Terminal 3710 USER Mode

Technical Description

USER MODE

Product	Version	Feature
Terminal	3710	

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0.1 Status

Date:	Status	Version	Editor	Approved by
14/09/2012	Standard	1.0	Rausch	

0.2 Modifications relative to previous version

Date:	Modification	Page	Version	Editor	Approved by
08/10/2012	Revised	1.1	Hauke		
23/11/2012	Chapter extended with 2.3 Interface connection and assignments	1.2	Hauke		
25/01/2013	Adaptation of factory settings	1.3	Hauke		
2013/08/12	UCAL4 adjusted Professional	13,14	1.4	Rausch	
2013/11/05	UCAL1 Pos.26 u. 27 with neutral measurement for version 3.02 and higher standardversion 1.05	9	1.4	Hauke	
214-02-03	UCAL1 Pos.14 „Nr. of scale“ UCAL4 Pos.2 „BMI“	9,13	1.5	Rausch	

0.3 Text system

This document was produced with Microsoft Word 2000.

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1 Introduction

USER Mode is an operating mode for setting the operating parameters for the user evaluation electronics.
It is accessed through read/write fields in consecutively numbered selection lists (UCALX). Empty field positions on the display are marked as irrelevant and are ignored during the setting procedure. All setting parameters are located at the same list positions on all devices.
All USER MODE data (UCAL Mode) are stored in an EEPROM which is protected from power interruptions.
The software version of the read-out electronics can be read out at POS 1 in USER MODE in UCAL 4.

2 Operation

The settings in USER MODE (UCAL Mode) can be made as follows:

- using the keypad
- through the RS232(V.24) serial interface using SOEHNLE PROFESSIONAL – Service program 30XX

In USER MODE, use of the keypad is standard across all model versions, but some of the functions are activated by different keys.

Data transfers to and from SOEHNLE PROFESSIONAL – Service program 30XX are possible only in UCAL Mode.

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2.1 Operating structure

"UCAL X" selection areas:
At this level, the relevant area can be selected using the forward/back functions.
The user setting mode is divided into 8 areas:

1.	Measuring station data (scales)	Display: UCAL□ 1
2.	Inputs/Outputs	Display: UCAL□ 2
3.	Interface setting 1+2+3	Display: UCAL□ 3
4.	Evaluation unit data	Display: UCAL□ 4
5.	Alibi memory and clock	Display: UCAL□ 5
6.	DP settings	Display: UCAL□ 6
7.	Anybus settings	Display: UCAL□ 7
8.	Area not used	Display: UCAL□ 8
9.	Area locked (password)	Display: UCAL□ 9

List level:
On this level, the list position can be selected using the forward/back functions. The level is indicated on the display by a flashing two-digit number on the left. The current position is identified by a left-aligned flashing number on the display. This position is activated with the Enter function,and the related value in the Edit level is shown aligned to the right.

Edit level:
On this level, the value to be edited is shown flashing and aligned to the right. The right decade of the value flashes and can be adjusted using the forward/back functions. The decade selection function is used to scroll the editable decade one position to the left. The changed value is stored with the Enter function, the list position is increased by 1 and the display returns to List level.
Edit level can also be used to perform special functions that do not involve editable values.

2.2 Operating note

The setting fields are either read/writeable or read-only. In the following overview, read/write positions are identified by a W, and read-only positions by an R.

