not Chinese 2of5 barcodes are to be read.
<b>Codabar</b>			
Enable Codabar	Enable/disable	Disabled	This setting can be used to specify whether or not Codabar barcodes are to be read.

Length options	<ul style="list-style-type: none"> <li>• One discrete length</li> <li>• Two discrete lengths</li> <li>• Lengths within a range</li> <li>• Any length</li> </ul>	Lengths within a range	<p>Setting lengths for Codabar barcodes.</p> <p>If Codabar barcodes of any length are to be read, this setting must be set to "Any length".</p>
One discrete length	1-255	1	<p>This setting can be used to specify that only Codabar barcodes which correspond to the length set here will be read.</p> <p>This setting is only effective when <b>Length options</b> is set to "One discrete length".</p>
Two discrete lengths (lower)	1-255	1	<p>This setting can be used to specify that only Codabar barcodes will be read whose length corresponds to one of the two settings.</p> <p>This setting is only effective when <b>Length options</b> is set to "Two discrete lengths".</p>
Two discrete lengths (larger)	1-255	255	
Lengths within a range (from)	0-255	5	<p>This setting can be used to specify that only Codabar barcodes will be read whose length is located within the set range.</p> <p>This setting is only effective when <b>Length options</b> is set to "Length within a range".</p>
Lengths within a range (until)	0-255	55	
CLSI Editing	Enable/disable	Disabled	<p>This setting can be used to specify whether or not start and stop characters are to be removed and whether a space is to be inserted after the 1st, 5th and 10th characters for Codabar barcodes that are 14 characters long.</p> <p>Note: The length of a Codabar barcode does</p>

			not include the start and stop characters.
NOTIS Editing	Enable/disable	Disabled	This setting can be used to specify whether or not start and stop characters of Codabar barcodes should be removed.
<b>MSI</b>			
Enable MSI	Enable/disable	Disabled	This setting can be used to specify whether or not MSI barcodes are to be read.
Length options	<ul style="list-style-type: none"> <li>• One discrete length</li> <li>• Two discrete lengths</li> <li>• Lengths within a range</li> <li>• Any length</li> </ul>	Lengths within a range	<p>Setting lengths for MSI barcodes.</p> <p>If MSI barcodes of any length are to be read, this setting must be set to "Any length".</p>
One discrete lengths	1-255	1	<p>This setting can be used to specify that only MSI barcodes which correspond to the length set here will be read.</p> <p>This setting is only effective when <b>Length options</b> is set to "One discrete length".</p>
Two discrete lengths (lower)	1-255	1	<p>This setting can be used to specify that only MSI barcodes will be read whose length corresponds to one of the two settings.</p> <p>This setting is only effective when <b>Length options</b> is set to "Two discrete lengths".</p>
Two discrete lengths (larger)	1-255	255	
Lengths within a range (from)	0-255	6	<p>This setting can be used to specify that only MSI barcodes will be read whose length is located within the set range.</p> <p>This setting is only effective when <b>Length options</b> is set to "Length within a range".</p>
Lengths within a range (until)	0-255	55	
Check digits	<ul style="list-style-type: none"> <li>• One check digit</li> </ul>	One check digit	Selection of how many

	<ul style="list-style-type: none"> <li>Two check digits</li> </ul>		<p>check digits the MSI barcode contains to check the validity of the data.</p> <p>If "Two check digits" is selected, an algorithm must be set via the setting <b>Check digit algorithm</b>.</p>
Transmit check digit	Enable/disable	Disabled	This setting can be used to specify whether the check digits are to be transmitted.
Check digit algorithm	<ul style="list-style-type: none"> <li>Mod10/Mod11</li> <li>Mod10/Mod10</li> </ul>	Mod10/Mod10	If the <b>Check digits</b> setting is set to "Two check digits", an algorithm must be set here to ensure the validity via the additional check.
<b>GS1 DataBar</b>			
GS1 DataBar 14	Enable/disable	Disabled	This setting can be used to specify whether or not GS1 DataBar 14 barcodes are to be read.
GS1 DataBar Limited	Enable/disable	Disabled	This setting can be used to specify whether or not GS1 DataBar Limited barcodes are to be read.
GS1 DataBar Expanded	Enable/disable	Disabled	This setting can be used to specify whether or not GS1 DataBar Expanded barcodes are to be read.
Convert GS1 DataBar to UPC/EAN	Enable/disable	Disabled	<p>If this is enabled and a barcode features a leading "0", the characters "010" are cut off and the barcode is displayed as an EAN-13 barcode.</p> <p>Barcodes with 2 or more leading 0s but less than 6 have the character "0100" cut off and the barcode is displayed as a UPC-A barcode.</p> <p>This setting is only effective for GS1</p>

			DataBar 14 and GS1 DataBar Limited barcodes.
Symbology options			
Symbology identifier	<ul style="list-style-type: none"> <li>• Disable</li> <li>• Aim Code ID Character</li> <li>• Symbol Code ID Character</li> </ul>	Disable	<p>By using this setting, additional information relating to the read barcode can be returned along with the data of the barcode in the form of additional characters. The additional characters are inserted before the read data.</p> <p>If "Symbol Code ID Character" is selected, the following characters can be issued:</p> <ul style="list-style-type: none"> <li>• A = UPC-A, UPC-E, UPC-E1, EAN-8, EAN-13</li> <li>• B = Code 39, Code 32</li> <li>• C = Codabar</li> <li>• D = Code 128, ISBT 128</li> <li>• E = Code 93</li> <li>• F = Interleaved 2of5</li> <li>• G = Discrete 2of5</li> <li>• J = MSI</li> <li>• K = UCC/EAN-128</li> <li>• L = Bookland EAN</li> <li>• M = Trioptic Code 39</li> <li>• N = Coupon Code</li> <li>• R = GS1 DataBar-14, GS1 DataBar Limited, GS1 DataBar Expanded</li> </ul> <p>If "AIM Code ID Character" is selected, refer to <b>Appendix A</b> for further information</p>
Trigger settings			
Laser on time	1-25	3	Timeout setting for reading with an SE955 head module. If a barcode cannot be read during this time, the reading process is



			<p>aborted and must be restarted.</p> <p>Specification in seconds. Interval in 1 second increments.</p>
Scan angle	<ul style="list-style-type: none"> <li>• Narrow Angle (35°)</li> <li>• Wide Angle (47°)</li> </ul>	Wide Angle (47°)	Settings for the scan angle

## 9 Resetting the settings

The firmware of the Ident-Ex can be used to reset the device to its factory settings. To enable this function, the **main trigger** (trigger button on the underside), **Trigger** (trigger button on the top) and **SPP** buttons must be pressed and held for approx. 2 seconds when the Ident-Ex is starting up. Previous settings, such as selection of the head module and selection of the module that responds when actuating the main trigger and/or trigger button are not reset and are retained.

## 10 Reading with a head module

The head module that is to be used for reading can be selected in the Ident-Ex settings. The button that is to be used to start the reading function for this head module can also be specified here. When the corresponding button is pressed the reading function is started and, if data can be read, this is sent to a device that is connected via Bluetooth where it is displayed. The Scan LED flashes during the reading process. When reading is complete, the Scan LED stops flashing. If data has been read, the Scan LED goes on and off again for a certain time and a beep sound is emitted (if the beep function is enabled in the settings of the Ident-Ex => see **Enable Beep**).

## 11 Bootloader

### 11.1 Introduction

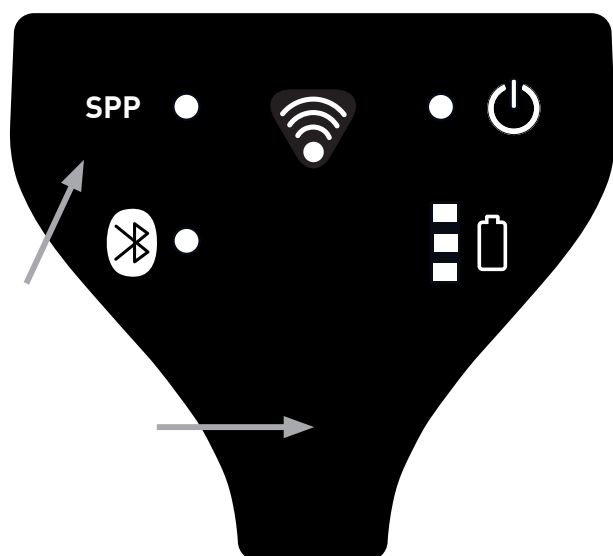
New firmware can be installed for the Ident-Ex via the bootloader. New firmware can be transferred to the Ident-Ex from a PC or mobile device (e.g. smartphone or tablet) via Bluetooth.

