

Operation Manual

RAVAS indicator Touch

RAVAS Europe BV

 Veilingweg 17
5301 KM Zaltbommel
Netherlands

 +31 418 515220
 www.ravas.com
 info@ravas.com

We would like to inform you about the fact that this RAVAS product is 100 % recyclable on the basis that the parts are processed and disposed off in the right manner.

More information can be found on our website www.ravas.com.

Rev. 20250807

Printing/typographical errors and model changes reserved

PLEASE RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

If you have any queries concerning the duration and terms of the guarantee, please contact your supplier. We would also refer you to our General Sale and Supply Conditions, which are available on request.

The manufacturer accepts no liability for any damage or injury caused by failure to follow these instructions, or from negligent operation or assembly, even if this is not expressly stated in this instruction manual.

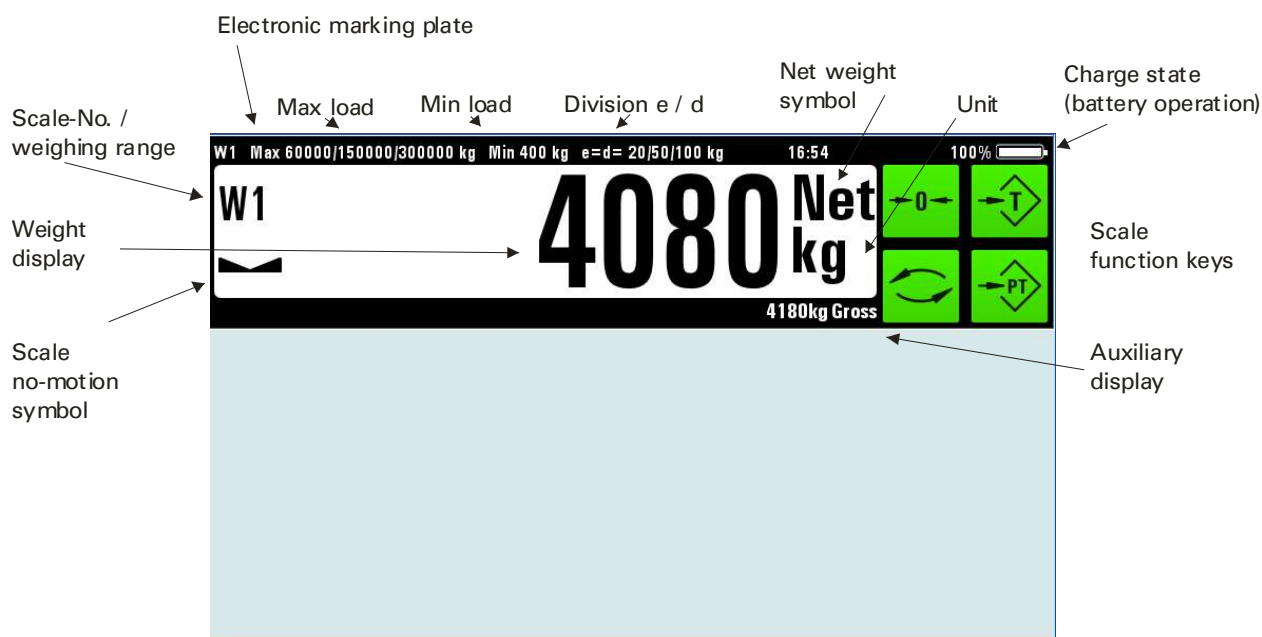
In light of our policy of continuous improvement, it is possible that details of the product may differ from those described in this manual. For this reason, these instructions should only be treated as guidelines for the installation of the relevant product. This manual has been compiled with all due care, but the manufacturer cannot be held responsible for any consequences of errors. All rights are reserved and no part of this manual may be reproduced in any way.

Contents

1 Weight Display And Scale Function Keys	5
1.1 Numeric / Alphanumeric Keyboard (Example)	6
2 Operation Of Scale Functions	8
2.1 Preset Tare (PT)	8
2.2 Tare Balancing	8
3 Operation Via Display And Keyboard.....	9
3.1 Power On.....	9
3.2 Main Menu	10
3.3 Special Functions For Mobile Weighing	11
4 Operating Sequence.....	12
4.1 Operating Mode 'Weighing'	12
4.1.1 Weighing	12
4.1.2 Weighing: Input Of ID	13
4.1.3 Weighing: Load Scale	13
4.2 Operating Mode 'Counting'	14
4.2.1 Parts Counting	14
4.2.2 Counting: Select Product.....	15
4.2.3 Counting: Calculate Tare	15
4.2.4 Counting: Tare Memory	16
4.2.5 Counting: Calculation Of Average Piece Weight.....	17
4.3 Operating Mode 'Loading / Unloading'	18
4.3.1 Loading / Unloading: Storage.....	18
4.3.2 Loading / Unloading: Assign New Key	18
4.3.3 Loading / Unloading: Select Key	19
4.3.4 Loading / Unloading: Weighing	19
4.4 Operating Mode 'Summing'	20
4.4.1 Totalizing Memory	20
4.4.2 Totalizing Memory: Assign New Key	20
4.4.3 Totalizing Memory: Select Key	21
4.4.4 Totalizing Memory: Weighing	21
4.5 Operating Mode 'Recipe Weighing'	22
4.5.1 Recipe Weighing	22
4.5.2 Recipe Weighing: Assign New Key	22
4.5.3 Recipe Weighing: Filling A Component	23
4.6 Overview Data Entry	24
4.6.1 Data Entry	24
4.6.2 Data Entry: Product File	25
4.6.3 Data Entry: Tare Memory	26

