EHP

**RADIO REMOTE CONTROL DRC 433**

**Technical manual**

# Table of contents

# Declaration of Conformity

<table>
<tr><td colspan="2" align="center">

## Declaration of Conformity
</td></tr>
<tr><td colspan="2">

**Manufacturer:** **EHP-Wägetechnik GmbH**

**Address:**  **Dieselstrasse 8**

 **D-77815 Bühl (Baden)**


hereby declares that the product: **Data Receiver Type DRC 433**

with all options complies with the following harmonized standards:

EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6,

EN 61000-4-11 according to Directive 2004/108/EC (electromagnetic compatibility)

EN 60950-1:2006 in accordance with Directive 2006/95/EC (Low Voltage Directive).

This product is marked with the CE mark.

|  |  |
|---|---|
| Bühl, January 2022 | Markus Ebel / Technical manager |
</td></tr>
</table>

This declaration has been prepared in accordance with DIN EN ISO/IEC 17050-1.

# Notes on the manual

In this technical manual you will find information on the operation of the **data receiver type DRC 433**

► Read the operating instructions before starting up the **DRC 433 data receiver.** This will protect you and prevent damage to your device.

► Always keep this manual in a place where employees, service personnel, etc. can view it.

**Design features of this guide**

Various elements of this guide have specified design features. This way you can easily distinguish the following elements:

Normal text

● Enumerations

► Action steps

*Table titles* and *figures* are in bold.

ⓘ Tips contain additional information.

**Figure design features**

If elements of a figure are referred to in a legend or in the running text, they are assigned a number (1). The numbers in the running text always refer to the figure shown.



*Figure 1 -Explanation design features*

# Technical data

| | |
|---|---|
| **Power supply of the electronics** | Plug power supply 12V 0,5A |
| **Minimum voltage of the accumulator** | 3V/DC, 1V per cell |
| **Power supply DRC 433** | 3 pieces NiMh battery 1.2V 2500mAh or bigger |
| **Radio range** **Infrared range** | approx. 100m approx. 35 m with angle < 20° |
| **Operating time** | approx. 8-10 hours |
| **Charger supply** | 110- 230V AC, 50/60Hz |
| **Recharge time of the accumulators** | Under hours4 |
| **Nominal temperature range** | -10°C…+40°C |
| **Operating range** | -20°C…+50°C |
| **Protection class** | IP 54 |

*Table 1 - Technical data*

# Safety instructions

| TO NOTE |
| :---: |
| ● **Device may only be opened by a specialist!**<br><br>● **Device must be protected from heat and moisture!** |

| ⚠    IMPORTANT SAFETY INSTRUCTIONS    ⚠ |
| :--- |

To avoid the risk of electric shock, do not open the remote control. There are no user-repairable parts inside the unit. Leave repairs to qualified customer service. There is a risk of contact with non-insulated parts inside the device, which can lead to electric shocks.

**Operating environment**

Avoid using this device in an insufficiently ventilated, humid or hot place.

**Disposal**

If you wish to dispose of this product, do not mix it with ordinary household waste. There is a separate collection system for used electronic products through which proper treatment, recovery and recycling is ensured in accordance with existing legislation.

**In case of malfunctions**

● Repairs may only be carried out by qualified personnel!

● Read through the chapter "Help in case of malfunctions" and "Error detection

● Contact EHP customer service.

# Warranty

The warranty is void in the event of:

- Non-intended use of the manufacturer's specifications in this operating manual
- Use outside of use
- mechanical damage, damage due to moisture and liquids
- Opening or mechanical modification
- Use of non-original EHP chargers and batteries
- Manipulation of the loading device

# Scope of delivery

● Data receiver type DRC 433



*Figure 2- Data receiver type DRC 433*

**The following accessories are included as standard:**

- 3 NiMH batteries 1.2V 2400-2850mAh
- Plug-in power supply
- Driver and Firmware CD

The driver and firmware CD contains:

- Driver for Windows 10
- Operating instructions in German and English

# Commissioning

The DRC 433 is supplied with built-in AA batteries and can be used directly. Switch on the DRC 433 by pressing and holding the "Tara | 1 | ⏻" key on the input keypad.

The battery compartment is located on the rear of the DRC 433 and can be opened by loosening the two Phillips screws. Insert the batteries according to the installation position marked in the battery compartment.