### 11.2 Program requirements

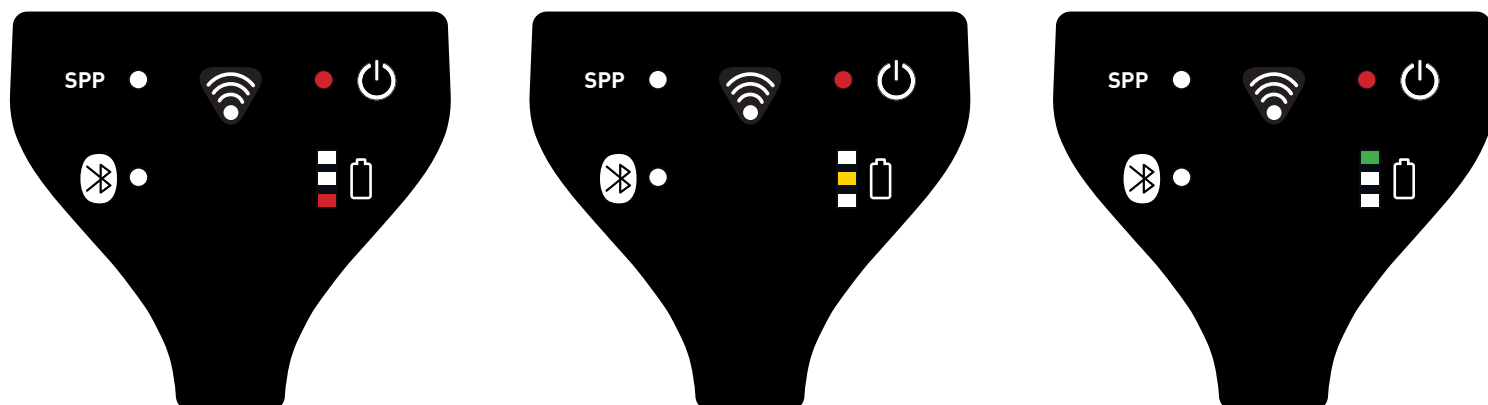
The HyperTerminal program is required to transfer new firmware from a PC. If the new firmware is transferred from a mobile device, this will require our APP. In addition, the new firmware must also be available as a file.

### 11.3 Launching the bootloader on the Ident-Ex

In order to install new firmware on the Ident-Ex, the Ident-Ex must be set to a certain state, namely the bootloader. The bootloader can be launched by pressing and holding the triggers and SPP button when switching on the Ident-Ex. It must be ensured that the Ident-Ex was previous switched off before launching the bootloader.



The bootloader starts to run on the Ident-Ex as soon as the buttons are released (a light on the battery display changes from red to yellow to green).

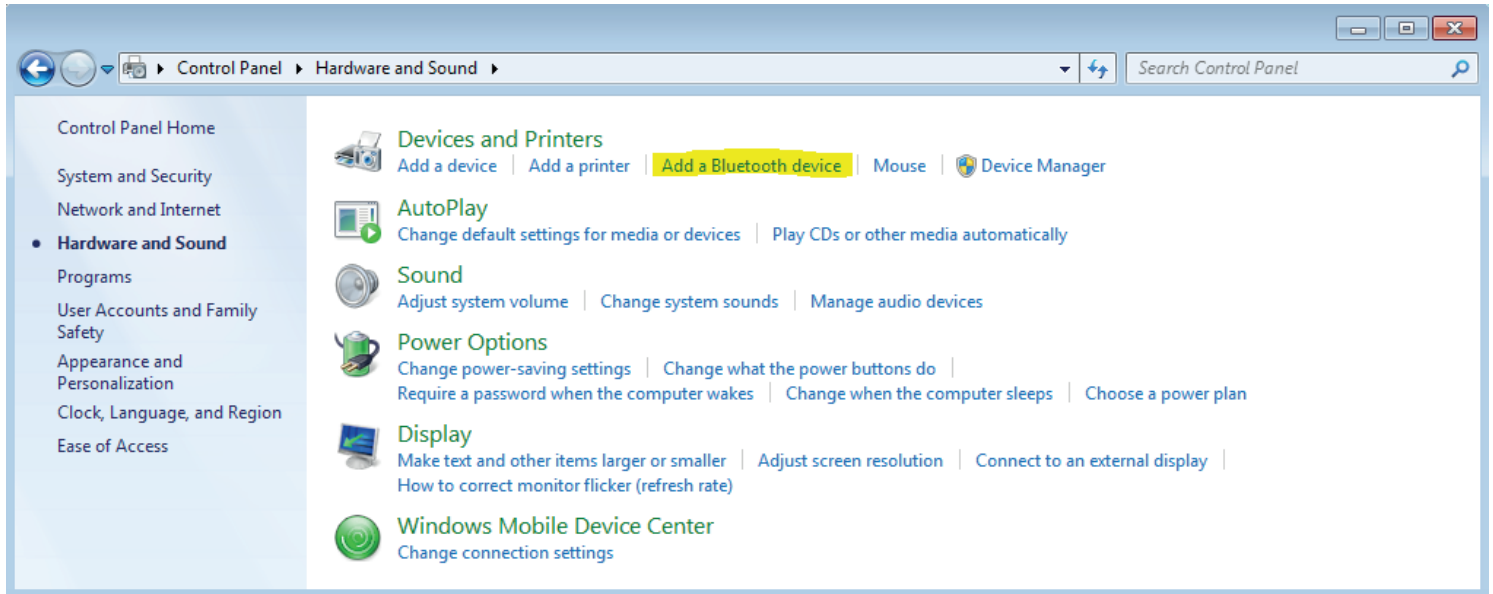


## 11.4 Installing new firmware for the Ident-Ex (by using a PC)

### 11.4.1 Pairing the Ident-Ex and PC for Bluetooth connectivity

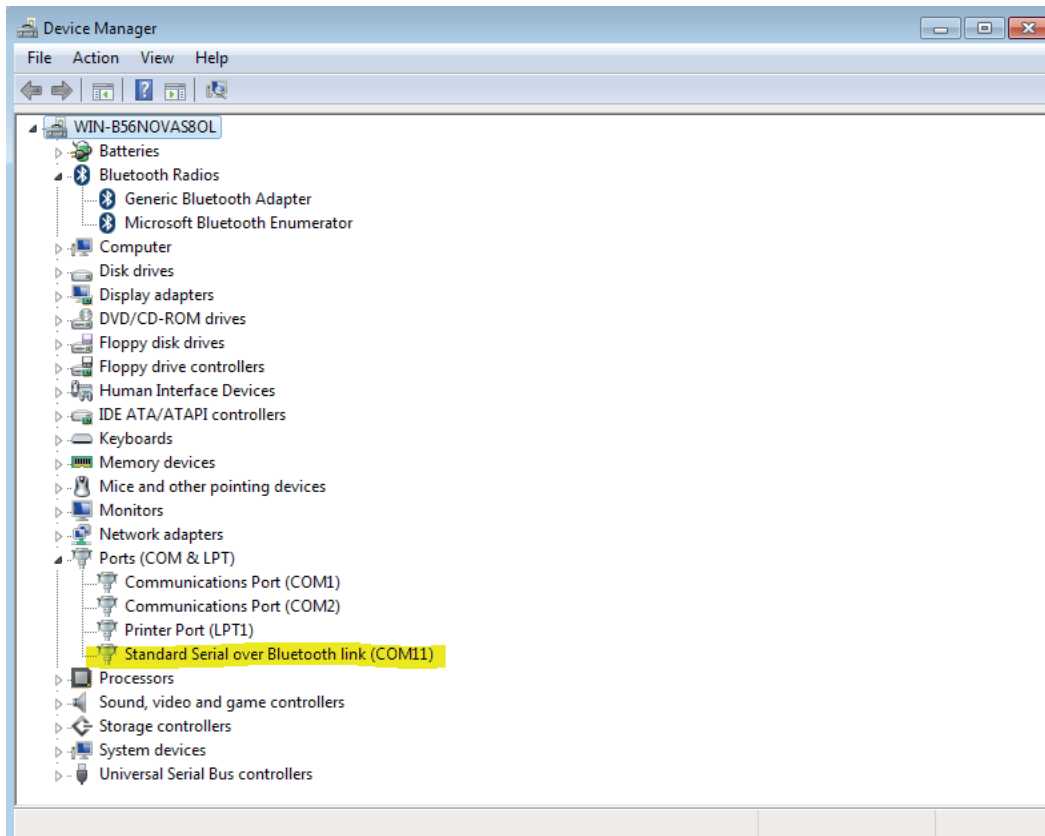
If the Ident-Ex has not yet been paired with a PC, a pairing process must be performed before a Bluetooth connection can be established between the Ident-Ex and PC.