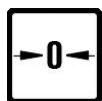
4.6.4 Data Entry: ID Memory	27
4.6.5 Data Entry: Data Backup	28
4.7 Data Entry: Settings.....	29
4.7.1 Data Entry / Settings / General	30
4.7.2 Data Entry / Settings / iForks Settings	31
4.7.3 Data Entry / Settings / WLX Settings	32
4.7.4 Data Entry / Settings / Printer Settings	34
4.7.5 Data Entry / Settings / Gravity Parameter	35
5 Data Transmission And Saving To File	36
6 Printformats	38
6.1 Weighing	38
6.2 Counting	38
6.3 Load / Unload	39
6.3.1 Subtotal	39
6.3.2 Summe	39
6.4 Summing mit Single- und Total weight	40
6.4.1 Singelweighing	40
6.4.2 Summing	40
7 Data Archive	41
8 Transport, Maintenance And Cleaning	42
8.1 Transport	42
8.2 Maintenance	42
8.3 Cleaning	42
9 Trouble Shooting	43
9 Error Messages	44

1 Weight Display And Scale Function Keys

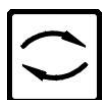


Please note that 'key' refers to the corresponding sensor field of the currently displayed template, in the same way 'pressing a key' is to be understood as touching the respective field of the touch panel.

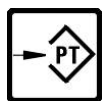
Scale Function Keys



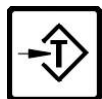
Call up Service Mode; to access the Service Mode, touch the field of the weight display (2 sec min.)



Set Zero Key to set the displayed scale to zero (only within zero setting range, selectable in calibration mode).



Display Select Key to switch the display between tare weight / gross weight / gross bargraph / data archive.

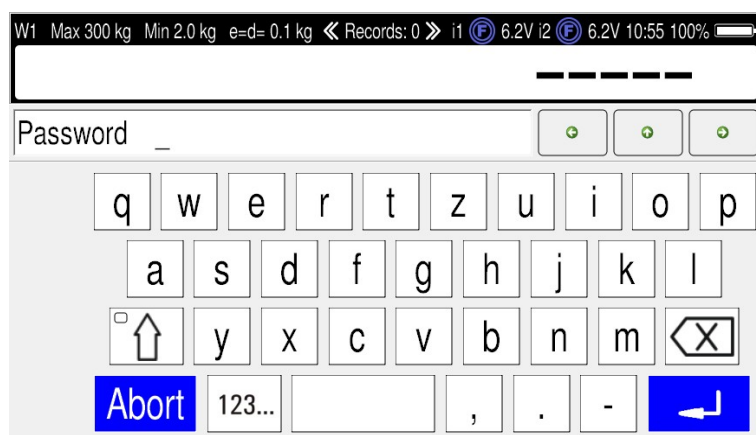


Tare Entry Key to enter preset tare in the tare line, the value is applied after confirmation with the Enter-key.

Tare Key for alternately taring of currently displayed weight or clearing the tare weight.

Electronic Marking Plate (only for single- and dual-range and two-interval scales)

Scale-No.	W1	.
Max Load	e.g.: Max 3000kg	Maximum load (without additive tare), selectable in calibration mode.
Min Load	e.g.: Min 20kg	Permissible minimum load.
Division e / d	e.g.: e=d=1kg	Approved division e and display graduation d (in most cases e = d).



With the '123...' key the layout can be switched back to the template for numeric inputs.



2 Operation Of Scale Functions

2.1 Preset Tare (PT)



After pressing the PT-key, the template for numeric inputs is opened and a tare value can be entered and confirmed with the Enter-key.

Display of net weight in the main display and of tare weight in the auxiliary display.



By pressing the Tare-key the tare is cleared and the main display returns to the indication of the gross weight.

2.2 Tare Balancing



By pressing the Tare-key, tare balancing (autotare) is executed. By pressing the Tare-key once more the display returns to gross weight.

3 Operation Via Display And Keyboard

3.1 Power On

Press -key to switch the terminal on.

After switching the terminal on, automatically the power up messages are displayed, then the program proceeds to the template 'main menu'.



Power up messages and program version.

3.2 Main Menu



Weighing	Weighing mode
Counting	Counting mode
Load / Unload	Operating mode loading / unloading
Totalizing	Summing mode
Recipe Weighing	Recipe weighing mode
Gravity Determination	Operating mode determination of center of load. Note: Must be enabled in menu 'Gravity parameters'.
Data Input	Entry of data



Choose operating mode.

3.3 Special Functions For Mobile Weighing

The weighing terminal features a power save mode and remains in sleep mode when external power is on. To switch the terminal on press -key.

Power off on battery low

If the input voltage falls below 11.3 V a blinking 'Battery Low' signal is shown. If no key is pressed within the next 2 min after the signal started blinking, the terminal is switched off. With every key stroke timeout is reset to 2 min. The terminal can be switched on again by pressing -key, then the timeout period of 2 min is started anew.

The further power off functions (after time, on key stroke) must be enabled in the configuration and are active only if corresponding time intervals have been entered. These settings cannot be changed by the operator.

Backlighting off

If terminal is not in use, backlighting of the display can be switched off after selectable time has elapsed (time after last key stroke). The weighing terminal remains operational. Backlighting can be switched on again by pressing -key.

Backlighting can also be configured to be permanently switched off after power up and initialization messages.

Power off after time

In the configuration a time (in min) can be entered after which the terminal is switched off after the last key stroke. The terminal can be switched on again by pressing the -key.

Power off on key stroke

If this function is activated in the configuration, the terminal can be switched off and on again by pressing the -key.