| Battery compartment closed | Battery compartment open |
|:---:|:---:|
|  |  |
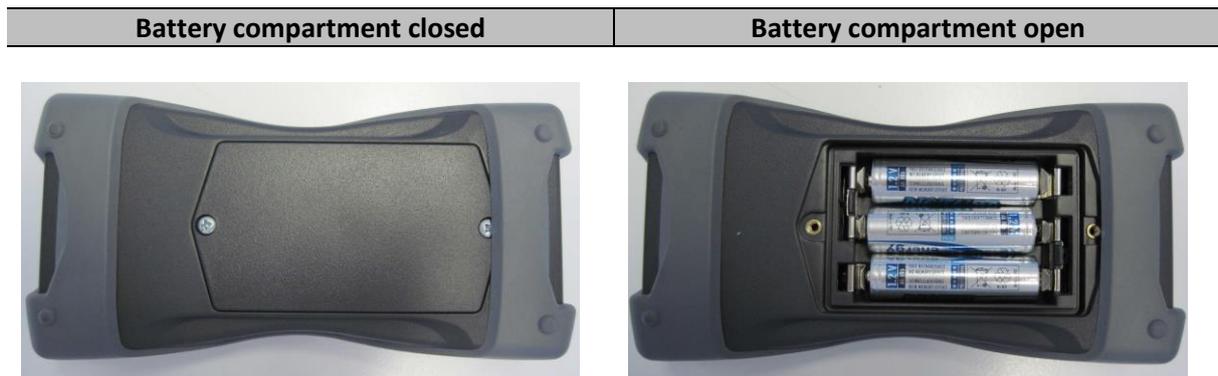
*Figure 3 - Battery compartment*

# Operation



The DRC 433 is equipped with an infrared transmitter, USB port and a charging socket on the top (1). The OLED display (2) and the input keypad (3) are located on the front.

## Connections
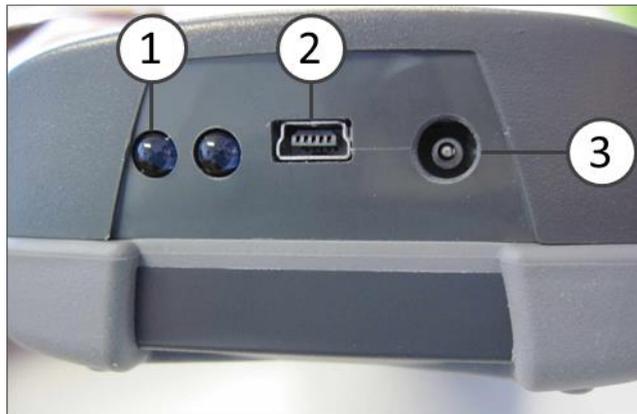


*Figure 4 - Top side DRC 433*

The infrared transmitter (1), the USB port (2) and the charging socket (3) are located on the top side.

Via the USB connection (2), weighing data can be transmitted to the PC and processed further. As long as the DRC 433 is connected via the USB port, power is also supplied via this port.

The DRC 433 can be charged using the supplied power supply unit. Plug the power supply unit into the socket, the internal spar plug fits into the charging socket (3) on the front of the DRC433 with reverse polarity protection. The charging process is started automatically.

When the DRC 433 is switched on, a charging animation is shown in the display as long as the battery is being charged. As soon as the battery is fully charged, the animation stops. The remote control can also be charged when it is switched off.

The charger is equipped with overcharge protection and charge retention. You can therefore leave the charger connected for a longer period of time. The capacity of the supplied batteries is sufficient for approx. 8-16 operating hours. The standby time is approx. 2 weeks.

| **NOTE** |
| --- |
| Instead of the supplied rechargeable batteries, commercially available batteries can also be used as an alternative. <br><br> When using batteries, the supplied charger must not be connected. This may cause damage to the DRC 433! |

## OLED display

There are 2 displays available on the DRC 433. Display A is the detailed view, which shows all important values. Display B is the simplified operator view (net display).

| Display A (detail view) | Display B (operator view) |
| --- | --- |
|  |  |
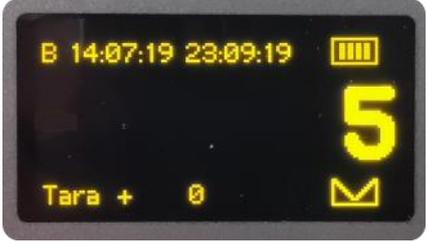
In the detail view, the display shows the following values:



In addition, the following icons can be displayed:

| | |
| --- | --- |
|  | flashes during data reception |
| | Displayed when integrated data storage is activated |

| P | A | T | Indicates whether weighing data is saved via Print, Add or Tare key |
|---|---|

In the operator view, the display shows the following values:

Uhrzeit  Datum     Batteriekapazität

Brutto/Nettogewicht ——— N 11:31:08 05:11:10

+ **1998**

Taragewicht ——— Tara + 2984

Stillstandsanzeige

## Input keyboard

Switch the DRC 433 on or off by pressing and holding the "Tara | 1 | ⏻" key on the input keypad (**Figure 5**). The operation of the DRC 433 is divided into 3 key levels.

Tara ——— ①
② ——— 1 ⏻ ——— ③
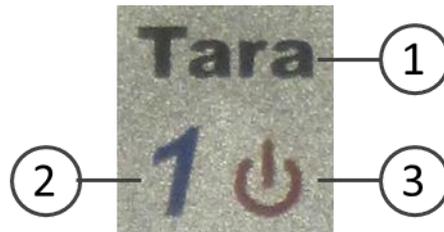
*Figure 5 - Key levels*

- The **black key level (1) is** reached by briefly pressing the operating keys. This allows you to operate the basic functions of the balance.