Select the Bluetooth name of the Ident-Ex via **Start -> Control Panel -> Hardware and Sound -> Add a Bluetooth device**. The PC is now paired with the Ident-Ex and a Bluetooth connection can be established. A Bluetooth connection (HID) may be established automatically after the pairing process; this is indicated by the illuminated Bluetooth LED on the Ident-Ex (the SPP LED is off). However, since we need to establish a Bluetooth connection in SPP to install firmware, an existing HID Bluetooth connection must be deleted. To do this, press and hold the SPP button on the Ident-Ex for approx. 2 seconds until the Bluetooth LED goes out. An SPP Bluetooth connection can now be established.

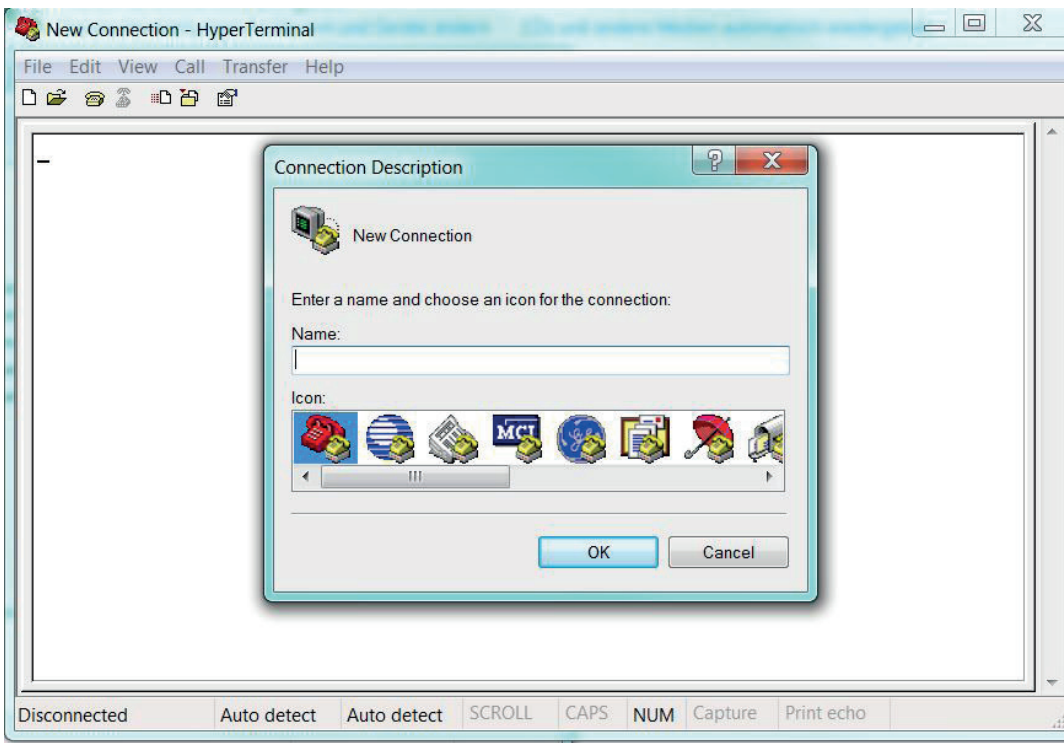


### 11.4.2 Bluetooth connection between Ident-Ex and HyperTerminal

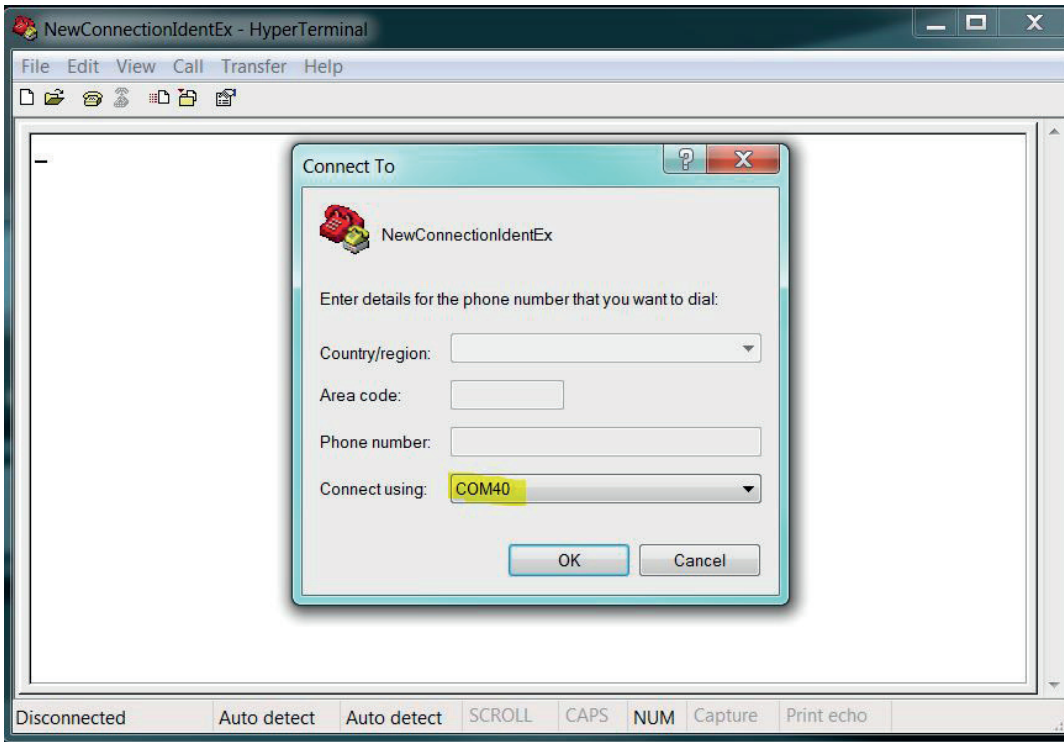
If the PC has been paired with the Ident-Ex, a Bluetooth connection (SPP) can be established via the HyperTerminal program. For this purpose, we need to know which COM port is being used for the Bluetooth connection. This information can be viewed by selecting **Start -> Control Panel -> Hardware and Sound -> Device Manager** and then the **Ports (COM & LPT)** section.



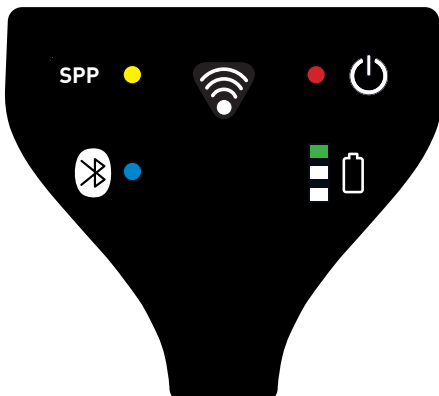
We can now use this information to establish a Bluetooth connection with the Ident-Ex via the HyperTerminal program. Open the HyperTerminal program on your PC. Start by assigning a name for the connection. This name can be freely selected (confirm by pressing OK).



In the next step, select the COM port that you want to use for the Bluetooth connection (confirm by pressing OK).