Printer control

Via a parallel output the power supply for the printer is controlled as follows:

When the terminal is switched on, this output is set for approx. 10 sec (to replace the paper roll).

Furthermore, the output is set 1 sec before data are sent to the printer and it remains on after printing has been completed for approx. 9 more sec.

Incline sensor

If scales are equipped with an incline sensor (connected to a parallel input of the weighing terminal), this sensor opens the contact when the permissible inclination angle is exceeded. If this is the case for longer than 3 sec, the message 'Level Error' is shown in the upper line of the display (instead of the weight). In this state printing is disabled. When the scale returns to a position within the permitted inclination range, the error message is cleared and printing is released again.

The error message also appears on power up if the incline sensor is activated.

4 Operating Sequence

4.1 Operating Mode 'Weighing'

In the operating mode 'Weighing' the terminal works as a simple indicator with optional entry of IDs. Automatic and manual taring is supported as well as zero setting. On keystroke, capturing of weight is started and -if applicable- depending on the configuration in the menu 'Data input/Settings/General' a ticket is printed, a data string transmitted and a record stored in the internal memory.

Note:

Optionally the functions 'Weighing with tare database' and/or 'Weighing with ID database' can be enabled in the menu 'Data input/Settings/General'. In this case an ID or a tare weight can be called up via function key from the database.

4.1.1 Weighing

Return

Return to main menu.

ID-Memory

Call up ID from ID database.

Tare

Call up tare weight from tare database.

Ok

Start of weighing.



The scale waits on the entry of an ID or on pressing the Ok key to start a weighing.

4.1.2 Weighing: Input Of ID

Entry step for ID.



Abort entry, changes are ignored.



Confirm entry.

4.1.3 Weighing: Load Scale

This message appears when the weight on the scale is below the min. load or if it is not different from the weight of the previous weighing.



Load scale.

4.2 Operating Mode 'Counting'

In the operating mode 'Counting' the weighing terminal works as a simple parts counting station with optional entry of IDs. On keystroke capturing of weight is started and -if applicable- depending on the configuration in the menu 'Data input/Settings/General' a ticket is printed, a data string transmitted and a record stored in the internal memory.

Note:

In the menu 'Data input/Settings/General' it is possible to enable a second scale (A&D at present only) as reference scale.

4.2.1 Parts Counting

To transmit data to the FTP Server, the network cable must be plugged in.

Back

Return to main menu.

kg>Pcs

Switching from kg to piece count.

Products

Select product from file.

Tare+

Calculate tare of pallet + number of containers.

Fix tare

Select tare weight from tare memory.

Pc. weight

Calculate average piece weight.

OK

Start of weighing.

4.2.2 Counting: Select Product

W1 Max 300 kg Min 2.0 kg e=d= 0.1 kg << Records: 1 >> i1 5.7V i2 5.6V 16:24 100%

W1 **0** Pcs 0.0kg Tare

Data Input/Products 4 / 100

Product-No. 5000-1000-04 Find

Description M4 Screw Find

Reference Weight (g) 2.345

< > Delete New Record Save Ok

Select product from file.



Show previous record in file.



Show next record in file.



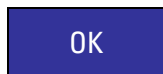
Delete record from file.



Create new record in file.



Store changes.



Select displayed product.



Choose product and confirm.

4.2.3 Counting: Calculate Tare

W1 Max 300 kg Min 2.0 kg e=d= 0.1 kg << Records: 0 >> 16:02 100%

W1 **8.6** Net kg 2.4 kgPT Tare

Tare = Tare1 + Number * Tare2

Tare1 1.0

Number 2

Tare2 2.0

Back Ok

Enter pallet tare, number of containers and container tare for calculation.



Return to previous menu.



Confirm entries.

4.2.4 Counting: Tare Memory

Tare code	Description	Tare
1	Box 100	2.4 kg

Select tare weight from tare memory.

<

Select previous record in tare memory.

>

Select next record in tare memory.

Delete

Delete record from tare memory.

New

Create new record in tare memory.

Save

Save changes.

OK

Select displayed tare weight.



Choose tare weight and confirm.

4.2.5 Counting: Calculation Of Average Piece Weight



Capturing of average piece weight by adding / removing parts.

Back	Return to previous menu.
Parts	Change the preset number of 10 parts.
OK	Confirm displayed number of pieces.

 Load parts and confirm.

Note:

- If no reference scale is enabled under 'Data input/Settings/General', scale #1 is used to determine the piece weight.
- If a reference scale is enabled (A&D at present only), the piece weight is automatically determined on the reference scale.

4.3 Operating Mode 'Loading / Unloading'

In the operating mode 'Loading / unloading' the weighing terminal works as a data capture station with optional tare memory.

4.3.1 Loading / Unloading: Storage

Sequence for loading and unloading to a specified target value.

Back

Return to previous menu.



Press key.

4.3.2 Loading / Unloading: Assign New Key

Configure key assignment with designation of destination, max. weight and threshold.

Back

Return to previous menu.

Ok

Confirm entries.



Complete entries and confirm.

4.3.3 Loading / Unloading: Select Key

Select already chosen or new key.

Back

Return to previous menu.



Select key.

4.3.4 Loading / Unloading: Weighing

Entry of ID and start of weighing or termination of weighing.

Back

Return to previous menu.

Tare

Select tare weight from tare memory.

Done

Current summing sequence is terminated. If applicable, depending on the configuration in the menu 'Data input/Settings/General' a ticket is printed, a data string transmitted and a record stored in the internal memory.

Ok

Start weighing. If applicable, depending on the configuration in the menu 'Data input/Settings/General' a ticket is printed, a data string transmitted and a record stored in the internal memory.



