



KERN & Sohn GmbH

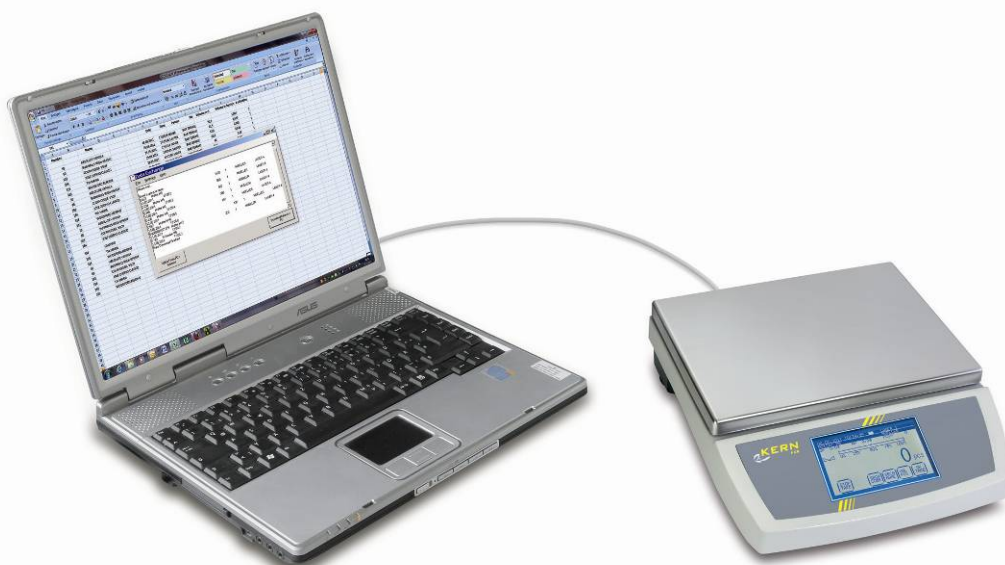
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Operating instructions Inventory balance

KERN FKA

Version 1.5
11/2015
GB



FKA-BA-e-1515



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Version 1.5 11/2015

Operating Instructions

Inventory balance

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1 Technical Data

KERN	FKA 30K-4	FKA 60K-4
Readability (d)	0,1 g	0,2 g
Weighing range (max)	36.000 g	65.000 g
Taring range (subtrac- tive)	36.000 g	65.000 g
Reproducibility	0,2 g	0,4 g
Linearity	±0,5 g	±1 g
Smallest piece weight	0,1 g	0,2 g
Adjustment points	10 / 20 / 30 kg	20 / 50 / 60 kg
Recommended adjust- ing weight F1 (not sup- plied)	20 + 10 kg	50 kg
Humidity of air	max. 80% rel. (non-condensing)	
Stabilization time (typical)	3 sec.	
Allowable ambient tem- perature	+10 °C ... + 40 °C	
Warm-up time	2 Std.	
Housing (B x D x H) mm	350 x 390 x 120	
Vibration filter	yes	
Weighing plate stain- less steel mm	340 x 240	
Units	see menu	
Weight kg (net)	6,5	
Data interface	yes (RS232)	
Article regular places	Inventory 1000 / Article 500	
Memory locations for manual article recording	30	
Battery operation with 6 x 1.5 V, size "C"	yes	

2 Basic Information (General)

It is absolutely necessary that you read and understand the operating instructions prior to installation and commissioning and follow the instructions during the process!

2.1 Proper use

The balance you purchased is intended to determine the weighing value of material to be weighed. It is intended to be used as a “non-automatic“ balance, i.e. the material to be weighed is manually and carefully placed in the centre of the weighing plate. As soon as a stable weighing value is reached the weighing value can be read.

2.2 Improper Use

Do not use balance for dynamic weighing. In the event that small quantities are removed or added to the material to be weighed, incorrect weighing results can be displayed due to the “stability compensation“ in the balance (Example: Slowly draining fluids from a container on the balance.).

Do not leave permanent load on the weighing plate. This may damage the measuring system.

Impacts and overloading exceeding the stated maximum load (max) of the balance, minus a possibly existing tare load, must be strictly avoided. Balance may be damaged by this.

Never operate balance in explosive environment. The serial version is not explosion protected.

The structure of the balance may not be modified. This may lead to incorrect weighing results, safety-related faults and destruction of the balance.

The balance may only be used according to the described conditions. Other areas of use must be released by KERN in writing.

2.3 Warranty

Warranty claims shall be voided in case

- Our conditions in the operation manual are ignored
- The appliance is used outside the described uses
- The appliance is modified or opened
- mechanical damage and damage caused by media, liquids
- natural wear and tear
- The appliance is improperly set up or incorrectly electrically connected
- The measuring system is overloaded

2.4 Monitoring of Test Resources

In the framework of quality assurance the measuring-related properties of the balance and, if applicable, the testing weight, must be checked regularly. The responsible user must define a suitable interval as well as type and scope of this test. Information is available on KERN's home page (www.kern-sohn.com) with regard to the monitoring of balance test substances and the test weights required for this. Our accredited DKD calibration laboratory offers fast and inexpensive adjustment for test weights and weighing balances (reset to national normal weight).

3 Basic Safety Precautions

3.1 Pay attention to the instructions in the Operation Manual



Carefully read this operation manual before setup and commissioning, even if you are already familiar with KERN balances.

3.2 Personnel training

The appliance may only be operated and maintained by trained personnel.

4 Transportation & Storage

4.1 Testing upon acceptance

When receiving the appliance, please check packaging immediately, and the appliance itself when unpacking for possible visible damage.

In case of visible damage have the damage verified by the messenger's signature. Do not alter goods or packaging and do not remove any parts of the delivery. Report the damage immediately (within 24 hours) in writing to the parcel service.

4.2 Packaging / return transport



- ⇒ Keep all parts of the original packaging for a possibly required return.
- ⇒ Only use original packaging for returning.
- ⇒ Prior to dispatch disconnect all cables and remove loose/mobile parts.
- ⇒ Reattach possibly supplied transport securing devices.
- ⇒ Secure all parts such as the glass wind screen, the weighing platform, power unit etc. against shifting and damage.

5 Unpacking, Setup and Commissioning

5.1 Installation Site, Location of Use

The balances are designed in a way that reliable weighing results are achieved in common conditions of use.

You will work accurately and fast, if you select the right location for your balance.