- The blue key level (2) is active for code entry on the scale, as well as for the entry of accompanying data. Numeric and alphanumeric input of the code of the balance and/or the setpoint specifications of the balance (see also operating instructions of the balance).

- You reach the red key level (3) by pressing the keys for a longer time. If you are in the setup menu of the DRC 433, the red key level controls the menu functions.

| Key | Function |
|---|---|
| Tara 1 ⏻ | **Black**: Activates and deactivates the tare function of the scale<br><br>Blue: The numerical values can be used for weight, code value or for delivery note number input<br><br>Red: Long press switches the DRC 433 on or off. |

| Key | Function |
|---|---|
| **Print 2↑** | **Black**: Activates the printout on auxiliary devices, starts the storage process on the DRC 433 and other weighing data receiving devices.<br><br>**Blue**: The numerical values can be used for weight, code value or for delivery note number input<br><br>**Red**: Control key Setup, value upwards |
| **>0< 3 Num** | **Black**: Resets the scale display to 0 kg<br><br>**Blue**: The numerical values can be used for weight, code value or for delivery note number input<br><br>**Red**: Press and hold to open the delivery bill editing function (see also section Delivery note function on page 18) |
| **Add 4←** | **Black**: Starts the adding function on the DRC 433 and on other weighing data receiving devices.<br><br>**Blue**: The numerical values can be used for weight, code value or for delivery note number input<br><br>**Red**: Control key Setup, exit menu without saving |
| **1/2 5 OK** | **Black**: Range selection 1/2 Weighing range of the scale<br><br>**Blue**: The numerical values can be used for weight, code value or for delivery note number input<br><br>**Red**: Control key Setup, Saves menu value |
| **Total 6→** | **Black**: Activates the save/print operation of the added weighing data acquired with the Add key.<br><br>**Blue**: The numerical values can be used for weight, code value or for delivery note number input<br><br>**Red**: Control key Setup, open submenu |
| **Test 7 Esc** | **Black**: Activates the test function of the scale<br><br>**Blue**: The numerical values can be used for weight, code value or for delivery note number input<br><br>**Red**: Control key Setup, Setup abort |
| **Off 8↓** | **Black**: Switches the scale off. Note: If the scale is switched off, the DRC 433 also switches off automatically. Press key longer Switches the scale on.<br><br>**Blue**: The numerical values can be used for weight, code value or for delivery note number input<br><br>**Red**: Control key Setup, value down; Long press turns the scale on. |
| **Peak 9 Menu** | **Black**: Activates and deactivates the peak value display on the scale or activates and deactivates the pouring rate display on the scale |

| Key | Function |
|---|---|
| | **Blue**: The numerical values can be used for weight, code value or for delivery note number input<br><br>**Red**: Long press opens the setup menu |
| PT 0 | **Black**: Activates the PT function of the scale<br><br>**Blue**: The numerical values can be used for weight, code value or for delivery note number input |
| Shift<br>Display A | **Black**: Opens the 2nd operating level of the scale<br><br>**Red**: Long press, change to detailed view. |
| Enter<br>Display B | **Black**: Closes the 2nd operating level of the scale<br><br>**Red**: Long press, change to operator view. |

## Integrated data storage

With the DRC 433, weighing data can be saved on the integrated data memory

By pressing the print key, the current weight value is stored. This is symbolized in the DRC 433 display by a brief flashing of the "P".

Weight values entered with the Add key continue to be shown in the display. During the adding process, the 3 most recently added weights are shown in the display. Each additional weight entered with "Add" is added to the total weight.

The total weight is shown in the display. If you press the Total key, the calculated total weight is stored in the data memory of the SD card. The display then returns to its original state. The stored data records can be saved via the USB interface using the "EHP Setup Tool" software.

**Note:** Data that has been properly saved is indicated by PRINT, ADD and Total flashing in the display.

**Examples of how the DRC433 stores the data:**

| Handheld transmitter key Balance/DRC | Display scale | Display DRC | Memory value SD card |
|---|---|---|---|
| PRINT | 1000 kg | PRINT, 1000 kg | 1000 kg |
| Add | 5005 kg | Add, 5005 kg | |
| Add | 1500 kg | Add, 6505 kg | |
| Add | 2000 kg | Add, 8505 kg | |
| Total | 2255 kg | Total, 8505 kg | 8505 kg |
| Print | 7564 kg | Print, 7564 kg | 7564 kg |
| Total | 5500 kg | Total, 5500 kg | 5500 kg |