Start weighing.

4.4 Operating Mode 'Summing'

In the operating mode 'Summing' the weighing terminal works as a totalizing scale with optional tare memory.

4.4.1 Totalizing Memory



Operating sequence summing without preset target.

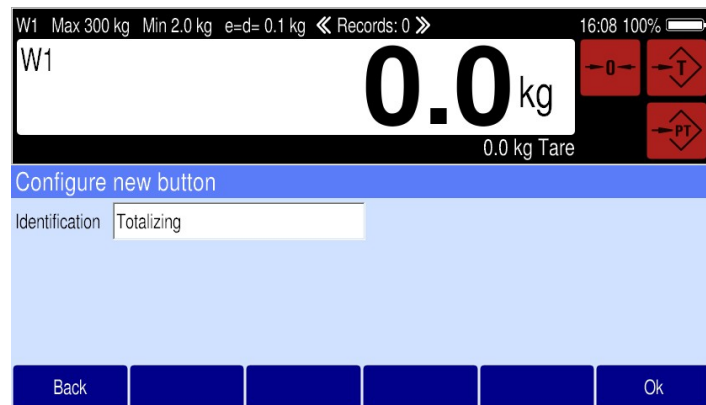


Return to previous menu.



Select key.

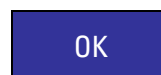
4.4.2 Totalizing Memory: Assign New Key



Configure key assignment with destination and threshold.



Return to previous menu.



Confirm entries.



Complete entries and confirm.

4.4.3 Totalizing Memory: Select Key

Select already chosen or new key.

Back

Return to previous menu.



Select key.

4.4.4 Totalizing Memory: Weighing

Entry of ID and start of weighing or termination of weighing.

Back

Return to previous menu.

Tare

Select tare weight from tare memory.

Done

Current summing sequence is terminated. If applicable, depending on the configuration in the menu 'Data input/Settings/General' a ticket is printed, a data string transmitted and a record stored in the internal memory.

Ok

Start weighing. If applicable, depending on the configuration in the menu 'Data input/Settings/General' a ticket is printed, a data string transmitted and a record stored in the internal memory.



Start weighing.

4.5 Operating Mode 'Recipe Weighing'

4.5.1 Recipe Weighing

Operating sequence recipe weighing.

Back

Return to main menu.



Select key.

4.5.2 Recipe Weighing: Assign New Key

Entry of recipe name.

Back

Return to main menu.

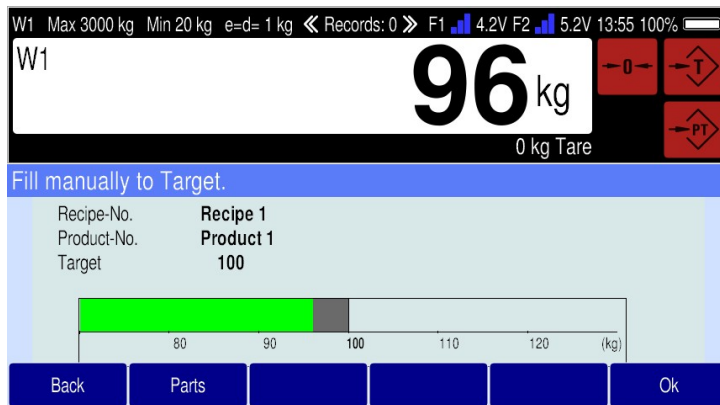
OK

Confirm entries.



Enter recipe-No. and confirm.

4.5.3 Recipe Weighing: Filling A Component



Filling of a component.

Back

Return to main menu.

Parts

Termination of the recipe in progress.

OK

Confirm entries.

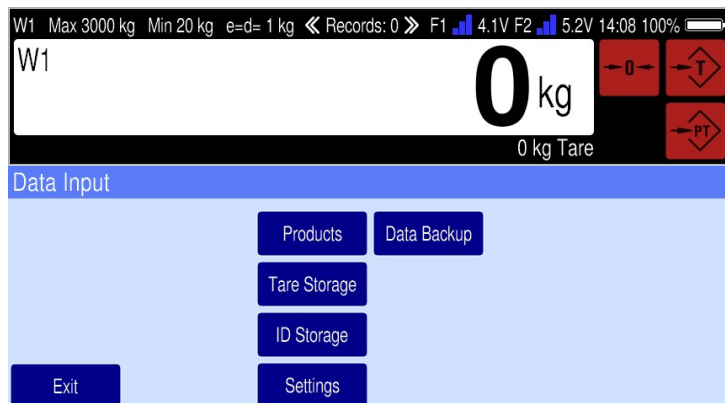


Fill component and confirm.

4.6 Overview Data Entry

The data entry menu contains the configuration settings, database entries and the backup of data. If the unit is switched on for the first time, first the master file data should be entered.

4.6.1 Data Entry



Return to main menu.



Entry of product-No., name and reference weight (g).



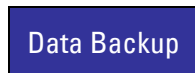
Entry of tare-No., name and tare weight.



Entry of ID-No. and name.



Entry of supervisor parameters.



Backup or restore data onto or from USB device.



Select menu.

4.6.2 Data Entry: Product File

Data for up to 99 products with their product names can be stored in the product file against a 2-digit product-No.

W1 Max 300 kg Min 2.0 kg e=d= 0.1 kg << Records: 1 >> i1 5.7V i2 5.6V 16:24 100%

W1 0 Pcs 0.0kg Tare

Data Input/Products 4 / 100

Product-No. 5000-1000-04 Find

Description M4 Screw Find

Reference Weight (g) 2.345

< > Delete New Record Save Ok



Show previous record in file.