If everything was successful, the SPP and Bluetooth LEDs on the Ident-Ex will illuminate. These two LEDs must illuminate, otherwise firmware cannot be installed on the Ident-Ex.



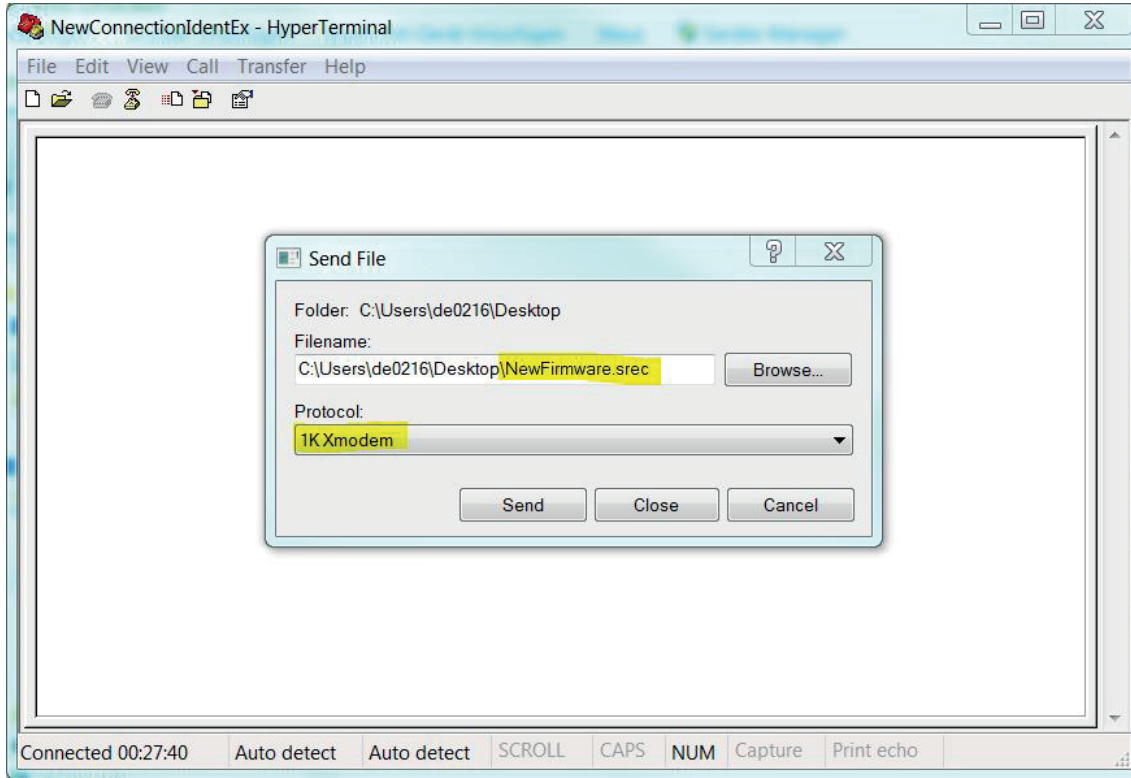
All of the necessary steps are now complete and new firmware can be installed on the Ident-Ex.

### 11.4.3 Installing new firmware

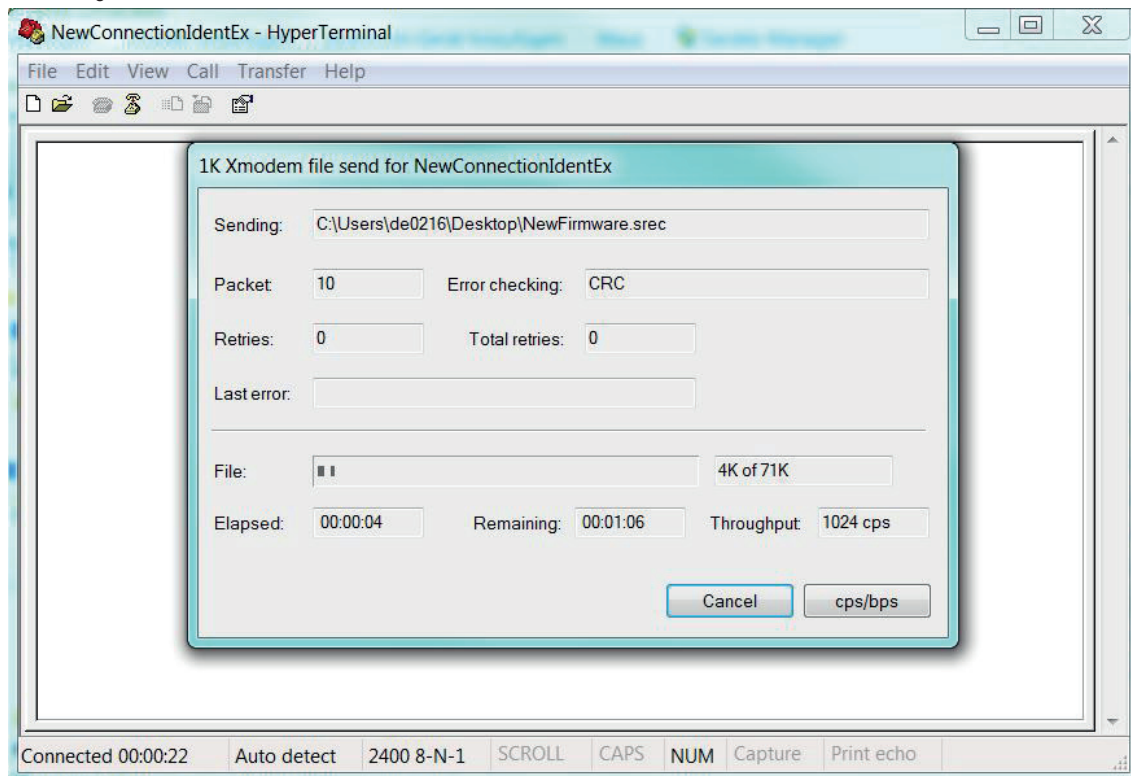
There are two methods of installing new firmware on the Ident-Ex. These two methods are described in the following two sections. The new firmware to be installed must be available as a file. A Bluetooth connection must have been established in the SPP mode before new firmware can be installed on the Ident-Ex (SPP and Bluetooth LEDs must illuminate).

#### 11.4.3.1 by pressing the trigger button (button on the top of the device)

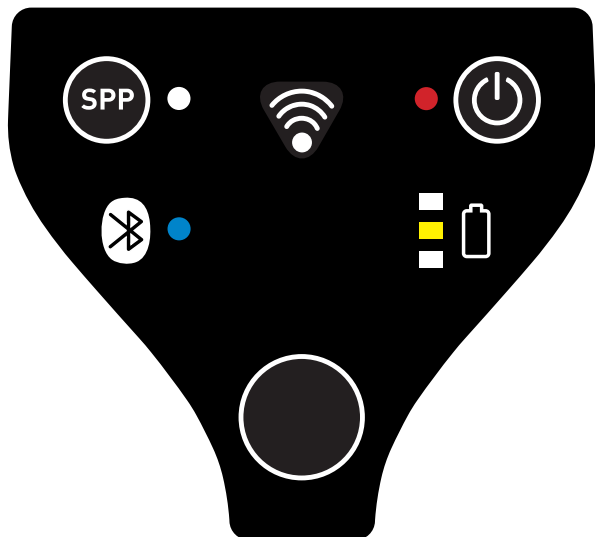
The trigger button (button on the top of the device) can be used to start the process of installing new firmware on the Ident-Ex. The file containing the new firmware must be selected first, however. The file with the firmware can be selected in the HyperTerminal program via **Transfer -> Send File....** A new window opens, in which the file can be selected. Select the file by pressing **Browse....** After selecting the file, the protocol will need to be selected. Select the **1K XModem** protocol here.