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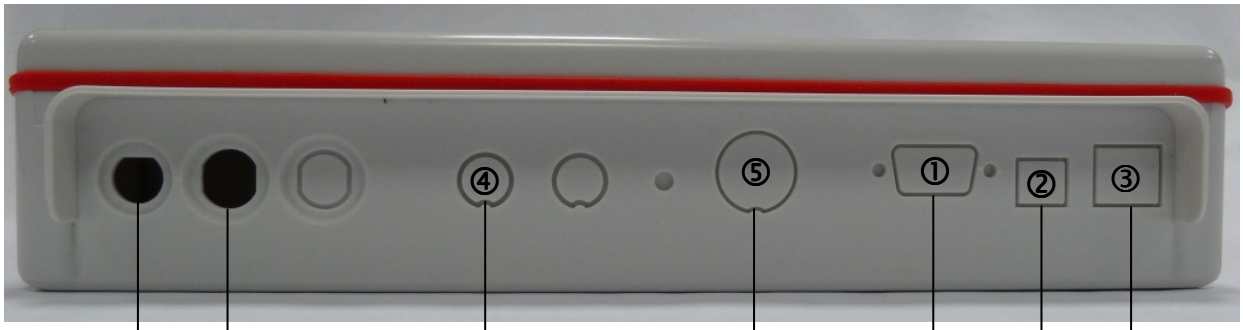
2.3 Connection assignments and interfaces



① Serial interface RS232

Included in the basic version, used for printer 2795.14, printer 2795.12+2795.13, data processing, large display 2562.01+2562.10 and Sonder large display
Parameter settings in UCAL 3 from Pos. 01 to 05

②+③ USB interface + interface for second display

Double interface module for USB + second display

②USB interface:
Parameter setting in UCAL 3 Pos. 13 (Value 3 = USB) and other parameters up to 17

③Interface for second display
Parameter setting in UCAL 3 Pos. 06 (Value 8 = Second display)

④ Optional output interface

Plug-in connection for the following variants → Parameter setting in UCAL 3 Pos. 06:
- RS232 (opto-decoupled) → Printer 2795.14, printer 2795.12+2795.13, DP, large display 2562.01+2562.10 and Sonder large display
- Ethernet → DP
- Bluetooth → DP

⑤ I/O socket

For connecting the optional traffic light display
Function and value settings in UCAL 2 Pos. 01 to 12
Factory setting parameters are for the traffic light display.

If the USB / second display interface module ②③ is being used the optional output interface ④ is not available!

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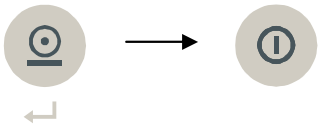
Key functions in user setting mode



Activate Setting mode for the user (press and hold simultaneously for >5s). The display then shows "**UCAL 1**".

After Setting mode is activated, the UCAL area is selected using →T← or F. Press ↵ to open the selected area.

Data transfer is possible using the service program.

For input and control in UCAL Mode, the following keys are available with the related functions:

⏻	On/Off	Switch On/Off Second button for UCAL activation
→T←	Tare button	Next setting step Increase the setting value
F	Function key	Previous setting step Decrease the setting value .
→0←	Zero button	Go back one menu level, e.g. area selection "UCAL X" Move one editable decade from right to left
↵	Print button	Confirm / Enter button Start the Edit function within a setting step Save parameters and go on to next setting step

Exit the user setting mode and save the data (briefly press both at the same time), possible only in "UCAL X" level.

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2.4 General parameters for measuring station (Area 1) "UCAL 1":

UCAL 1					
CAL POS	**R/W**	**CONTENT**	**VALUE RANGE**	**COMMENT**	**DEFAULT**
01	W (R)	Filter type selection Ambient condition setting	1 2 3 4 5	Service setting Live cattle scales steady normal unsteady **Important:** does not work if locked in ECAL Mode	1
02	W	Hold mode	0 1 2 3 4 5 6	Not active Still/key Still/empty Max/key Max/empty Drag/key Drag/empty	0
03	W	Auto-tare function	0 1	Off On	0
04	W	Second unit (select with F button)	0 1 2	g kg lb	0
05	W	Limit value for empty signal	0...99.9	in XX.X% of max. load	01.0
06	W	Piece count optimisation	0 1	Off On	Not used yet
07	R	Not used	---		---
08	W	Tot. /batch. function	1 2 3 4	Totalizing Auto-totalizing / Batching / Auto-batching	1
09	W	Reset consecutive numbering	0 1 2	Not active Clear totalizing memory Switch On/Off	1
10	W	Load relief factor	0...255	d	15
11	R	Not used	---		---
12	R	Not used	---		---