Therefore, observe the following for the installation site:

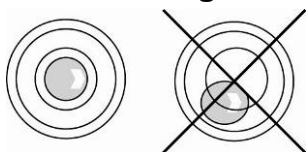
- Place the balance on a firm, level surface;
- Avoid extreme heat as well as temperature fluctuation caused by installing next to a radiator or in the direct sunlight;
- Protect the balance against direct draughts due to open windows and doors;
- Avoid jarring during weighing;
- Protect the balance against high humidity, vapors and dust;
- Do not expose the device to extreme dampness for longer periods of time. Non-permitted condensation (condensation of air humidity on the appliance) may occur if a cold appliance is taken to a considerably warmer environment. In this case, acclimatize the disconnected appliance for ca. 2 hours at room temperature.
- Avoid static charging of the material to be weighed, weighing container and wind-shield.

If electro-magnetic fields or static charge occur, or if the power supply is unstable major deviations on the display (incorrect weighing results) are possible. In that case, the location must be changed.

5.2 Unpacking

Carefully remove the balance from the packaging, remove plastic cover and setup balance at the intended workstation.

5.2.1 Placing



Level balance with foot screws until the air bubble of the water balance is in the prescribed circle.

5.3 Mains connection

Power is supplied via the external mains adapter. The stated voltage value must be the same as the local voltage.

Only use original KERN mains adapters. Using other makes requires consent by KERN.

5.4 Battery operation



- ⇒ To insert the batteries (6 x 1.5 V) remove the battery compartment cover. Remove it with the help of a coin.
- ⇒ In the each battery tube insert three batteries in the same polarity sense.
- ⇒ Screw down again the battery cover.

To save the battery, the background illumination can be switched off (G23).

If the battery voltage drops below a critical value for operational safety, turns off the scale.

5.6 Connection of peripheral devices

Before connecting or disconnecting of additional devices (printer, PC) to the data interface, always disconnect the balance from the power supply. With your balance, only use accessories and peripheral devices by KERN, as they are ideally tuned to your balance.

5.7 Initial Commissioning

A warming up time of 2 hours after switching on stabilizes the measuring values. The accuracy of the balance depends on the local acceleration of gravity. Strictly observe hints in chapter "Adjustment".

5.8 Adjustment

As the acceleration value due to gravity is not the same at every location on earth, each balance must be coordinated - in compliance with the underlying physical weighing principle - to the existing acceleration due to gravity at its place of location (only if the balance has not already been adjusted to the location in the factory). This adjustment process must be carried out during the initial start-up, after change in location and variation of surrounding temperature. To receive accurate measuring values it is also recommended to adjust the balance periodically in weighing operation.

5.9 Adjustment

With an adjustment weight, the weighing accuracy can be checked and re-adjusted at any time.

Attention: In the verified balances the adjustment is not possible.

Procedure when adjusting:

Observe stable environmental conditions. A short warming up time of ca. 15 minutes is recommended for stabilization.

5.10 Verification

General introduction:

According to EU directive 90/384/EEC balances must be verified if they are used as follows (legally controlled area):

- a) For commercial transactions if the price of goods is determined by weighing.
- b) For the production of medicines in pharmacies as well as for analyses in the medical and pharmaceutical laboratory.
- c) For official purposes
- d) For manufacturing final packages

In cases of doubt, please contact your local trade in standard.

Verification instructions

An EU type approval exists for balances described in their technical data as verifiable. If a balance is used where obligation to verify exists as described above, it must be verified and re-verified in regular intervals.

Re-verification of a balance is carried out according to the respective national regulations. The validity for verification of balances in Germany is e.g. 2 years.

The legal regulation of the country where the balance is used must be observed!

6 Operation

6.1 Starting the scales and switching on the screen

Starting balance by touch screen

Welcome display:

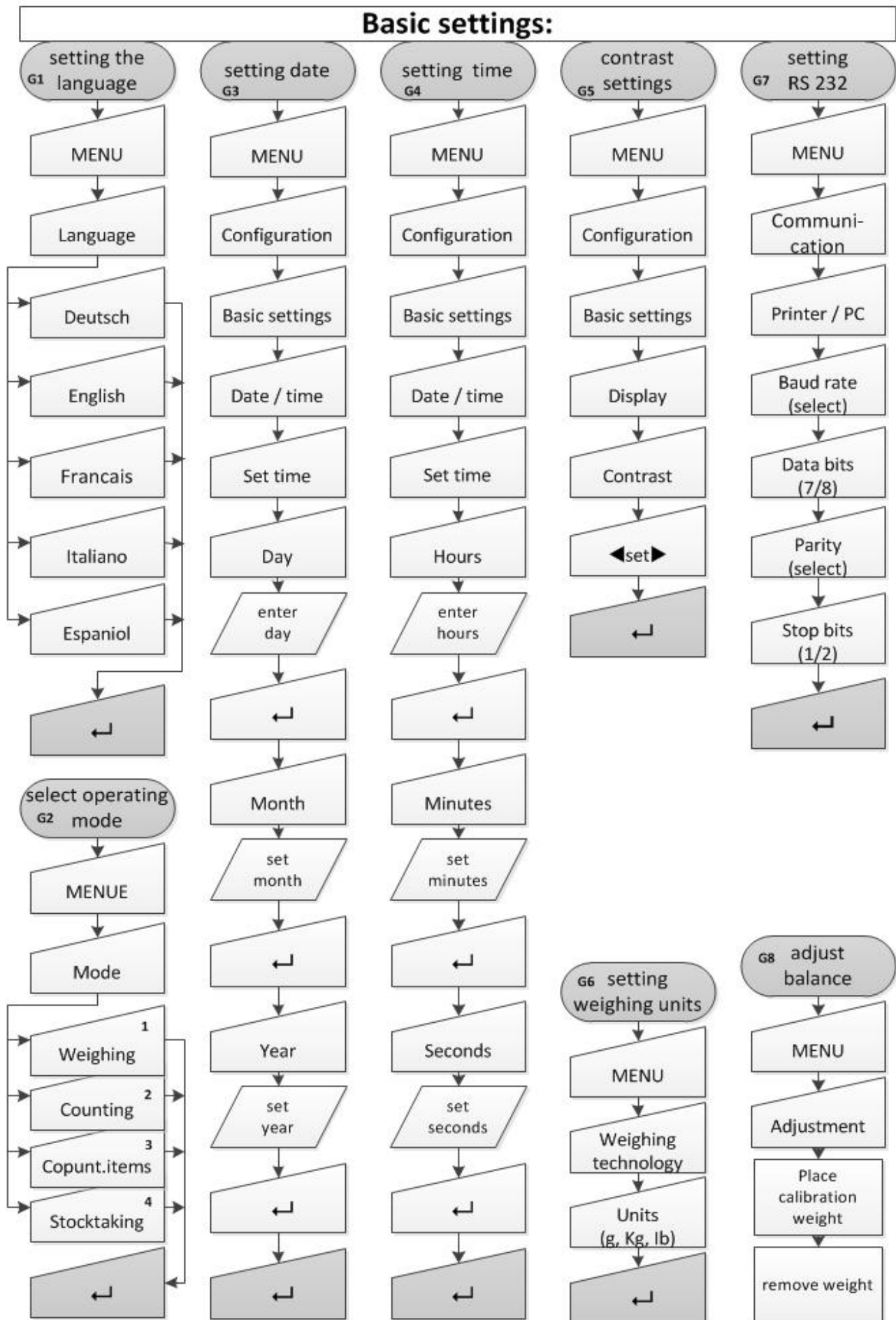


The welcome display appears after touching the touch display and the start up of the scales.