## Menu

The settings of the DRC 433 are intuitive:

| | |
|---|---|
| Open the settings menu by pressing and holding the (Menu) key. | |
| The desired menu item can be selected using the arrow keys (↑ │ ↓). | |
| Press (→) to open the respective menu item.<br>Press (←) to exit the menu item without making any changes. | |
| With (OK) changed values are saved and the main menu is closed.<br>Press (ESC) to exit the menu without saving. | |

| Menu list | Setting values | Function |
|---|---|---|
| **Language** | • German<br>• English | Changing the menu language |
| **Clock** | Format:<br><br>• DD/MM/YY<br>• MM/DD/YY<br>• YY/MM/DD<br><br>Time: hh : mm : ss<br><br>Date: xx : xx : xx | Setting the date/time values. |
| **Scale no.** | 01....................99 | Setting the scale number.<br><br>The scale number on the DRC433 must correspond to the number of the crane scale. |
| **Channel no.** | 01.....28 | Setting the radio channel number.<br><br>The channel number on the DRC433 must correspond to the number of the crane scale. |
| **Display type** | • Display A<br>• Display B | Selection of the preferred display view to be shown when the DRC 433 is switched on. |
| **Memory** | • Yes<br>• No | Selection of whether data is to be stored on the internal data memory. |

| Menu list | Setting values | Function |
|---|---|---|
| **PAT waiting time** (Print, Add, Total) | • Min: 00:00 <br> • Max: 60:00 | Print, Add, Total (PAT) is transmitted only after the time set here. <br><br> If a waiting time value is entered, the activated timer is symbolized by flashing "P" in the display of the DRC 433 when the Print, Add or Total function is activated. |
| **Radio response** | • Yes <br> • No | Select setting value "Yes" if DRC 433 is used as the only receiving device. <br><br> Select the "No" setting if other weighing data receiving devices are used in addition to DRC 433 (e.g. Telebox SPS, USB Box, Teledata, etc.). |
| **Contrast** | • UP <br> • DOWN | • UP: Increase display brightness <br> • DOWN: Decrease display brightness |
| **Firmware >** | V 0 2.01.0601.03.16 | Display of firmware and firmware release date |
| **Commands per** | • Radio <br> • Infrared | Selection of the transmission mode to the scale |

# Delivery note function

Using the delivery note function, an individual alphanumeric data record can be linked to each weighing.

| | |
|---|---|
| Pressing and holding the (Num) key opens the delivery bill function. The display shows "Delivery bill" and 0000000000000000"". | |

There are 16 characters available. If a delivery note number has already been edited, the last number entered appears. Now the delivery note number can be edited via the keyboard. With "Shift" an incorrect entry can be corrected. The delivery note number is activated by pressing the "Enter" key. The activated delivery note number is represented by an "L".

| Key | Function / Character |
|---|---|
| Tara 1 | 1, space |
| Print 2 | 2,A,B,C |
| >0< 3 Num | 3,D,E,F |
| Add 4 | 4,G,H,I |
| 1/2 5 OK | 5,J,K,L |
| Total 6 | 6,M,N,O |
| Test 7 Esc | 7,P,Q,R,S |
| Off 8 | 8,T,U,V |
| Peak 9 Menu | 9,W,X,Y,Z |
| PT 0 | 0,., |
| Shift Display A | Deletes the last character |
| Enter Display B | Saves the delivery note number |

# EHP setup tool

With the help of the software, the functions and the radio connection of the DRC 433 can be tested safely.

## Installation

Copy the "Setup Tool" folder from the supplied CD to the computer (assuming unrestricted read and write rights). Then open the program "EHP Setup Tool.exe".

## Program overview



*Figure 6- EHP Setup Tool*

| User interface | |
|---|---|
| 1 | "Weight" shows the current weight of the scale when the connection is active; if there is no connection, the display is empty. |
| 2 | Lights green when the connection is active, lights red when the scale is not in radio range or is off, lights orange when the scale has no stable weight. |
| 3 | Flashes red with each data packet received from the scale |
| 4 | "Connection - Port" Select the port of your DRC 433 via scroll-down (see driver installation DRC 433). |
| 5 | Connect/Disconnect" key establishes the connection between software and433 DRC. Each time you press "Connect", the current settings of the software are loaded. |
| 6 | "Path" select the path where the Setup Tool should save weighing data. |
| 7 | "Log" monitor, here you can see information about weighing data exchanged between scale and PC. |

*Table 2 - User interface*

| Menu tab | |
|---|---|
| Settings | • "Save current settings as default" Saves all settings of the Setup Tool as default, the tool will start with these settings in the future.<br>• "Change unit" Changes the display between kg and t.<br>• "End" ends the application |
| Help | • Displays EHP contact information |
| Language | • Change language (German/English) |

*Table 3 - Menu tab*

| Data format of the stored weighing data |
|---|
| The output format of the software is a CSV file. This is automatically saved under the name EHP.csv in the path stored in the application.<br><br>The content is saved in follow format:<br>"2021-09-06";"14:42:50";"01";"0.0";"0.0"<br>"YYYY-MM-DD"; "HH:MM:SS"; "WW"; "NNNNN"; "DTTTT"<br><br>YYYY-MM-DD = date<br>HH:MM:SS = Time<br><br>**Data format of the stored weighing data:**<br>WW = Scale no.<br>NNNN = Net weight of the scale<br>TTTTT = Tare weight of the scale |