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UCAL 1					
CAL POS	**R/W**	**CONTENT**	**VALUE RANGE**	**COMMENT**	**DEFAULT**
13	R	Not used	---		---
14	R	Nr. of scale	0…99	DP mode	01
15	R	Not used	---		---
16	R	Min. value underload error memory	0...9999999	Display in calibrated unit weight	0000000
17	R	Underload error memory, date of last underload error	XX.XX.XX	e.g. 12/01/08	00.00.00
18	R	Underload error memory, number of underloads	0...9999		0000
19	R	Max. value overload error memory	0...9999999	Display in calibrated unit weight	0000000
20	R	Overload error memory, date of last overload error	XX.XX.XX	e.g. 12/01/08	00.00.00
21	R	Overload error memory, number of overloads	0...9999		0000
22	W	CAL print	0 1 2 3	Do not apply print ECAL print UCAL print E+UCAL	0
23	W	Enter test weight Reference value for GLP printout	0..999999	Store active GLP printout the next time Print button is operated	0000000
25	W	Reset to UCAL factory settings	0 1 2 3	Do not apply Load USER settings Load default print layout Clear error memory	0
26	W	Decimal point for neutral measurement factor and price labelling	0..6		3
27	W	Neutral measurement factor and price labelling	0..999999	Decimal point is indicated according to setting at Step 26	01,000

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2.5 Measuring station inputs/outputs (Setting mode Area 2) "UCAL 2":

UCAL 2					
CAL POS	**R/W**	**CONTENT**	**VALUE RANGE**	**COMMENT**	**DEFAULT**
01	W	Weight reference value for checking	0..999999		0000000
02	W	Weight positive tolerance for checking	0..999999		0000000
03	W	Weight negative tolerance for checking	0..999999		0000000
04	W	Reference value for piece quantity check/ neutral measurement	0..999999		0000000
05	W	Positive tolerance for piece quantity check / neutral measurement	0..999999		0000000
06	W	Negative tolerance for counting / neutral measurement	0..999999		0000000
07	W	Weight value switching point (gross = net without tare)	0 1	Net Gross	0
08	R	Not used	---		---
09	W	Output 1 function	00 01 02 03 04 05 06 07 08 09 10	Not active Value inside tolerance Idle Empty message Underload Overload Scales On Value outside tolerance Value too small Value too large Value exact	09
10	W	Output 2 function			01
11	W	Output 3 function			08
12	W	Output 4 function			03
13	W	Beeper mode	0 1 2	Off Short beep if in tolerance Short beep if reference value exact	1
14	W	Display mode	0 1 2	Off Flashes in tolerance Flashes if reference value exact	1

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2.6 Parameters for interfaces 1 , 2 , 3 (Setting area 3) "UCAL 3":

UCAL 3					
CAL POS	**R/W**	**CONTENT**	**VALUE RANGE**	**COMMENT**	**DEFAULT**
01	W	Use of interface 1 Standard RS232	0 1 2 3 4 5	none Printer 2795.14 Printer 2795.12+2795.13 Data processing Large display 2562.01+2562.10 Sonder large display	3
02	W	Interface 1 baud rate	1200 2400 4800 9600 19200	1200 2400 4800 9600 19200	9600
03	W	Interface 1 7/8 bit	7 8	Bit	8
04	W	Interface 1 parity	0 1 2	none even odd	0
05	W	XON/XOFF interface 1	0 1	Off On	0
06	W	Use of interface 2	0 1 2 3 4 5 6 7 8	none Printer 2795.14 Printer 2795.12+2795.13 Data processing Large display 2562.01+2562.10 Sonder large display Ethernet Bluetooth Second display	0
07	W	Interface 2 baud rate	1200 2400 4800 9600 19200	1200 2400 4800 9600 19200	9600
08	W	Interface 2 7/8 bit	7 8	Bit	8
09	W	Interface 2 parity	0 1 2	none even odd	0