The location and operator must be specified in order to start the stock-taking.

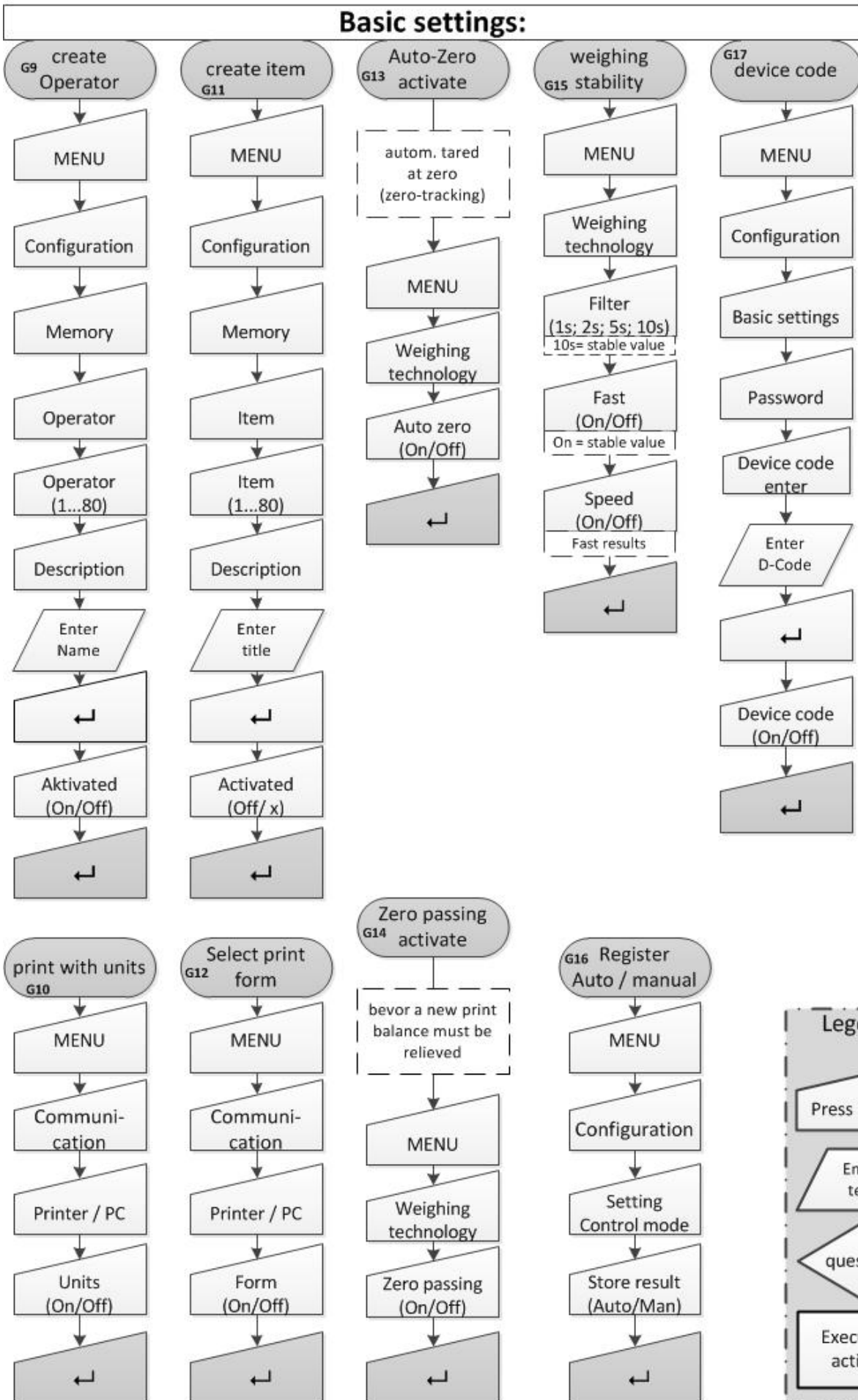
Please press the inverted buttons.