*Table 4 - Data format*

# 28 byte data protocol DRC 433

Only relevant for customer-specific applications.
The preconfigured data log has the following data format (28 bytes):

| Byte # | ASCII | Meaning | | |
|---|---|---|---|---|
| 1. | S | Start signal | | |
| 2. | 0<br>1<br>2<br>3<br>4 | No comma<br>One decimal place<br>Two decimal places<br>Three decimal places<br>Four decimal places | (e.g. 19520)<br>(e.g. 1952.0)<br>(e.g. 195.20)<br>(e.g. 19,520)<br>(e.g. 1.9520) | |
| 3. | Blank (20H)<br>+<br>- | No sign<br>Plus<br>Minus | | |
| 4. | Digit 5 | Ten-thousandths digit of the weight | | |
| 5. | Digit 4 | Thousands digit of the weight | | |
| 6. | Digit 3 | Hundreds digit of the weight | | |
| 7. | Digit 2 | Decimal place of the weight | | |
| 8. | Digit 1 | Units digit of the weight specification | | |
| 9. | B<br>N | Scale tare OFF (gross weight)<br>Scale tare ON (net weight) | | |
| 10. | E<br>1<br>2 | Single range scale<br>in area I<br>in area II | | |
| 11. | 0<br>1 | No standstill<br>Standstill | | |
| 12. | 0<br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>A<br>X<br>E<br>C | No key is pressed on the handheld transmitter<br><br>Key 2 (***Print key***)<br><br>Key 4 (***Add- key***)<br><br>Key 6 (***Total key***)<br><br><br>Scale was switched off manually<br>Scale was switched off by automatic switch-off function<br>Reception disturbance<br>Test | | |
| 13. | V<br>H<br>L | Scale battery charged<br>Scale battery - forewarning<br>Scale battery - Discharged/ Empty | | |
| 14. | (1 - 99) | Digit 1 of the scale number | | |
| 15. | (1 - 99) | Digit 2 of the scale number | | |
| 16. | (X) | no setpoint =0, setpoint 1 =8<br>Setpoint 2=4, Setpoint 3=2<br>Setpoint 4=1 Values of the setpoints that overlap are added together. | | |

| Byte # | ASCII | Meaning |
|--------|-------|---------|
| 17. | N<br>J<br>G | No overload<br>Overloaded<br>Preload too high |
| 18. | Digit 5 | Most significant digit (left digit) during numeric code input |
| 19. | Digit 4 | |
| 20. | Digit 3 | |
| 21. | Digit 2 | |
| 22. | Digit 1 | Least significant digit (right digit) during numeric code input |
| 23. | Digit 5 | Ten thousand digit of the tare value |
| 24. | Digit 4 | Thousands digit of the tare value |
| 25. | Digit 3 | Hundreds digit of the tare value |
| 26. | Digit 2 | tens digit of the tare value |
| 27. | Digit 1 | Units digit of the tare value |
| 28. | 03 H | End of block - character (03 Hex) |

*Table 5 - 28 byte data log*

With the following commands the data can be read out or deleted via USB.

| Command HEX | Function |
|-------------|----------|
| A5 5A C8 00 00 37 03 | Measurement data of the internal memory are deleted |
| A5 5A C7 00 00 38 03 | Read out measurement data, activates data transfer from SD card to VCP USB interface |

The control commands to the DRC 433 are confirmed by a return command. Depending on the amount of data, some time may pass between the return command of the DRC 433 and the data transfer to the USB interface. The successful sending of the measuring data is confirmed by the same command at the end of the data records.

| Return command DRC 433 | Meaning |
|---|---|
| 4F 4B 03 0D 0A | ASCII = OK ETX CR LF positive response DRC 433 command was recognized and is executed. Sending of the SD card data was successful and has been completed. |
| 45 52 xx xx xx 03 0D 0A | ASCII = ERRxxxx ETX CR LF negative response DRC 433 command was not recognized or an error occurred during data processing. Where xx or x stands for the error number. See table error handling |

**Notice:**

Please note that you will only receive data if data transmission has been activated on the interface (active at the factory). The following commands can be used to change the flow control on the USB port.

| Command HEX | Function DRC 433 |
|---|---|
| A5 5A C1 00 00 3E 03 | Enable USB data transfer |
| A5 5A C2 00 00 3D 03 | Disable USB data transfer |
| A5 5A CA 00 00 35 03 | Reset Error |
| A5 5A CB 00 00 34 03 | Reset software |

Possible responses of the DRC 433:

| Return command DRC 433 | Meaning |
|---|---|
| 4F 4B 03 0D 0A | ASCII = OK ETX CR LF positive response DRC 433 command was recognized and is executed. |
| 45 52 xx xx xx 03 0D 0A | ASCII = ERRxxxx ETX CR LF negative response DRC 433 command was not recognized or an error occurred during data processing. Where xx or x stands for the error number. See table error handling |

**Com Port Parameters:**

The parameters of the Com Port are fixed and cannot be changed.

| | |
|---|---|
| Baud rate | 19200 |
| Data Bit | 8 |
| Stop bit | 1 |
| Parity | No |

# Driver installation

ⓘ  The installation of the device drivers can only be performed with administration rights.