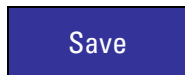
Show next record in file.



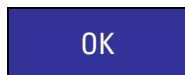
Delete record from file.



Create new record in file.



Store changes.



Confirm entries.

4.6.3 Data Entry: Tare Memory

Up to 50 tare weights with their pertaining designation can be stored in the tare file against a 2-digit tare-No.

W1 Max 300 kg Min 2.0 kg e=d= 0.1 kg << Records: 1 >> i1 5.7V i2 5.6V 16:26 100%

W1 18.5 kg Net 5.0kgPT Tare

Data Input/Tare Storage 5 / 50

Tare code 1 Find

Description Box 100 Find

Tare 2.4 kg

< > Delete New Record Save Ok



Select previous record in tare memory.



Select next record in tare memory.



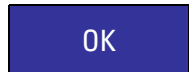
Delete record from tare memory.



Create new record in tare memory.



Store changes.



Confirm entries.

4.6.4 Data Entry: ID Memory

Up to 99 IDs can be stored in the ID file against a 2-digit ID-No.

W1 Max 3000 kg Min 20 kg e=d= 1 kg << Records: 0 >> F1 4.1V F2 5.2V 14:11 100%

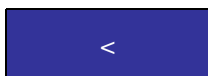
W1 0 kg 0 kg Tare

Data Input/ID Storage 0 / 100

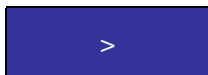
ID Find

Description Find

< > Delete New Record Save Ok



Select previous entry in ID file.



Select next entry in ID file.



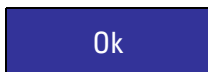
Delete entry from ID file.



Create new entry in ID file.



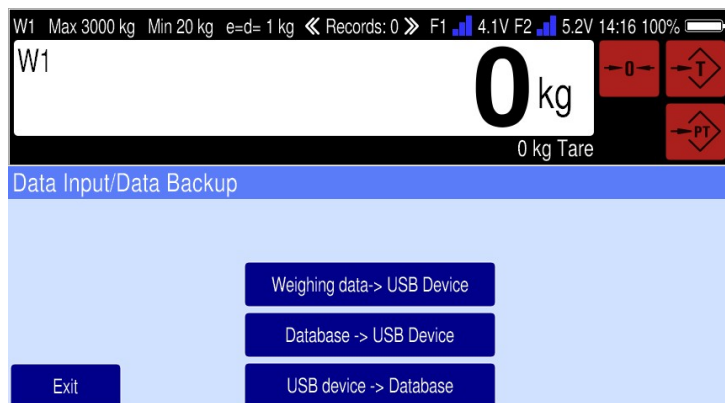
Store changes.



Confirm entry.

4.6.5 Data Entry: Data Backup

Weighing data and the contents of the database can be copied onto a USB device. In the other direction, the database can be restored.



Exit

Return to main menu.

Weighing data -> USB
Device

Copy weighing data onto USB device.

Database -> USB Device

Copy databases onto USB device.

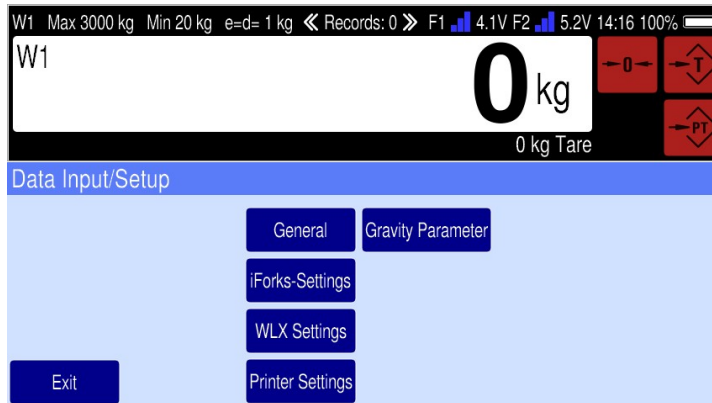
USB Device -> Database

Upload databases from USB device into weighing terminal.

4.7 Data Entry: Settings

Only trained service personnel may make / change configuration settings.

Note: If no password is specified, password check is skipped. The password can be entered in the menu 'Data entries\Settings\General'.



Exit	Return to data entry menu.
General	Entry of general parameters.
iForks-Settings	Entry of iForks parameters (see iForks installation instructions).
WLX Settings	Entry of WLX Parameter (only when WLX module is used).
Printer Settings	Configuration of printer parameters.
Gravity Parameter	Entry of gravity parameters (only when WLI module is used).
Factory Defaults	Irrevocably reset all settings to factory defaults and clear all memory



Select menu.

4.7.1 Data Entry / Settings / General

Data Input/Settings/General	
Terminal-No.	1
Date	07.10.14
Time	14:12
Min. Load	20
Checkweight	0
Data transmission?	☐

Exit Ok

Exit

Return to previous menu.

Ok

Confirm entries.

Terminal-No.	Entry of unequivocal terminal-No.
Date	Entry of date in format DD.MM.YY
Time	Entry of time in format HH.MM
Min.Load	Entry of min. load. A weighing is only released when this min. load is exceeded.
Checkweight	Entry of checkweight. A following weighing is only released when the current weight differs from that of the last weighing cycle by at least this amount.
Data transmission	Enable / disable data transmission.
Host Channel	Select host interface for communication.
Store on USB device	Enable / disable storing on USB device.
With ready acknowledge (Summing)	Ready acknowledge after the end of summing
Delete label? (Summing)	If summing is done clear label data
Weighing w. Tare database	Enable / disable tare weight database for operating mode 'Weighing'.
Weighing w. ID database	Enable / disable ID database for operating mode 'Weighing'.
Totalizing w. Tare database	Enable / disable 'Summing' for operating mode 'Weighing'.
Load/Unload w. Tare database	Enable / disable 'Loading / unloading' for operating mode 'Weighing'.
Reference Scale	Enable / disable A&D reference scale. Note: It is not possible to use both, the main scale (W1) and an A&D scale as reference scale at the same time.
Ref.Scale Channel	Select interface for reference scale.
Weighing ID1 - ID4	Prompts for the entry of IDs in the operating mode 'Weighing'.
Counting ID1 – ID4	Prompts for the entry of IDs in the operating mode 'Counting'.