6.2 Menu paths for basic settings / operating modes

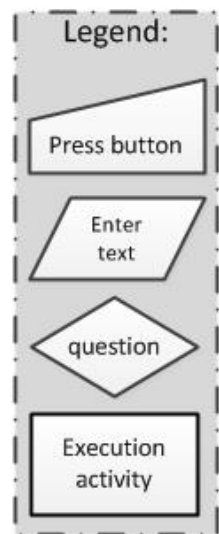
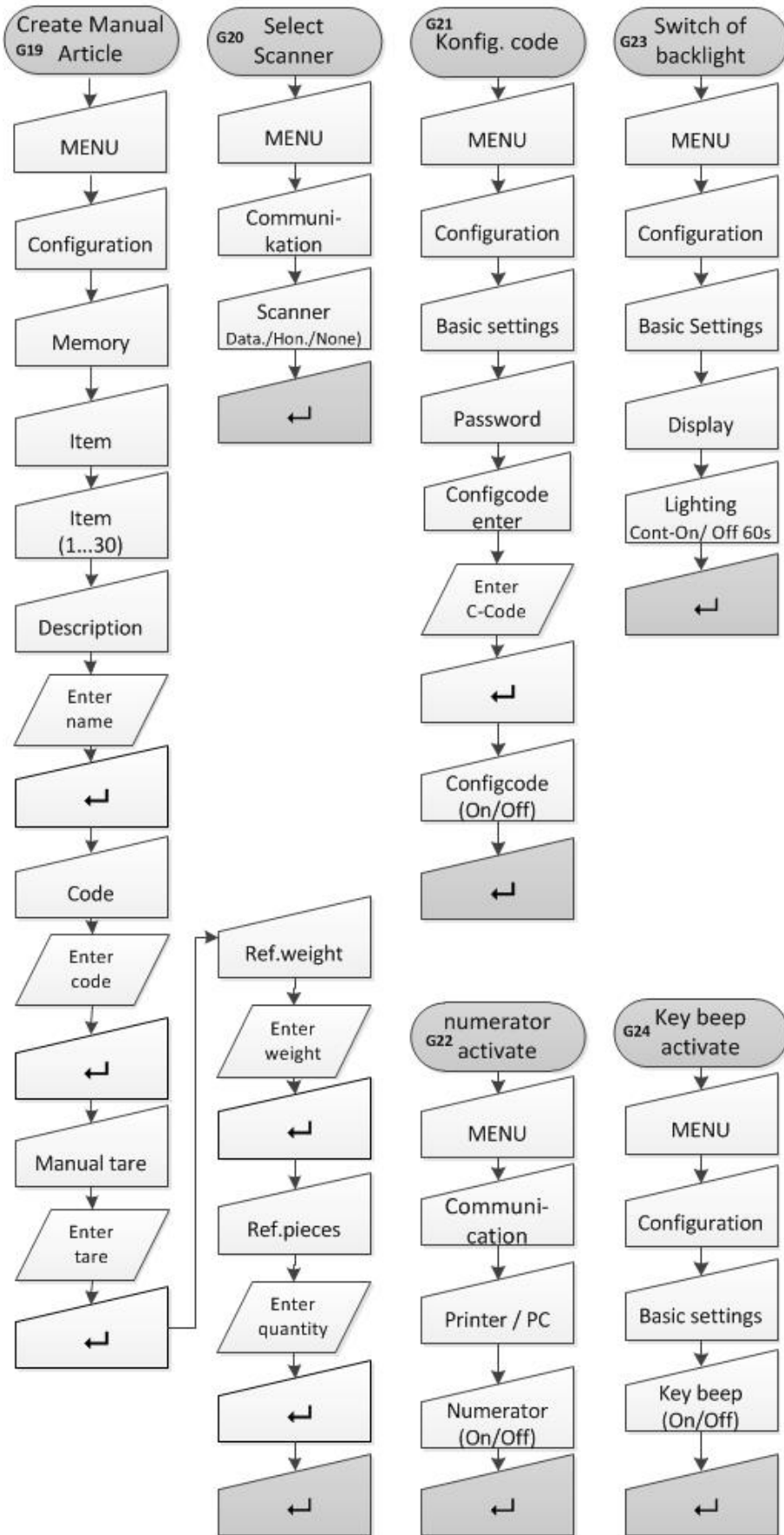


English

Basic settings:

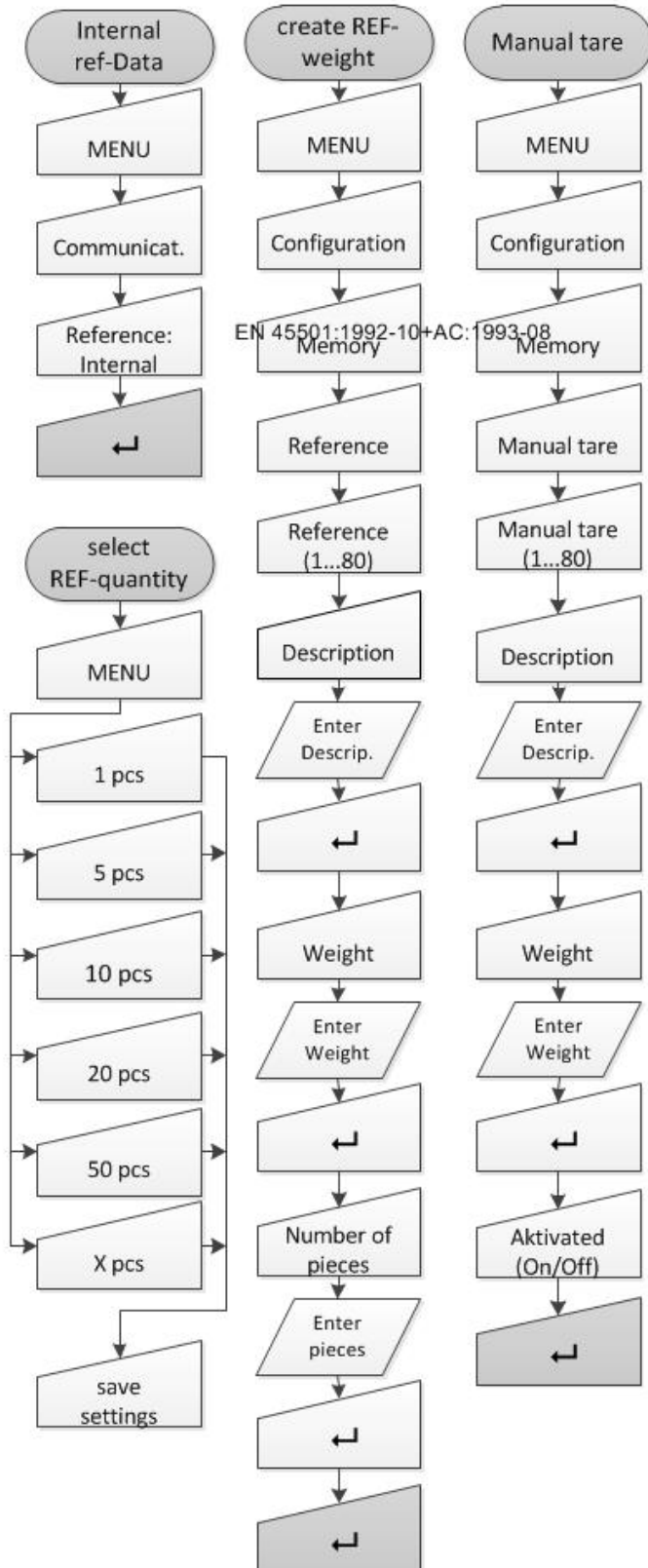
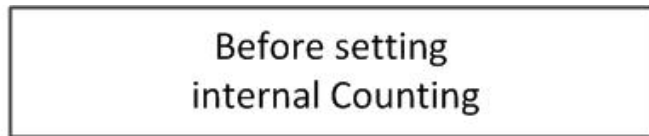
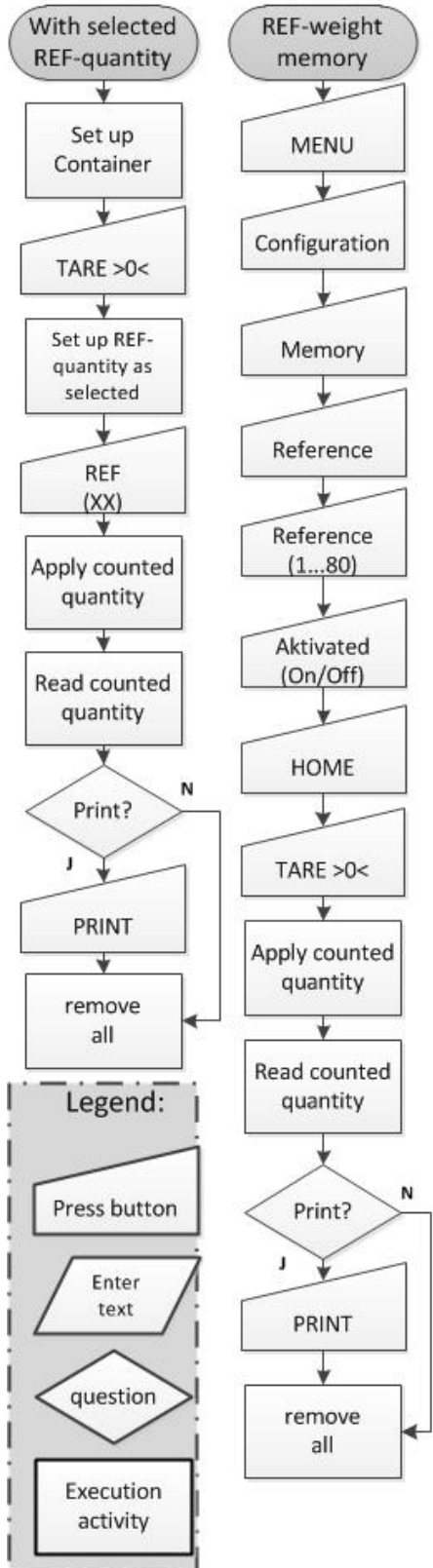
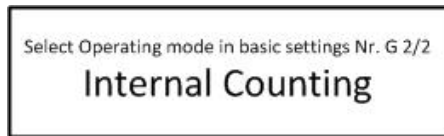