Connect the device to a free USB 2.0 port. The driver is installed automatically under Windows 10. An active Internet connection is required for loading the installation data.

The successful installation can be checked under "Windows Device Manager" in the tab "Ports (COM&LPT)". Here is a new entry "COMxx" (xx= COM port no., is assigned automatically).

## Manual driver installation

If the automatic installation fails, the driver for the can also be installed manually:

To do this, open the "Windows Device Manager". Under the tab "Other devices" there is an entry "FT232R USB UART", marked with a yellow "!".

Install the driver manually using the supplied "EHP Drivers and Manuals" CD:
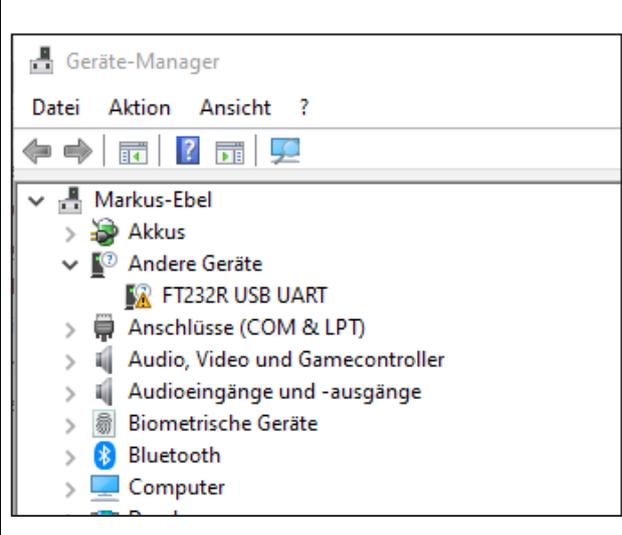
| | |
|---|---|
|  | Right-click the uninstalled device and select the "Update Driver" entry. |

| | |
|---|---|
|  | Select the "Search for drivers on my computer" option. |
|  | Select the driver - this can be found on the supplied CD in the USB_Box/Driver folder. Then click on "Next" to start the installation. |
|  | Confirm the successful driver installation with the "Close" button. |
|  | There is now a new device "USB Serial Port" in the Device Manager with a yellow ! in the tab "Other devices". Click on this with the right mouse button and select the entry Update driver. |