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UCAL 3					
CAL POS	**R/W**	**CONTENT**	**VALUE RANGE**	**COMMENT**	**DEFAULT**
10	W	XON/XOFF interface 2	0 1	Off On	0
11	W	DP mode	0 1 2 3 4 5 6	none **A**: 1x immediate **B**: 1x after a change when stable **C**: always after a change when stable **D**: always when stable and a change in advance of empty message **E**: as for <D>, but after unloading first **F**: always (continuous)	0
12	W	Timeframe for data packets	0-999	1=100ms	2
13	W	Use of interface 3 (DP setting possible only with USB interface!)	0 3	none Data processing	0
14	W	Interface 3 baud rate	1200 2400 4800 9600 19200	1200 2400 4800 9600 19200	9600
15	W	Interface 3 7/8 bit	7 8	Bit	8
16	W	Interface 3 parity	0 1 2	none even odd	0
17	W	XON/XOFF interface 3	0 1	Off On	0

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2.7 Parameters for evaluation unit (Setting mode Area 4) "UCAL 4":

UCAL 4					
CAL POS	**R/W**	**CONTENT**	**VALUE RANGE**	**COMMENT**	**DEFAULT**
01	R	Software status	1.00	Version 1.00	
02	W	Assign F key function	0 1 2 3 4 5 6 7 8 9	F key not active Hold mode Switch to 2nd unit weight BMI Manual tare input Temporary tare Counting Percentage calculation Neutral measurement PLU	6
03	W	Lock entire keypad	0 1	Off On	0
04	W	Keylock for ON/OFF button	0 1	Off On	0
05	W	Keylock for Zero setting button	0 1	Off On	0
06	W	Keylock for Tare button	0 1	Off On	0
07	W	Keylock for Print button	0 1	Off On	0
08	W	Keylock for "Cl" button	0 1	Off On	0
09	W	Keylock for Info button	0 1	Off On	0
10	W	Keylock for Plus button	0 1	Off On	0
11	W	Keylock for Count button	0 1	Off On	0
12	W	Keylock for Reference Value button	0 1	Off On	0
13	W	Keylock for F button	0 1	Off On	0
14		No function	---		---
15		No function	---		---

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UCAL 4					
CAL POS	**R/W**	**CONTENT**	**VALUE RANGE**	**COMMENT**	**DEFAULT**
16	W	Timeout for display	0 1...255	Continuous operation in minutes to switch-off	0
17	W	Brightness of LCD backlight	0 100	Off Max. brightness	100
18	W	Timeout for back-lighting	0 1...255	Continuous operation in seconds to switch-off	30
19	R	Lithium battery voltage	0...9.9	in Volt	
20	W	Threshold for lithium battery low signal	0...9.9	in Volt	2.5
21		Threshold for battery symbol	0…140	in Volt (X10)	65
22		Threshold for switching off when battery empty	0…140	in Volt (X10)	60
23		No function	---		---

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2.8 Alibi memory/clock (Setting mode Area 5) "UCAL 5":

UCAL 5					
CAL POS	**R/W**	**CONTENT**	**VALUE RANGE**	**COMMENT**	**DEFAULT**
01	R	Alibi memory size	4000000		
02	R	Alibi memory fill level	0...4000000		
03	W	Select alibi entry number and display	0...4000000	Rolling display of content: - Alibi No. 12 - Scales type 2880 - Year 07 - Serial number 1001 - Gr./net value A 12.34 kg - Tare value A 2.98 kg "T"	
04	W	Start alibi entry No. printout	0...4000000	Start	0000000
05	W	End alibi entry No. printout	0...4000000	End	0000000
06	W	Alibi memory printout	0 1	No printout Print selected entries	0
07	W	Display time * 8	0...99	15 = 1.5 seconds	15
08	W	Fill level for full message	0...99	% value at which the alibi flag flashes	90
09	W	Alibi memory display mode	0 1	Gross value Net value	0
10	W	Date (Day. Month. Year)	XX.XX.XX	e.g. 12/01/08	
11	W	Weekday	1...7		
12	W	Clock time (hours. minutes. seconds)	XX.XX.XX	e.g. 12.34.59	

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2.9 DP settings (Setting mode Area 6) "UCAL 6":