Basic settings:

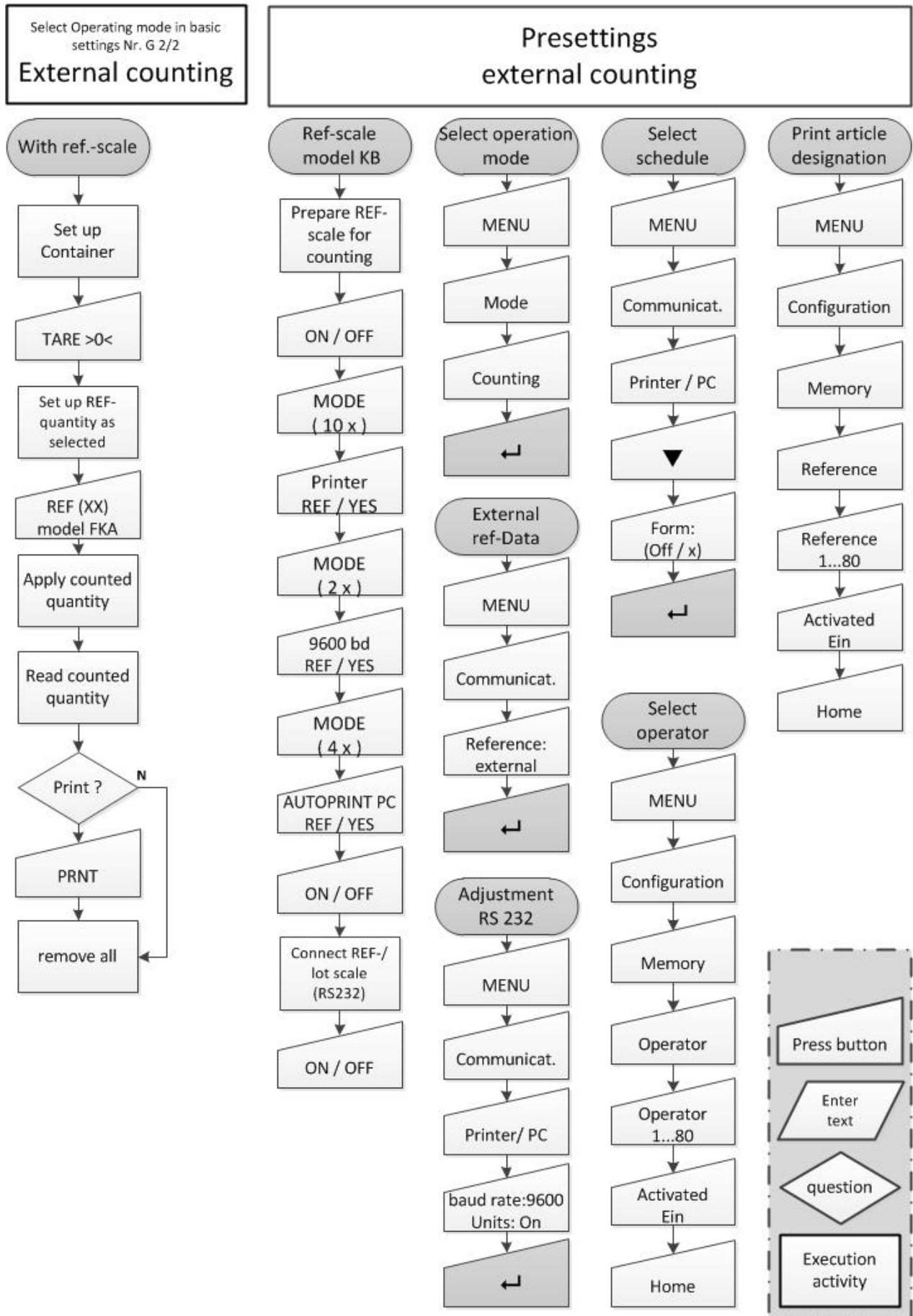


English

6.2.1 Internal counting

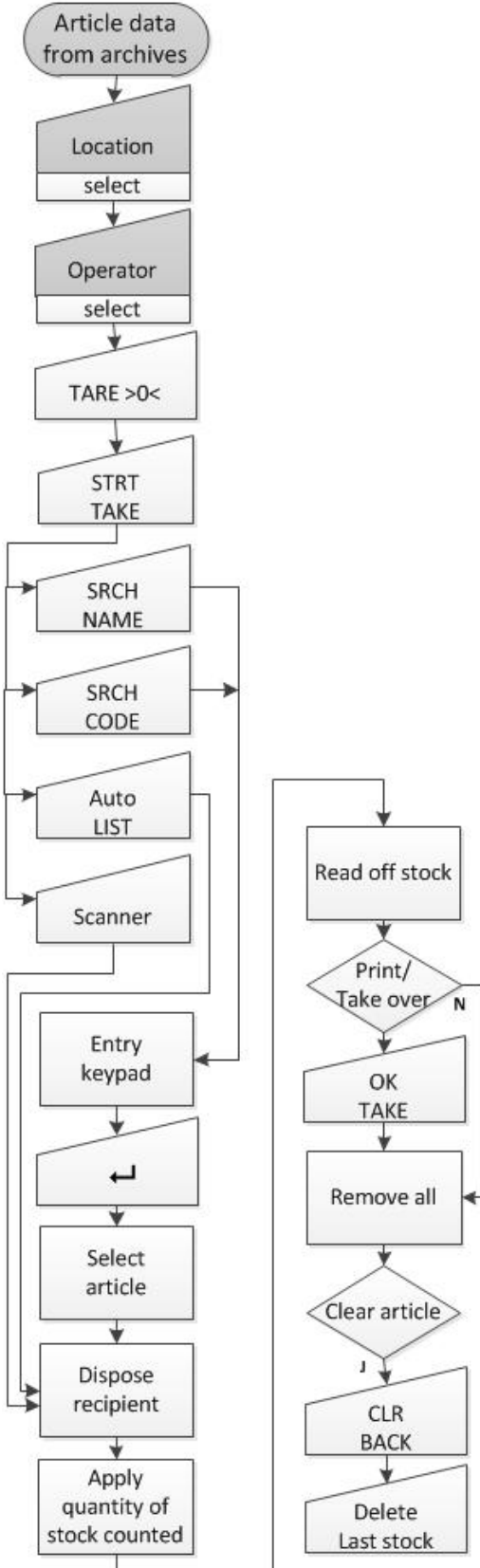


6.2.3 External counting

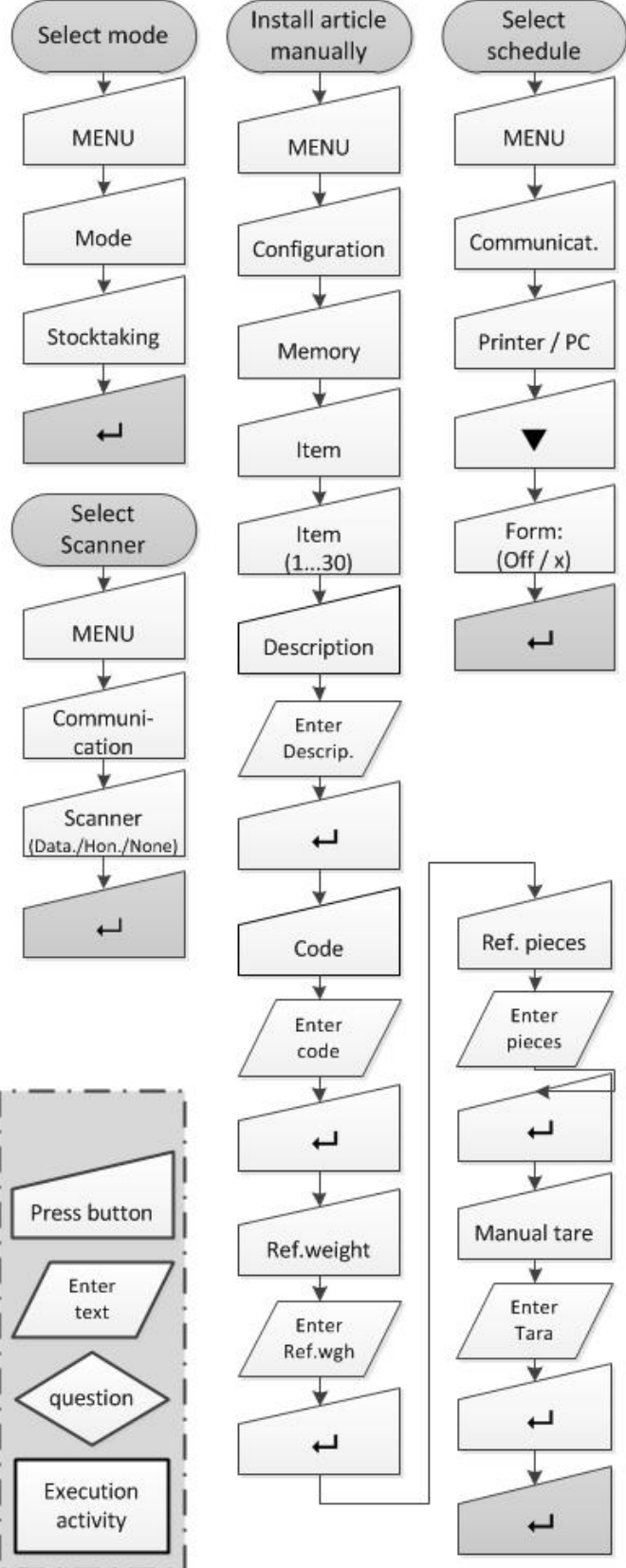


6.2.4 Calculate stock

Select Operating mode in basic settings Nr. G 2/4