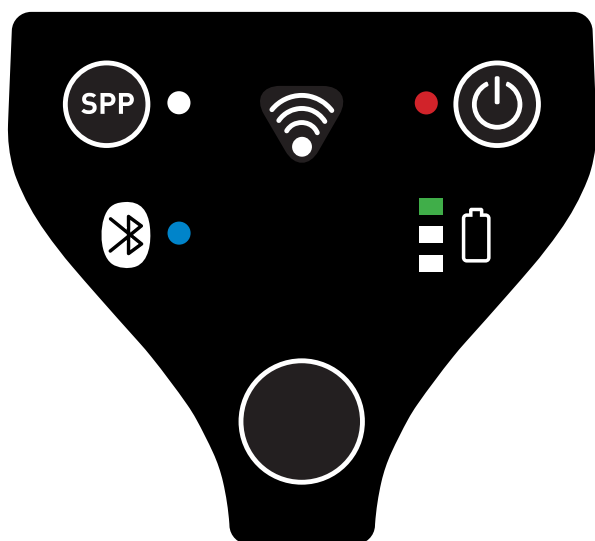
The file can then be sent by pressing the **Send** button. Pressing the trigger button now (button on the top) will start the process of installing the firmware on the Ident-Ex.



The yellow LED on the Ident-Ex battery display flashes when data is being transferred. The LED flashes until the transfer is complete or until an error occurs.



If the transfer was successful, the green LED on the Ident-Ex battery display will illuminate briefly and then go out again.

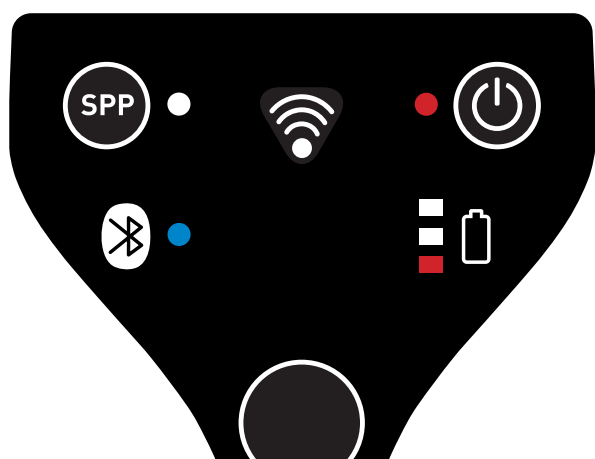


The new firmware will start and we now exit the bootloader. If new firmware is to be installed, we will need to start the process again from point **11.3 Launching the bootloader on the Ident-Ex**.

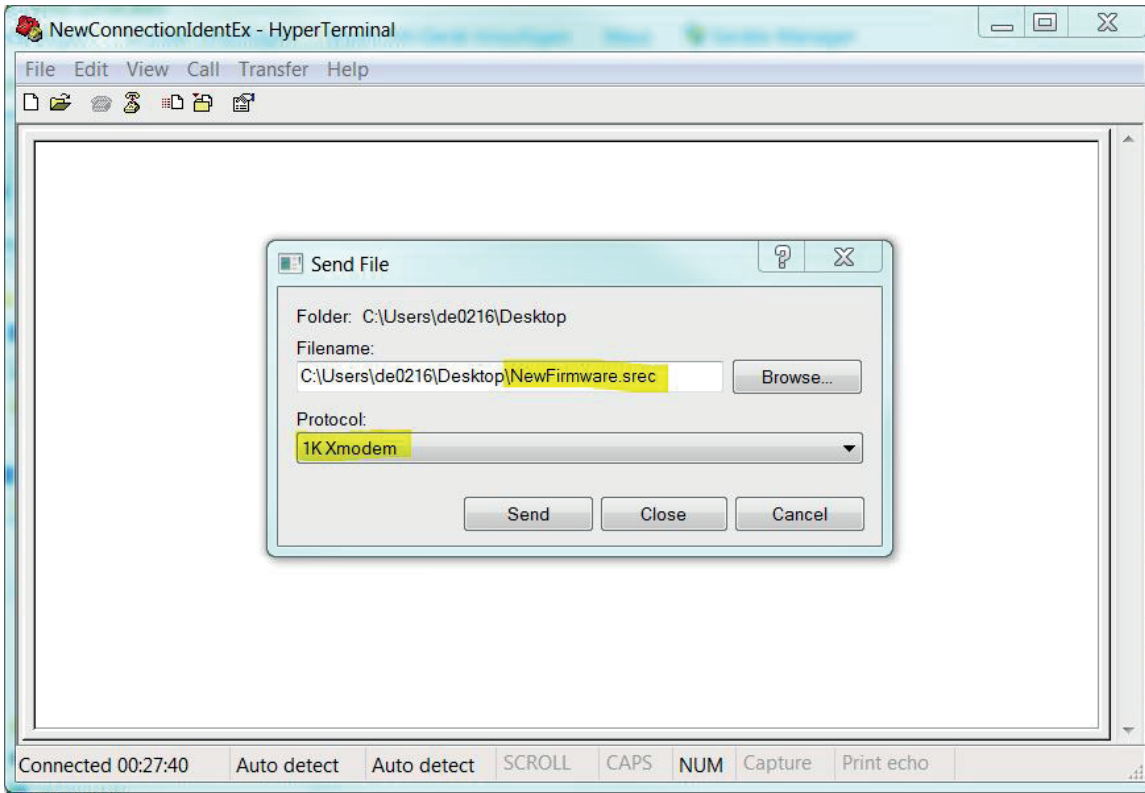
If something went wrong during the data transfer process, the new firmware will not be able to be started and we remain in the bootloader (the light on the battery display changes from red to yellow to green). If this occurs, the firmware will have to be reinstalled and a new data transfer process must be started (see **11.4.3 Installing new firmware**). If the Bluetooth connection is lost when transferring firmware data (the SPP and Bluetooth LEDs are off), a new Bluetooth connection will need to be established before a new transfer process can be started.

#### 11.4.3.2 by sending the string „BOOT“

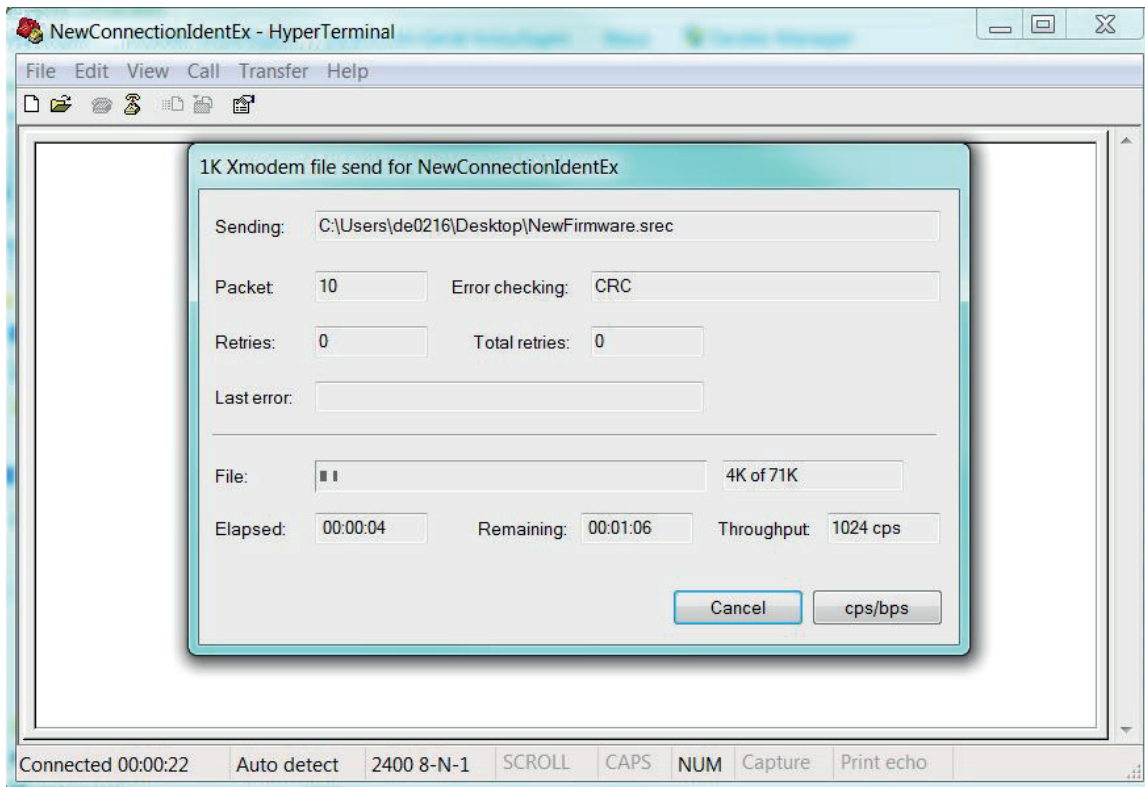
The second method of installing new firmware for the Ident-Ex is to send the string „BOOT“ before firmware data is sent in the HyperTerminal program. To do this, just enter the string „BOOT“ in the HyperTerminal program by using the keyboard. The red LED on the Ident-Ex battery display starts flashing. This means the Ident-Ex is requesting data from the PC.