| | |
|---|---|
|  | 6. select the tab "Search for drivers on my computer |
|  | Select the path for the driver, which is located on the supplied CD in the folder USB_Box/Driver, then press "Next". Windows will now install the driver. |
|  | Confirm the successful driver installation with the "Close" button. |
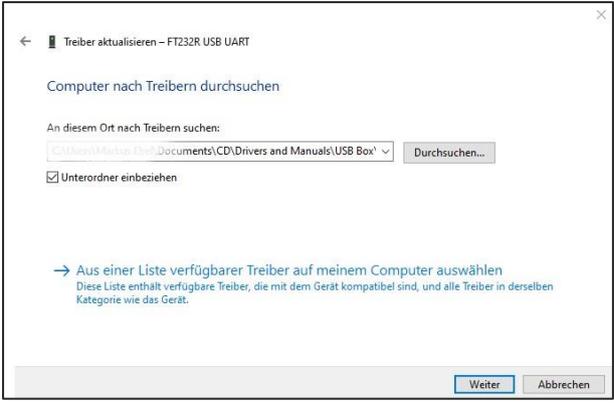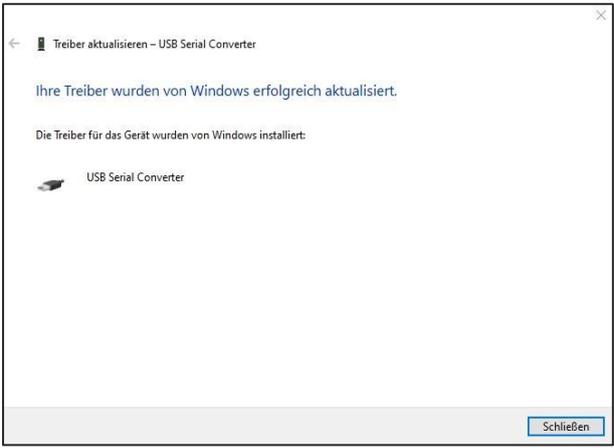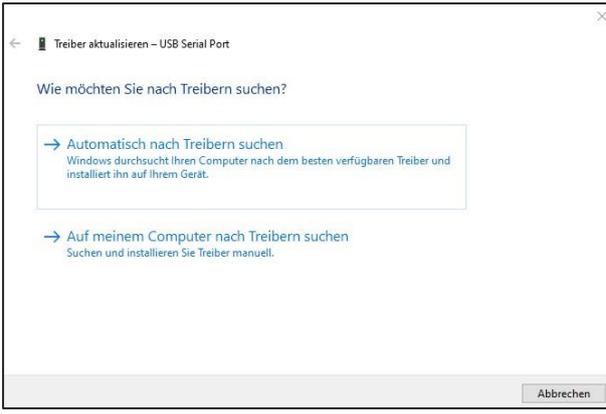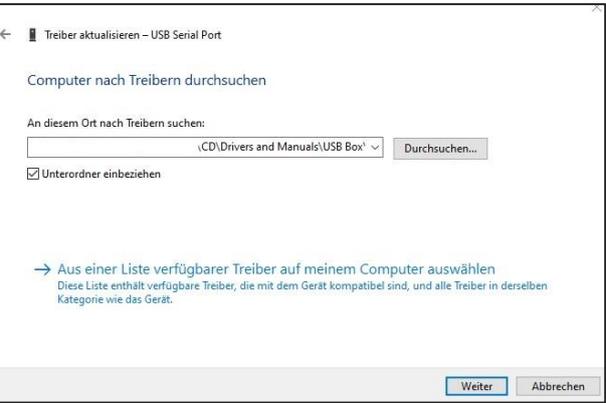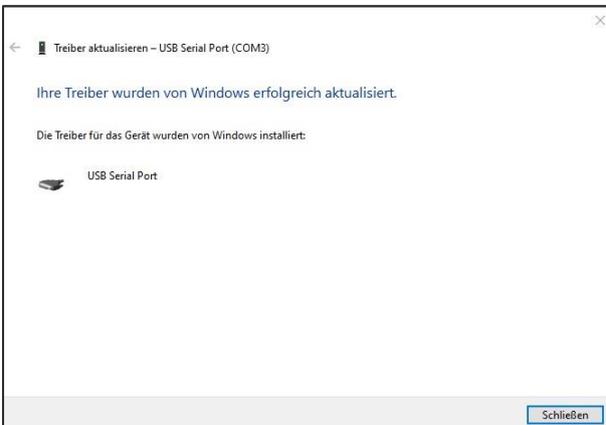
*Table 6 - Manual driver installation*

The successfully installed DRC433 now has an entry in the Device Manager our the "Ports (COM&LPT)" tab. Here you will find an entry "USB Serial Port (COMxx) → XX=COM Port No..

ⓘ Note the COM port number for your later application. Restart the PC after successful installation.

ⓘ If the DRC 433 is connected to a different USB port on the same computer, Windows automatically installs a new COM port.

# Radio transmission

## Frequency tables

A uniform radio frequency is preset between EHP crane scale and DRC 433 from delivery. This corresponds to channel 01 (433.075 MHz) by default. You can adjust the radio frequency via the menu of your DRC 433 remote control.

The following table shows the radio frequency of the respective channel numbers. When selecting the radio channel, make sure that it is not already occupied by other radio users (e.g. radio crane control).

*Table 7 - Frequency table*

| Frequency Table High Range Radio IR500 (500m) 433 MHz Band | | | |
|---|---|---|---|
| **Channel no.** | **Frequency in MHz** | **Channel no.** | **Frequency in MHz** |
| 00 | Not occupied | | |
| 01 | 433,075 | 15 | 434,000 |
| 02 | 433,125 | 16 | 434,075 |
| 03 | 433,175 | 17 | 434,150 |
| 04 | 433,225 | 18 | 434,225 |
| 05 | 433,275 | 19 | 434,300 |
| 06 | 433,325 | 20 | 434,375 |
| 07 | 433,400 | 21 | 434,425 |
| 08 | 433,475 | 22 | 434,475 |
| 09 | 433,550 | 23 | 434,525 |
| 10 | 433,625 | 24 | 434,575 |
| 11 | 433,700 | 25 | 434,625 |
| 12 | 433,775 | 26 | 434,675 |
| 13 | 433,850 | 27 | 434,725 |
| 14 | 433,925 | 28 | 434,775 |

## Change frequency & scale number of the crane scale

The settings of the crane scale and the DRC433 radio remote control require a match of the scale number and the channel number. You can only receive data from a scale if the settings of the crane scale are identical to the values of the DRC 433 remote control.

► Press the TEST key of the crane scale, the most important setting parameters are now displayed one after the other. Value 4 and value 5 are relevant.