Calculate stock

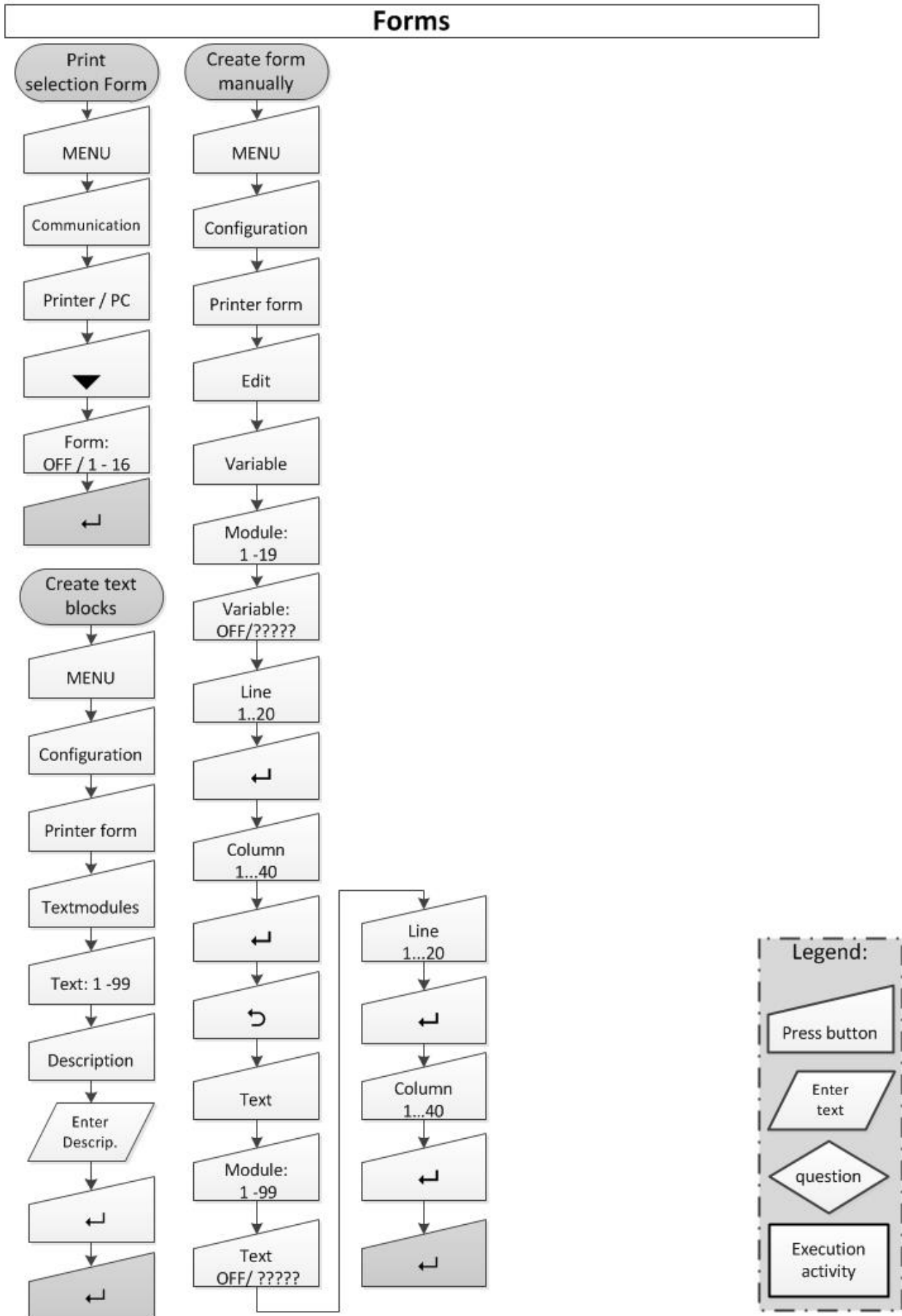


**Presettings
 calculate stock**

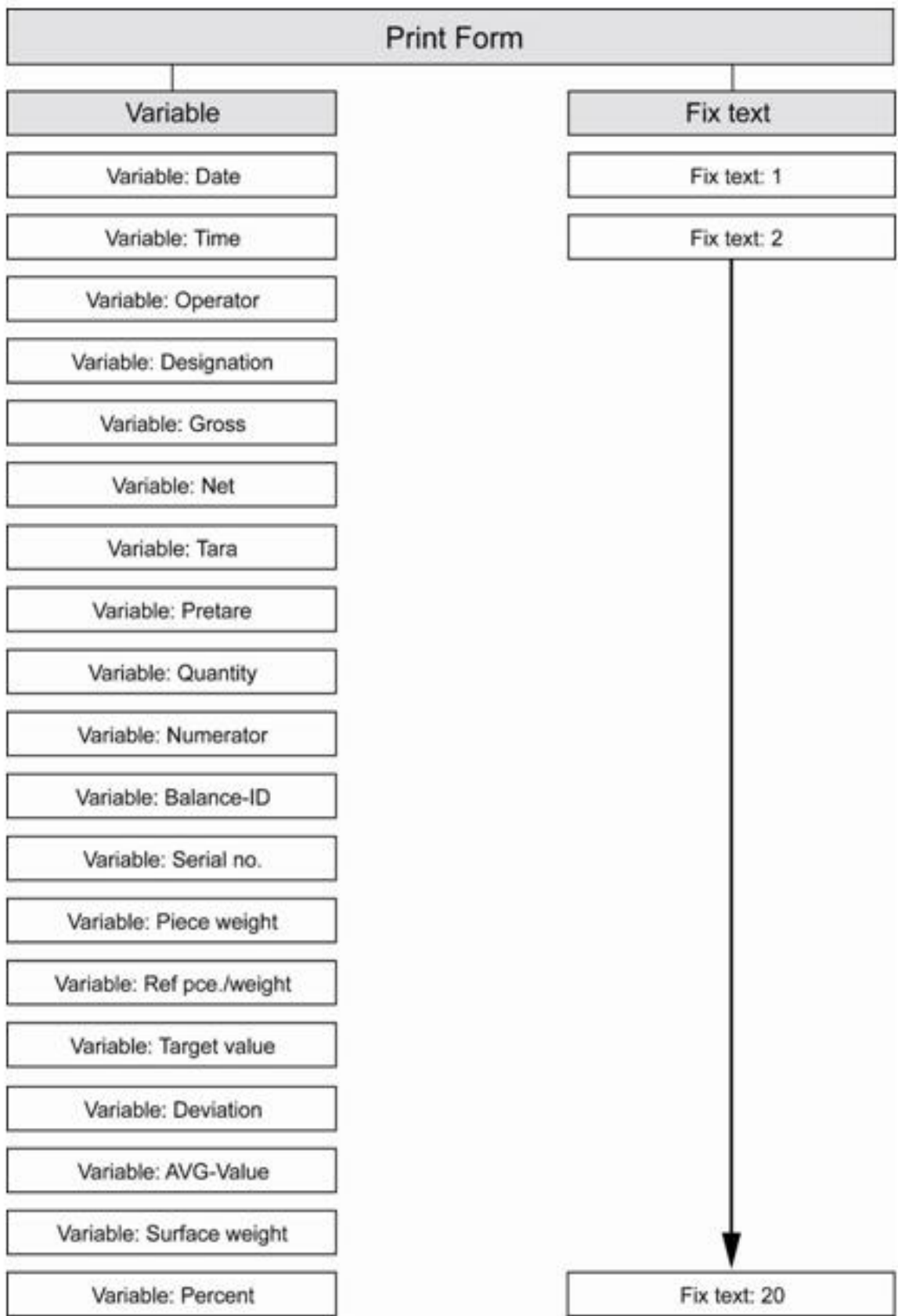


English

6.2.5 Forms



Content of possible variables



English

Design of the print form

Variable	
Variable: Gross	Activated: ON
Line 2	Column 1
Printout "Gross" line 2 / column 1	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx 1. line 1500,00 g xxxxxxxxxxxxxxxx 2. line
Printout "Gross" line 2 / column 12	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx 1. line xxxxxxxxxxxxx1500,0 g xxxxxx 2. line