UCAL 6					
CAL POS	**R/W**	**CONTENT**	**VALUE RANGE**	**COMMENT**	**DEFAULT**
01	W	Printout for G+T = 0	0 1	Off On, also applies to printer	1
02	W	Decimal separator	0 1 2	None Point Comma	2
03	W	Thousands separator	0 1 2	None Point Comma, also for printer	0
04	W	Suppress unit	0 1 2	No Yes (with space as place-holder) Yes (without place-holder)	0
05	W	Cons. number Print button	0 1	Do not reset Reset	0
06	W	Date format	1 2	European Imperial	1
07	W	Suppress initial zeros	0 1	No Yes	1
08	W	Decimal point for Sonder large display	0 1	No Yes	0

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2.10 Anybus settings (Setting mode Area 7) "UCAL 7":

UCAL 7					
CAL POS	**R/W**	**CONTENT**	**VALUE RANGE**	**COMMENT**	**DEFAULT**
01	R	Not used	—		---
02	R	Not used	---		---
03	R	Not used	---		---
04	R	Not used	---		---
5	W	Ethernet address byte1	0-255	e.g. 10.10.5.5	010
6	W	Ethernet address byte2	0-255		010
7	W	Ethernet address byte3	0-255		005
8	W	Ethernet address byte4	0-255		005
9	W	Subnet mask byte1	0-255	e.g. 255.255.255.0	255
10	W	Subnet mask byte2	0-255		255
11	W	Subnet mask byte3	0-255		255
12	W	Subnet mask byte4	0-255		0
13	W	Standard gateway byte1	0-255	e.g. 10.10.5.12	010
14	W	Standard gateway byte2	0-255		010
15	W	Standard gateway byte3	0-255		005
16	W	Standard gateway byte4	0-255		012
17	W	Port	0 to 65535	e.g. Telnet "23"	00023

Important: After changing Ethernet settings 5 -17, the evaluation unit must be switched Off and then On again.

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2.11 Settings (Setting mode Area 8) "UCAL 8": not used

2.12 Locked area (Setting mode Area 9) "UCAL 9":

UCAL 9					
CAL POS	**R/W**	**CONTENT**	**VALUE RANGE**	**COMMENT**	**DEFAULT**
01	W (R)	Password input	0...999999	Password = 002509 Entry "000000" readable only	000000
02	W	Alibi memory	0 1	Off On	0
03	W	OFF indication	0 1	Off On (if set as Medical in ECAL Mode, the OFF indication is always On)	1

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2.13 Explanation of the various user functions on the Standard terminal

Activate with the F button

Counting:
When the F button is pressed, "Add" and the reference piece count appear on the display. The F button can be pressed again to change the value from 1 to 100. Then place the items to be counted on the scales and press the ⊙ button.
The reference weight is determined and the piece count is displayed. Exit Counting mode using the ⏻ button.

Percentage weighing:
When the F button is pressed, "percent" appears on the display. Then place the reference weight as 100% on the scales and press the ⊙ button. The reference weight is determined and the piece count is displayed. Exit using the ⏻ button.

Neutral measurement:
When the F button is pressed, "Neutral" appears on the display. Then press the ⊙ button. The weight is multiplied by the factor set in UCAL 1 26+27 and then displayed. Exit using the ⏻ button.

PLU Mode:
The PLU (Product Look Up) memory has 100 memory locations. The PLU memory is written to through the interface. Each PLU location contains a name, piece weight, and tare weight.
To write to the memory, the command <K080Kplu;name;piece;tare> is used.
- "plu" is the PLU number with a value from 001 to 100
- "name" consists of up to 20 characters (the first 7 characters are displayed)
- "piece" is the piece weight value in gr, with a point as decimal separator
- "tare" is the tare weight value in gr, with a point as decimal separator

When the F button is pressed, the PLU and number appear on the display. The F and →T← buttons

can be used to change the value from 1 to 100. Press the ⊙ button to store. The identifier is displayed for 2 secs, and the reference weight and tare are stored. The calculated piece count is displayed.
Exit PLU Mode using the ⏻ button

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