In the next step, we need to send the file that contains the new firmware. To do this, we will need to select the file in the HyperTerminal program window that opens when we select **Transfer -> Send File**.... Select the file by clicking **Browse.... 1K XModem** must be selected as the transfer protocol.

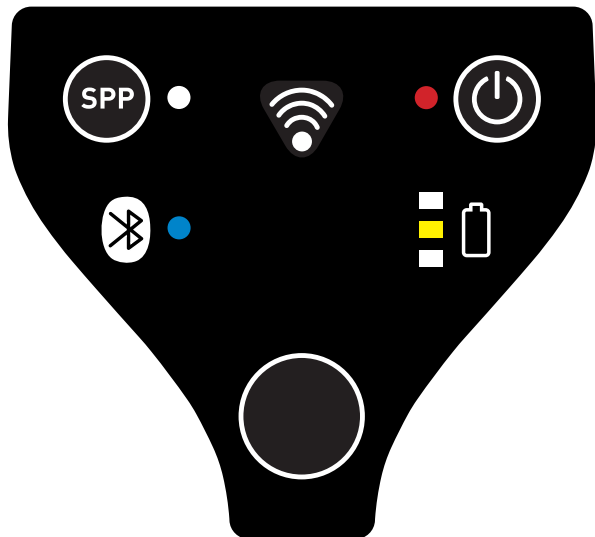


The file is sent by pressing **Send**. The transfer process starts.

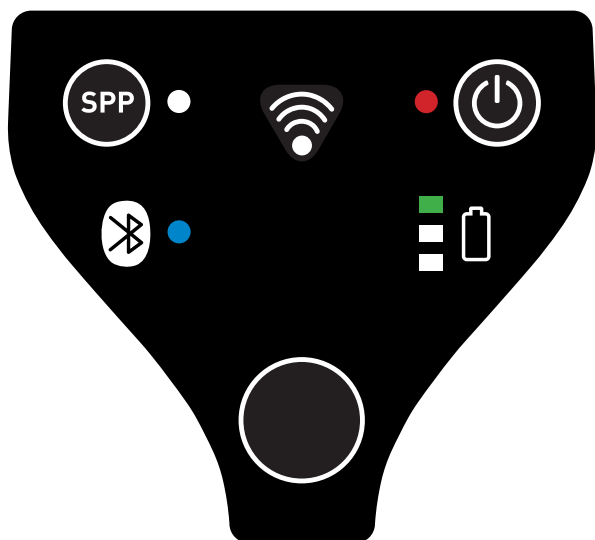




The yellow LED on the Ident-Ex battery display flashes when the transfer is in progress. The LED flashes until the transfer is complete or until an error occurs.



If the transfer was successful, the green LED on the Ident-Ex battery display will illuminate briefly and then go out again.



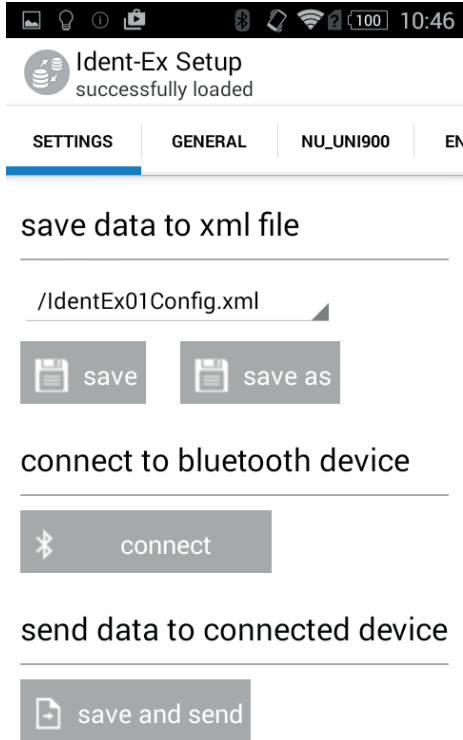
The new firmware starts and we now exit the bootloader. If new firmware is to be installed, we will need to start the process again from point **11.3 Launching the bootloader on the Ident-Ex**.

If something went wrong during the data transfer process, the new firmware will not be able to be started and we remain in the bootloader (the light on the battery display changes from red to yellow to green). If this occurs, the firmware will have to be reinstalled and a new data transfer process must be started (see **11.4.3 Installing new firmware**). If the Bluetooth connection is lost when transferring firmware data (the SPP and Bluetooth LEDs are off), a new Bluetooth connection will need to be established before a new transfer process can be started.

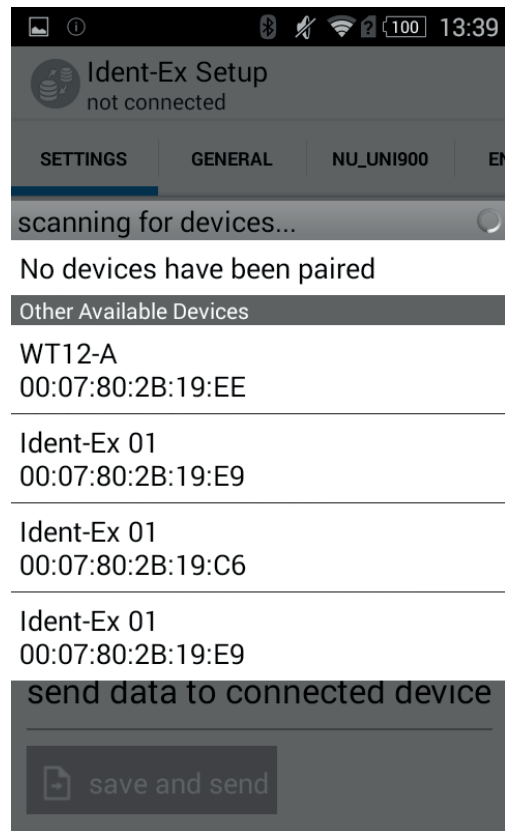
## 11.5 Installing new firmware for the Ident-Ex (by using a mobile device)

### 11.5.1 Bluetooth connection between Ident-Ex and a mobile device

To install new firmware on the Ident-Ex by using a mobile device, a Bluetooth connection between the Ident-Ex and the mobile device must be established first in the app. A Bluetooth connection can be established under the „**SETTINGS**“ tab by pressing „**connect**“.

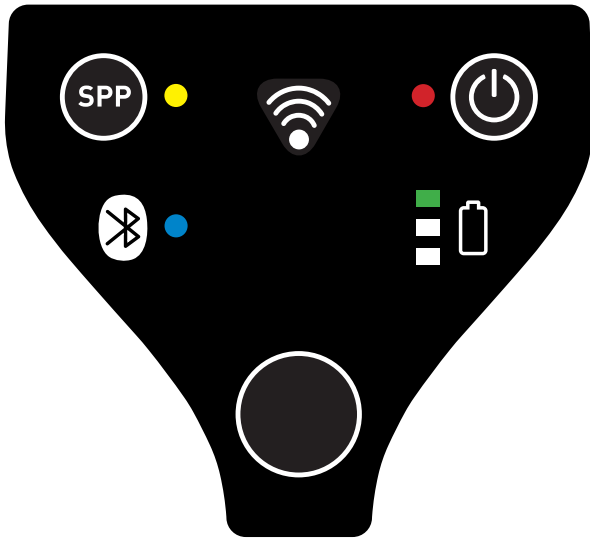


A window opens which contains the name(s) of the Bluetooth device(s) that can be connected. The default Bluetooth name of the Ident-Ex is „**Ident-Ex 01**“. If a different Bluetooth name has been set for the Ident-Ex (see **BT name**), this name will need to be selected.