*Table 8 - TEST Display values*

| No. | Display | Explanation |
|-----|---------|-------------|
| 1 | 88888 | LED segment test |
| 2 | LAH | Release |
| 3 | 12.21 | Version |
| 4 | xx | **Scale number (01-16)** |
| 5 | Cxx | **Channel number (01-99)** |
| 6 | Hxx | Remote control number (01-12) |

Change the scale and channel number on your EHP crane scale as follows:

*Table 9 - Set scale & channel number*

| Key combination | Function |
|---|---|
| | Press the On and Test keys simultaneously, EEEEE appears in the display. |
| | Press the Test key repeatedly until P 13(frequency channel) appears in the display. |
| | Activate the parameter using the tare key to call up the position to be changed.<br><br>Use the Test key to enter a value between 01- (corresponds 28to channel 01-28). |
| | Close the parameter with the zero key. |
| | Press the Test key repeatedly until P14 (scale number) appears in the display. |

| | |
|---|---|
| | Using the tare key, activate the parameter and move it to the position to be changed. |
| | Use the Test key to enter a value between 01- 16 (corresponds to scale 01-16). |
| | Close the parameter with the zero key. |
| | Press the Test key repeatedly until P 99(save parameter) appears in the display. |
| | First press the tare key and then operate with the zero key
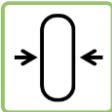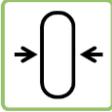
Sto (Store) flashes in the display. |
| | To exit the setting mode, press the On and Off keys simultaneously or briefly disconnect the scale's battery pack |

# Troubleshooting

The DRC 433 works with error codes. Error codes that you may be able to correct yourself are listed below. If you get an extended system error displayed that is not listed here, please contact EHP Service.

| Problem | Remedy |
|---|---|
| **No function** | Check the batteries/rechargeable batteries.<br><br>Press and hold the power button for a longer time. |
| **The display shows "Scale no. incorrect".** | The scale number was set incorrectly in the setup or another EHP scale is transmitting on the same radio frequency |
| **The display shows "Error no. xxxx". (xxxx corresponds to an error number)** | Press the OK key to acknowledge the error. The DCR 433 will now restart automatically.<br><br>The meaning of the respective error number is listed in the following lines. |
| **4** | Modem error - if the error is not corrected after a restart, contact EHP Service. |
| **5** | USB installation faulty - reinstall driver, check USB connection on PC |
| **6** | SD card error - Format the SD card on your PC. If the error persists, use another SD card. Do not use SDHC cards. |
| **1162** | An incorrect channel has been selected for High Range DRC 433. Select a channel between 1-28. |
| **1165** | An incorrect channel has been selected for Low Range DRC 433. Select a channel between 30-39. |
| **1166** | An incorrect channel has been selected for Low Range DRC 433. Select a channel between 30-39.<br><br>For devices with High Range radio, the modem does not initiate. Remove the batteries from the device for 3 minutes and check again. |
| **1170-1181** | Low Range Modem defective/ faulty. Contact EHP Service. |
| **6000** | SD card error - Format the SD card on your PC. If the error persists, use another SD card. Do not use SDHC cards. |

| Problem | Remedy |
| --- | --- |
| 6001 | Write-protect switch on SD card activated. Deactivate this switch on the SD card |
| 6002 | SD card not inserted |
| 6003 | Write protection switch SD card activated |
| 6010-6012 | Data set could not be saved to SD card.<br><br>Repeat weighing, if the error occurs again, check SD card. |
| 6013 | Storage not possible, time was not set.<br><br>Set a valid time. |
| 6055 | Transmission of the measurement data to the USB port canceled by pressing the Off button on the DRC 433. |
| 6100-6238 | Measurement data on SD card incorrect, unusable.<br><br>The measurement data were manipulated with a PC.<br><br>The measurement data are fragmentary due to a defective SD card. |
| No data connection to program Trans | Use a COM port between 1-9.<br><br>Wrong BAUD rate set.<br><br>DRC 433 has no connection to the scale. |
| Measurement data cannot be read out. | Commands on the USB port are only accepted:<br><br>1.in the pause between 2 consecutive records, or<br><br>2. if the USB port data transfer is disabled. See instructions par. data protocol 28 bytes EHP scales, or<br><br>3. when the scale is switched off. |
| No weighing data at the VCP | Data transfer on the USB port has been deactivated. See also instructions Para. data protocol 28 byte EHP scales |
| Reception display flashes, but no weight display | Scale number set incorrectly. Channel is set correctly. |
| Receive indicator does not flash rhythmically at 1 second intervals. | The reception situation is poor. Select another radio channel, see channel table. |
| Tare is not evaluated in the display, only a line is visible in the tare line. | Old scales firmware. Contact the EHP service.<br><br>Incorrect data protocol EHP scales. Contact EHP Service. |

# EHP service hotline

Do you need our support in the fastest way? No problem - just call us free of charge.



**Hotline: +497223 9366-0**

**Hotline hours: 8am - 4pm (CET) (Monday - Thursday); 8am - 12pm (CET) (Friday)**

# EHP Weighing Technology GmbH

Dieselstraße 8 - D-77815 Bühl (Baden)

Phone +49 (0) 7223 9366-0 - Fax +49 (0) 7223 936660

**E-mail: info@ehp.de - www.ehp.de**