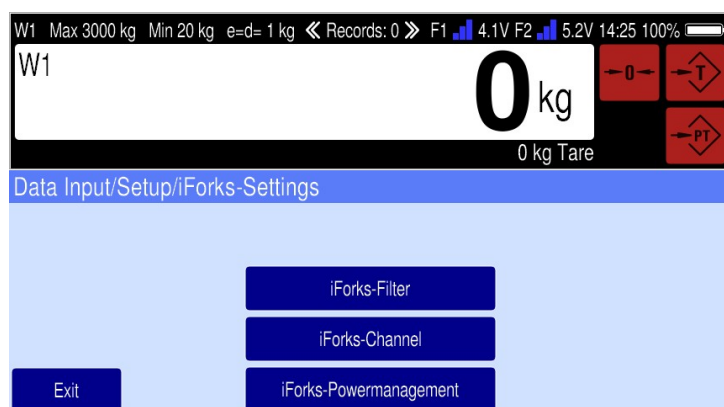
Load/Unload ID1 – ID4	Prompts for the entry of IDs in the operating mode 'Summing'.
Max.No of lines in load/unload	Entry of the max. number of lines in the operating mode 'Load / unload'.
Max.No of columns in load/unload	Entry of the max. number of columns in the operating mode 'Load / unload'.
Totalizing ID1 – ID4	Prompts for the entry of IDs in the operating mode 'Summing'.
Max.No of lines in Totalizing	Entry of the max. number of lines in the operating mode 'Summing'.
Max.No of columns in Totalizing	Entry of the max. number of columns in the operating mode 'Summing'.
Recipe ID1 – ID4	Prompts for the entry of IDs in the operating mode 'Recipe weighing'.
Max.No of lines in Recipe Weighing	Entry of the max. number of lines in the operating mode 'Recipe weighing'.
Max.No of columns in Recipe Weighing	Entry of the max. number of column in the operating mode 'Recipe weighing'.
Autostart	Select operating mode that is to be started automatically after power up.
Password	Enter password for entries. If no password is specified, password check is disabled.

4.7.2 Data Entry / Settings / iForks Settings

For a detailed description of the iForks configuration refer to technical manual 'IFORKS_THE'.

Note:

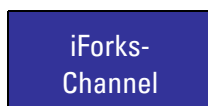
- The iForks menu appears only when a WSI module is installed.



Return to configuration menu.



Filter settings for thr WSI module of the weighing terminal.



Settings for the connection of the WSI module.



The function 'iForks-Powermanagement' contains the settings of the 'Stand By' and 'PowerDown' timers.



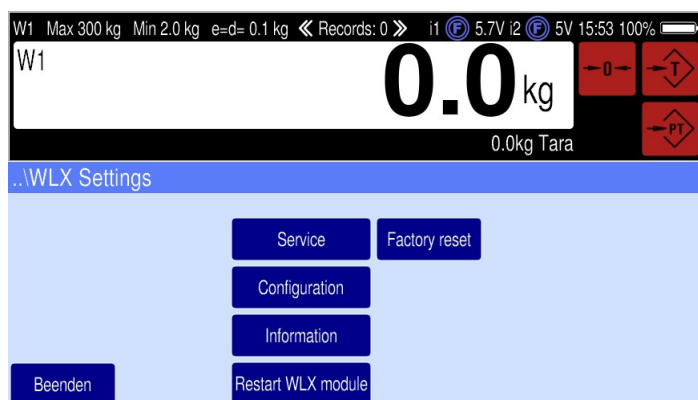
Select menu.

4.7.3 Data Entry / Settings / WLX Settings

For a detailed description of the individual WLX parameters refer to technical manual 'WLX IAE'.

Note:

- The WLX menu appears only when an WLX module is installed.



Exit

Return to configuration menu.

Service

Network settings for the WLAN module of the weighing terminal.

Configuration

Setting of connections for the WLAN module.

Information

The function 'Information' provides details on status of connection, available networks, firmware version of module and version of configuration file.

Restart WLX
Module

Use the function 'Restart WLX Module' to *restart* the module.

Note: Settings remain unchanged and are not deleted.

Factory Reset

Use the function 'Factory Reset' to *reset* the module.

Note: All settings are reset to factory defaults.



Select menu.

4.7.4 Data Entry / Settings / Printer Settings

Exit

Return to previous menu.

Ok

Confirm choice.

With Printer

Enable / disable printer.

Multiple Printouts

Enable / disable multiple printouts.

Printer language

Select printer language (only for operation mode 'Weighing'):

ASCII (Standard Printer Code)

ZPL (Zebra Programming Language)

EPL (Eltron Programming Language)

Ticket size

Select ticket size.

Printer channel

Select printer interface.

Printer IP-Address

Entry of IP address when printer channel 'Ethernet' was chosen.

Printer wireless

Wireless data communication to the printer that has Bluetooth® technology.

Line feed

Enable / disable line feed.

No of line feeds

Entry of number of lines when 'Line feed' was enabled.