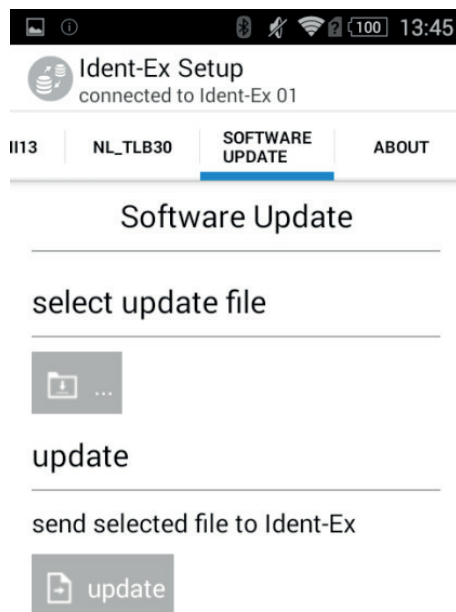
If the mobile device has not yet been paired with the Ident-Ex, a window will appear after selecting the Bluetooth name of the Ident-Ex to query whether a connection should be established with the Ident-Ex. After confirming the query, a Bluetooth connection is established between the Ident-Ex and the mobile device. If the corresponding Bluetooth name of the Ident-Ex does not appear in the list of Bluetooth devices, you can perform a search for the Ident-Ex by selecting „**Scan for devices**“.

If a Bluetooth connection has been established successfully between the Ident-Ex and the mobile device, the SPP and Bluetooth LEDs on the Ident-Ex will illuminate. These two LEDs must illuminate, otherwise firmware cannot be installed on the Ident-Ex.

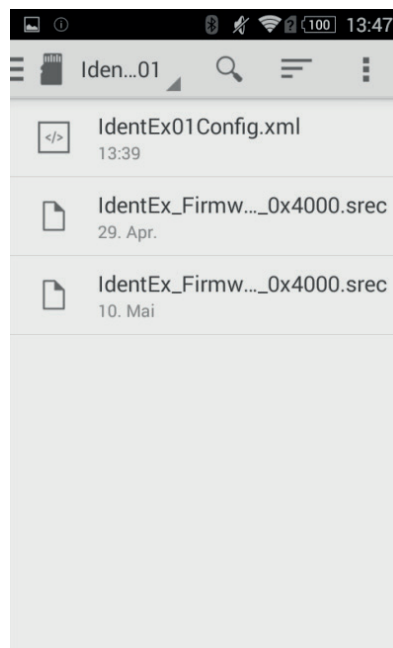


### 11.5.2 Installing new firmware

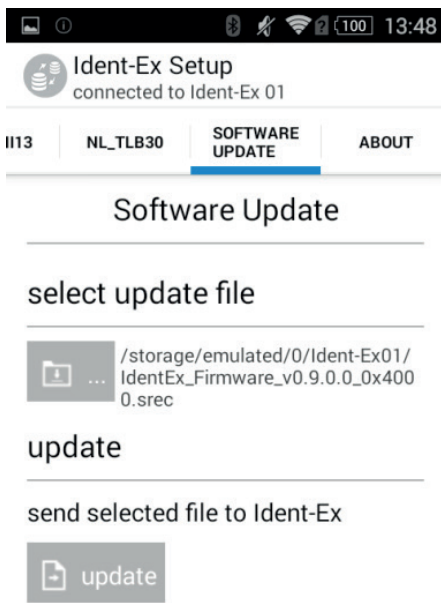
Navigate to the „SOFTWARE UPDATE“ tab and press „...“ to select the file that contains the new firmware for the Ident-Ex.



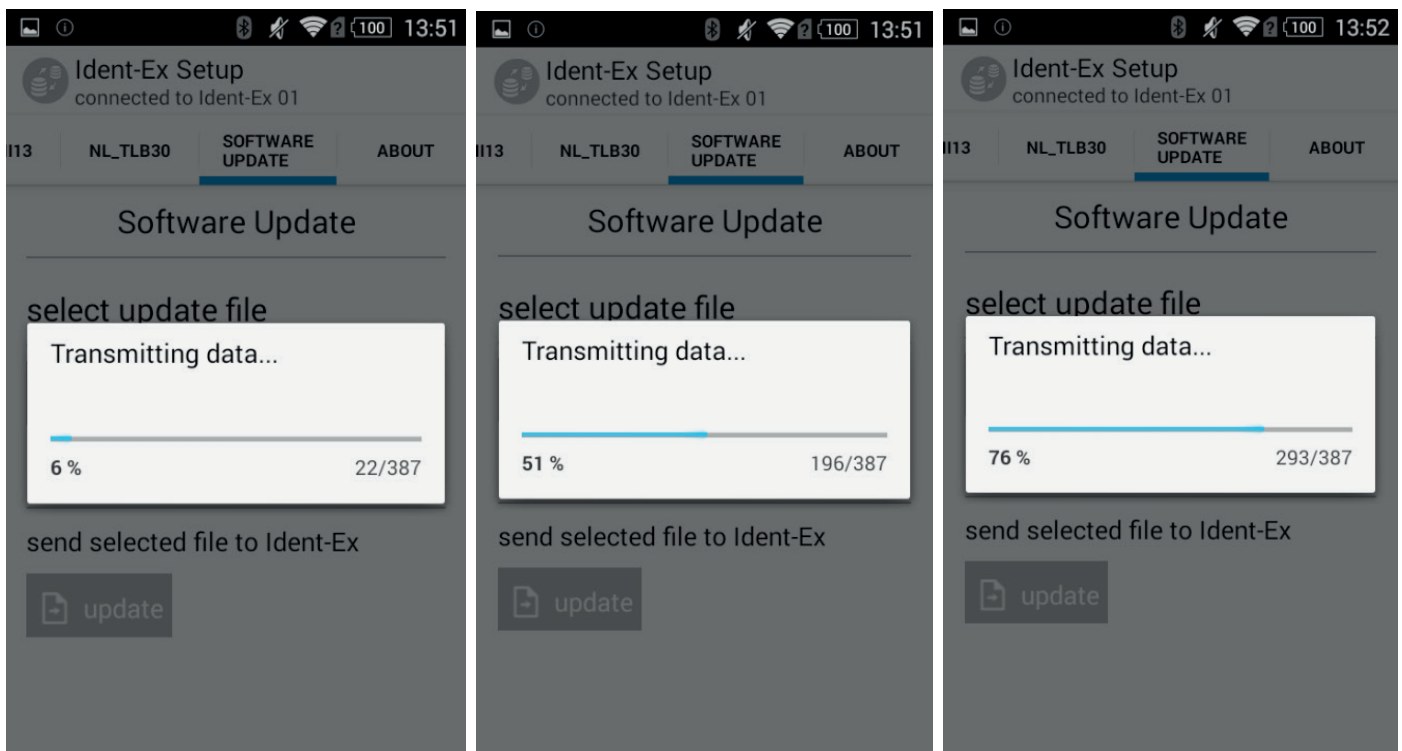
Pressing „...“ will open a window in which the file with the new firmware can be selected.



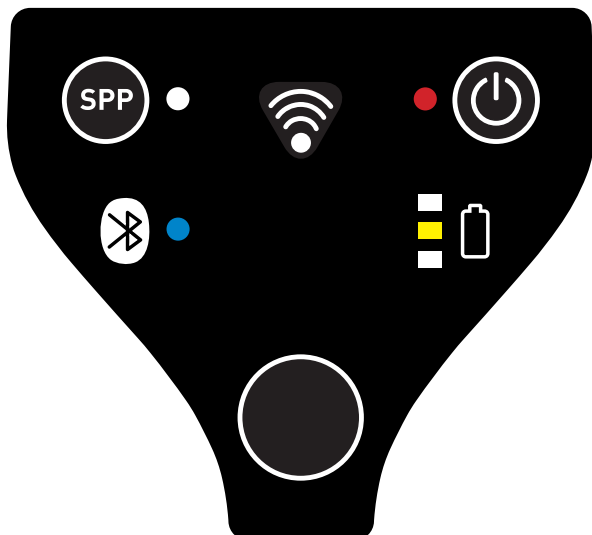
After selecting the corresponding file that contains the new firmware, we are transferred back to the software update menu. The new firmware for the Ident-Ex can now be installed by pressing „update“.