Note: When printer language 'ZPL' or 'EPL' has been chosen, the configuration of a ticket must be loaded in the internal 'Shared' folder. Depending on the chosen size of the label and the printer language, the label must be named as follows:

- **WeighingTicket_EPL_A.lab** (L150 x W100 mm)
- **WeighingTicket_EPL_B.lab** (L70 x W100 mm)
- **WeighingTicket_ZPL_A.lab** (L150 x W100 mm)
- **WeighingTicket_ZPL_B.lab** (L70 x W100 mm)

4.7.5 Data Entry / Settings / Gravity Parameter

Exit

Return to previous menu.

Ok

Confirm choice.

With Gravity Determination Enable / disable gravity determination.

Note: After enabling the function and confirming the parameters, the application is automatically restarted.

Gravity Determination Mode

Select mode for determination of gravity: constant, variable or fork lift.

Distance Cell-Cell

Entry of distance (depth) between cell (front) and cell (rear).

Distance Edge-Cell

Entry of distance (depth) between load stop (rear) and cell (front).

Distance Middle-Fork

Entry of distance between middle of fork #1 and middle of fork #2.

Note:

- **Constant:** Parameters cannot be changed during determination of gravity.
- **Variable:** Parameter 'Distance edge of package – Middle of fork 1' can be changed during determination of gravity.
- **Fork Lift:** Parameter 'Distance edge of package – Mitte Gabel 1' and 'Distance Middle-Fork' can be changed during determination of gravity.

5 Data Transmission And Saving To File

If data transmission is enabled in the menu 'Data Entry/Settings/General', after each weighing cycle data are transferred to the host system.

When the 'AckNak' protocol is used, receipt of data must be confirmed by the host system with ACK(06H) within 3 sec. In the case of an error, NAK(15H) can be returned to initiate a repetition of the transmission. Always the oldest record in the buffer is transmitted and deleted from the buffer after successful transmission.

The weighing data can also be saved in a file, to this effect the parameter 'Store on USB device' must be enabled in the menu 'Data Entry/Settings/General'.

Numeric fields are represented in ASCII format with variable position of decimal separator and leading space characters to fill non-significant places. In the configuration decimal point or comma can be selected as decimal separator.

The individual data fields are separated from each other by semicolons. The length of the data fields is variable, control characters -if applicable- are added.

Fields that are not used in the chosen operating mode remain empty in the data string. Depending on the chosen operating mode, the same data fields are used for different variables.

Note: Data transmission and saving to file use the same structure of the data string.

Field	Max. length	Format
Terminal-No.	2	numeric
Date	8	Format depending on configuration
Time	5	Format HH:MM
Alibi-No.	4	numeric (number of record in data archive)
Gross weight	10	numeric (in divisions of scale calibration)
Net weight	10	numeric (in divisions of scale calibration)
Tare weight	10	numeric (in divisions of scale calibration)
Unit	2	Unit sign (kg or t)
Pieces	8	numeric Note: Only for operating mode 'Counting'
Reference weight (g)	9	numeric and always in g Note: Only for operating mode 'Counting'
Destination	24	alphanumeric
Recipe-No.	24	alphanumeric Note: Only for operating mode 'Recipe'
Product-No.	24	alphanumeric Note: For operating mode 'Gravity determination' this field is used to transmit the package-No.
Target weight	7	numeric Note: Only for operating mode 'Recipe'
Net total	10	numeric Note: Updated after each weighing cycle
Done	1	If the operator terminates the weighing cycle, the character '*' is transmitted in the field 'Done', otherwise it is left empty.
ID #1	24	alphanumeric
ID #2	24	alphanumeric Note: Contains the selected ID from the database
ID #3	24	alphanumeric
ID #4	24	alphanumeric
ID #5	24	alphanumeric

6 Printformats

6.1 Weighing

0 1 2 3 4 5 6 7 8
1234567890123456789012345678901234567890123456789012345678901234567890

Terminal-No.	1
Date	08.01.15
Time	14:42
Consec-No.	0
Gross	11.0 kg
Net	10.0 kg
Tare	1.0 kg
ID	1000

6.2 Counting

0 1 2 3 4 5 6 7 8
1234567890123456789012345678901234567890123456789012345678901234567890

Terminal-No.	1
Date	08.01.15
Time	14:47
Consec-No.	0
Ref.Weight	1 g
Scale-No.	1
Parts	6
Gross	7.4 kg
Net	6.4 kg
Tare	1.0 kg
Product-Nr.	5000-1000-04
	M4 Screws

6.3 Load / Unload

6.3.1 Subtotal

0 1 2 3 4 5 6 7 8
1234567890123456789012345678901234567890123456789012345678901234567890

Identification Load	
Terminal-No.	1
Date	09.01.15
Time	08:28
Countername	1
Consec-No.	1
Gross	15.2 kg
Net	14.2 kg
Tare	1.0 kg
ID	
Subtotal	14.2kg

6.3.2 Summe

0 1 2 3 4 5 6 7 8
1234567890123456789012345678901234567890123456789012345678901234567890

Identification Load	
Terminal-No.	1
Date	09.01.15
Time	08:29
Countername	3
ID	1000
Total	42.6kg*

6.4 Summing mit Single- und Total weight

6.4.1 Singelweighing

0 1 2 3 4 5 6 7 8
 1234567890123456789012345678901234567890123456789012345678901234567890

10000	
ID	123456
Countername	1
Consec-No.	1
Gross	19.8 kg
Tare	1.0 kg
Net	18.8 kg
Date	09.01.15
Time	08:32

6.4.2 Summing

0 1 2 3 4 5 6 7 8
 1234567890123456789012345678901234567890123456789012345678901234567890

Summing:	
Countername Tot.	3
Gross Total	90.4 kg
Tare Total	3.0 kg
Net Total	87.4 kg
Date	09.01.15
Time	08:32

7 Data Archive

A record -secured with checksum- is stored for every completed weighing transaction in the internal data archive, consisting of weight, date and consecutive Id-No. The Id-No. is reset to 0001 with every change of the date. As an alternative to the internal memory, also a USB stick may be used as data storage device. The stored data are read-only and cannot be deleted or changed.