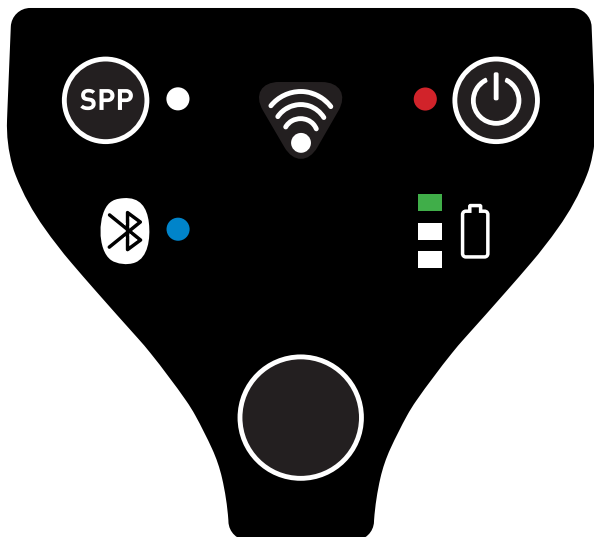
This opens a window which displays the progress of the transfer.



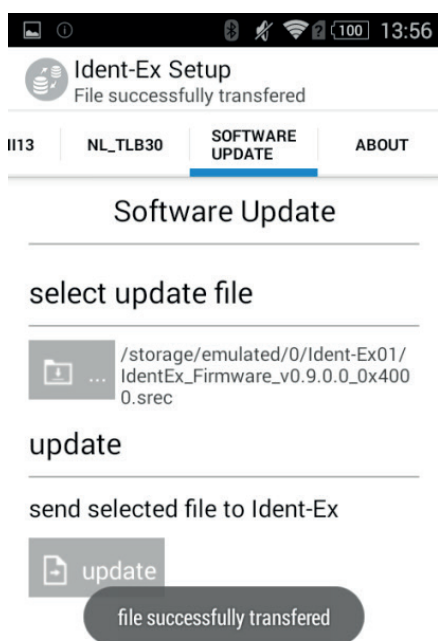
The yellow LED on the Ident-Ex battery display flashes when the firmware data is being transferred. The LED flashes until the transfer is complete or until an error occurs.



If the transfer was successful, the green LED on the Ident-Ex battery display will illuminate briefly and then go out again.



A message is displayed on the mobile device to indicate that the transfer was successful.



The new firmware is launched on the Ident-Ex and the bootloader is closed. If new firmware is to be installed, we will need to start the process again from point **11.3 Launching the bootloader on the Ident-Ex**.

If something went wrong during the data transfer process, the new firmware will not be able to be started on the Ident-Ex and we remain in the bootloader (the light on the Ident-Ex battery display changes from red to yellow to green). If this occurs, the firmware will have to be reinstalled and a new data transfer process must be started (see **11.5.2 Installing new firmware**). If the Bluetooth connection is lost when transferring firmware data (the SPP and Bluetooth LEDs on the Ident-Ex are off), a new Bluetooth connection will need to be established between the Ident-Ex and the mobile device before a new transfer process can be started.

## AIM Code Identifiers

Each AIM Code Identifier contains the three-character string **]cm** where:

- ] = Flag Character (ASCII 93)
- c = Code Character (see Table B-2)
- m = Modifier Character (see Table B-3).

**Table B-2. Code Characters**

Code Character	Code Type
A	Code 39
C	Code 128
E	UPC/EAN
F	Codabar
G	Code 93
H	Code 11
I	Interleaved 2 of 5
M	MSI
S	D2 of 5, IATA 2 of 5
X	Code 39 Trioptic, Bookland EAN
e	GS1 DataBar

The modifier character is the sum of the applicable option values based on the following table.

**Table B-3. Modifier Characters**

Code Type	Option Value	Option
<b>Code 39</b>		
	0	No Check character or Full ASCII processing.
	1	Reader has checked one check character.
	3	Reader has checked and stripped check character.
	4	Reader has performed Full ASCII character conversion.
	5	Reader has performed Full ASCII character conversion and checked one check character.
	7	Reader has performed Full ASCII character conversion and checked and stripped check character.
Example: A Full ASCII bar code with check character W, <b>A+I+MI+DW</b> , is transmitted as <b>JA7</b> Aimld where 7 = (3+4).		

**Table B-3. Modifier Characters (Continued)**

Code Type	Option Value	Option
<b>Trioptic Code 39</b>		
	0	No option specified at this time. Always transmit 0.
		Example: A trioptic bar code 412356 is transmitted as <b>JX0</b> 412356
<b>Code 128</b>		
	0	Standard data packet, No Function code 1 in first symbol position.
	1	Function code 1 in first symbol character position.
	2	Function code 1 in second symbol character position.
		Example: A Code (EAN) 128 bar code with Function 1 character in the first position, <b>FNC1</b> Aim Id is transmitted as <b>JC1</b> AimId
<b>I 2 of 5</b>		
	0	No check digit processing.
	1	Reader has validated check digit.
	3	Reader has validated and stripped check digit.
		Example: An I 2 of 5 bar code without check digit, 4123, is transmitted as <b>JF0</b> 4123
<b>Codabar</b>		
	0	No check digit processing.
	1	Reader has checked check digit.
		Example: A Codabar bar code without check digit, 4123, is transmitted as <b>JF0</b> 4123
<b>Code 93</b>		
	0	No options specified at this time. Always transmit 0.
		Example: A Code 93 bar code 012345678905 is transmitted as <b>JG0</b> 012345678905
<b>MSI</b>		
	0	Mod 10 check digit checked and transmitted.
	1	Mod 10 check digit checked but not transmitted.
		Example: An MSI bar code 4123, with a single check digit checked, is transmitted as <b>JM0</b> 4123
<b>D 2 of 5</b>		
	0	No options specified at this time. Always transmit 0.
		Example: A D 2 of 5 bar code 4123, is transmitted as <b>JS0</b> 4123

**Table B-3. Modifier Characters (Continued)**

Code Type	Option Value	Option
<b>UPC/EAN</b>		
	0	Standard packet in full EAN country code format, which is 13 digits for UPC-A, UPC-E, and EAN-13 (not including supplemental data).
	1	Two digit supplement data only.
	2	Five digit supplement data only.
	3	Combined data packet comprising 13 digits from a UPC-A, UPC-E, or EAN-13 symbol and 2 or 5 digits from a supplemental symbol.
	4	EAN-8 data packet.
	Example: A UPC-A bar code 012345678905 is transmitted as <b>JE00012345678905</b>	
<b>Bookland EAN</b>		
	0	No options specified at this time. Always transmit 0.
	Example: A Bookland EAN bar code 123456789X is transmitted as <b>JX0123456789X</b>	

According to AIM standards, a UPC with supplemental bar code is transmitted in the following format:

**JE0** (UPC chars) (terminator) **JE2** (supplemental) (terminator)

In the SE955, however, the format is changed to:

**JE0** (UPC chars) **JE2** (supplemental)

Therefore, a UPC with two supplemental characters, 01234567890510, is transmitted to the host as a 21-character string, **JE00012345678905JE110**.



Copyright© 2020 ECOM Instruments GmbH.

The contents of this document, either in part or in their entirety, may not be reproduced, forwarded, distributed or saved in any way without ECOM Instruments GmbH prior written consent.

The contents of this document are presented as they currently exist. ecom instruments GmbH does not provide any express or tacit guarantee for the correctness or completeness of the contents of this document, including, but not restricted to, the tacit guarantee of market suitability or fitness for a specific purpose unless applicable laws or court decisions make liability mandatory. ECOM Instruments GmbH reserves the right to make changes to this document or to withdraw it any time without prior notice.

DOCT-7016

10/2020 | WEEE-Reg.-Nr. DE 934 99306

Subject to change without notice.

ECOM Instruments GmbH | Industriestraße 2 | 97959 Assamstadt | Germany

Phone +49 62 94 42 24 0 | Fax +49 62 94 42 24 100

sales@ecom-ex.com | www.ecom-ex.com