Date	02.12.2014	Scale	(n/a)
Id-No.		Gross	(n/a)
		Net	(n/a)
		Tare	(n/a)



Call up data archive with display switching key.

Previous / Next

Scroll records

Search date

Enter date of record that is to be looked up

Id-No.

Enter ident-No. of record that is to be logged up

Scale

Show scale-No.

Gross

Gross weight of record

Net

Net weight of record

Tare

Tare weight of record

If an error is detected in the checksum of the data archive, the stored data are void! Instead of a weight, a corresponding error message is shown.

8 Transport, Maintenance And Cleaning

8.1 Transport

Notes:

- Transport and storage of electronic components such as boards, EPROMS, etc. must only be made in suitable anti-static ESD bags or cases.
- Storage temperature -25 to +70°C at 95% max. relative humidity without condensation.

8.2 Maintenance

! CAUTION

- This unit and its associated equipment must be maintained by qualified personnel only, who are familiar with the construction and operation of all equipment in the system and the potential hazards involved. Failure to observe these precautions could result in bodily injury!

Disconnect all power to this unit before servicing!

The weighing terminal is designed to require a minimum of maintenance and service, however, depending on the environmental conditions a visual inspection at regular intervals is recommended. The frequency at which normal maintenance (cleaning and inspection) should be performed, when installed in a clean office environment, should be twice a year. However, if the unit is subject to a dusty or dirty environment the frequency should be increased as required. At these inspections it should be made sure that all connected cables are undamaged and that all connectors are tightly fastened.

Maintenance of scale platforms is required at regular intervals depending on use and environment. The accuracy of scales can be affected by dirt, foreign objects, etc. and appropriate maintenance is strongly recommended. Also recommended is the calibration with certified test weights at regular intervals.

8.3 Cleaning

! CAUTION

- Disconnect all power to this unit before servicing!

Clean the keyboard and covers with a soft clean cloth that has been dampened with a mild window type cleaner. Do **NOT** use any type of industrial solvent or the finish of the unit may be damaged. Do not spray cleaner directly on the unit.

9 Trouble Shooting

! CAUTION

- **This unit does not contain any customer serviceable parts!**

Only permit qualified personnel to service this equipment. Exercise care when making checks, tests, and adjustments!

If any problem arises that has not been explained above, please follow this check list:

- Batteries sufficiently charged, supply cable undamaged (visual inspection)?
- All cables connecting to scales and peripheral devices undamaged (visual inspection)?
- Connectors fitted correctly and tightly secured at peripheral devices (visual inspection)?

If operational difficulties are encountered that cannot be rectified by means of this manual, obtain as much information as possible regarding the particular trouble, as this may eliminate a lengthy, detailed checkout procedure.

If possible, try first to determine the conditions under which the problem occurs. Try to find out whether the appearance of the difficulties can be reproduced under the same conditions.

For the systematic analysis of an unknown problem the information as listed below is required:

- Serial-No. of the unit and its peripheral components
- Program version as displayed on power up
- Exact wording of any error message displayed
- Type and model of peripheral devices related to the problem (e.g. scale, printer, etc.)

To obtain professional assistance contact your service station stating the information listed above.

! CAUTION

- **It is suggested that assistance from trained service personnel be requested in the event a problem should arise that is beyond the scope of this instruction manual.**

9.1 Error Messages

If an error occurs during calibration or normal operation, error messages are displayed as follows:

Error Message	Possible Cause	Corrective Measure
Calibration Locked	• Jumper for protection of calibration parameters in position 'protected'	• Set calibration jumper to calibration position
Error Calibr. Jumper	• Parameters cannot be saved, jumper in wrong position	• Set jumper to correct position, repeat calibration
ADM not installed	• No A/D converter installed	• Check A/D converter
Not Available	• No scale selected	• Check parameters in Service Mode
ADM Defect ADM Error	• No data received from A/D converter • Short circuit in L/C cable	• Replace A/D converter • Check cabling
Resolution Error	• Internal resolution too small, must be at least tenfold the displayed resolution	• Select bigger increment size • Use L/C with lower capacity
ADM Over Out Of Range	AA/D converter overrange: • Wiring error loadcell • Loadcell defective • Scale heavily overloaded	• Check wiring • Check loadcell • Unload scale

Error Message		Possible Cause	Corrective Measure
W1	-----	• Scale in overload	• Unload scale
	Overload	• CPU does not receive data from weighing interface	• Check internal and external wiring and cabling
Powerup Out of Range		• Error power up zero. This message appears on power up if the weight on the scale exceeds the power up zero range (+2%,+10%) or is below the power up zero range as set in the calibration (-2%, -10%) as set in the calibration.	• Unload scale or apply dead load
Powerup Motion		• This message appears on power up if the terminal cannot detect a settled weight within the specified power up zero range ($\pm 2\%$, $\pm 10\%$).	• Settle scale
Error Transmission		• Host switched off or off-line, data cable not connected or damaged	• Switch on host and start communication program • Check cable and connectors • If problem cannot be rectified, disable data transmission in Supervisor Mode