Fix text	
Fix text 1	Activated: ON
Line 2	Column 1
Designation „Gross“	
Printout "Designation contents" Line 2 / column 1	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx 1. line Gross : xxxxxxxxxxxxxxxxxxxx 2. line


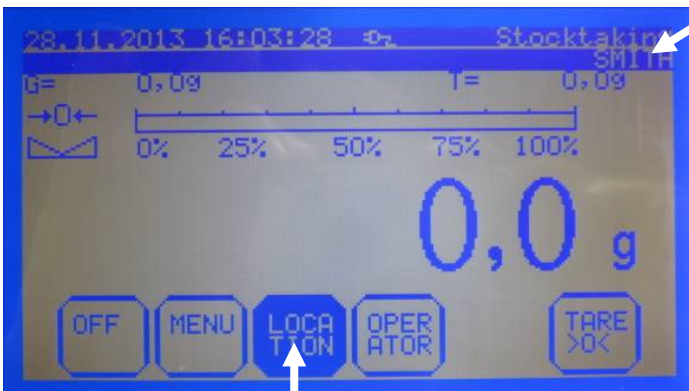
Combination of fix text and variable	
Fix text "Gross:" -line 2 / column 1	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx 1. line
Variable "gross value" – line 2 / column 12	Gross : xxx1500,0 g xxxxxx 2. line

x = space character

- The fields „line“ and „column“ are position printing input fields
- Field „Variable“ is a selection field of fixed printing possibilities
- Field „Fix text“ offers the possibility to specify texts for printout.
- The field „designation“ is a text input field to add information such as gross, tare, net, pcs to the values.
- Field „Activated: on“ takes over this line into the print form.

6.3 Operator/location selection

Select operator:

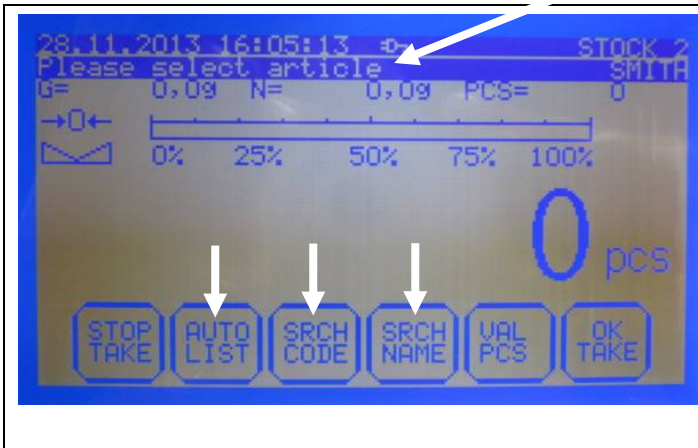
	<p>Press the Operator button to access the selection fields for authorised operators. Select the current operator.</p> <p>If no operators are available, they must be re-entered via MENU / CONFIGURATION / MEMORY / OPERATOR / DESIGNATION (G9).</p>
	<p>In the second information line appears now the selected operator (see arrow).</p> <p>Now press the Location key.</p>

Select location:

	<p>Press to select the correct stock-taking location from the selection fields displayed.</p> <p>If no storage locations are available, they must be re-entered via MENU / CONFIGURATION / MEMORY / AREA / DESIGNATION (G11).</p>
---	---

6.4 Starting the stock-tacking

	<p>The selected storage location (see arrow) will now be displayed on the first information line.</p>
	<p>Please press the STRT/TAKE button to start the stock-taking.</p>
	<p>If any inventory data from the previous stock-taking is still available, it can be deleted or retained. Please select accordingly.</p>

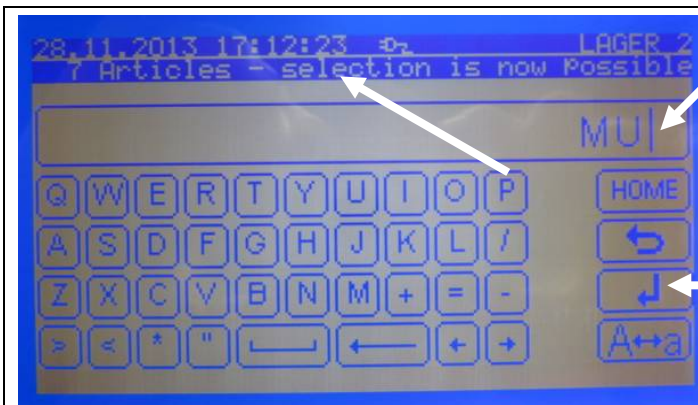


Press the start button to trigger this screen asking you to select an article.

The article selection can be made via
 SEARCH-CODE
 SEARCH-NAME
 AUTO-LIST or
 SCAN function may be carried out

6.5 Article selection – Inventory calculation and saving

Input via keyboard:



If selected via „SRCH-NAME“, this keyboard input field will appear.

Enter the article designation to enable direct selection via selection fields.


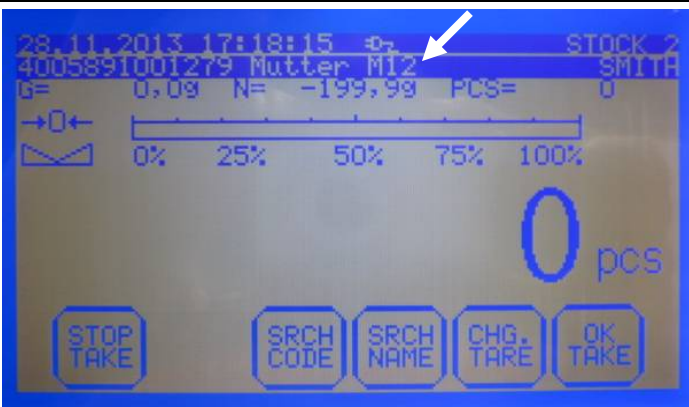
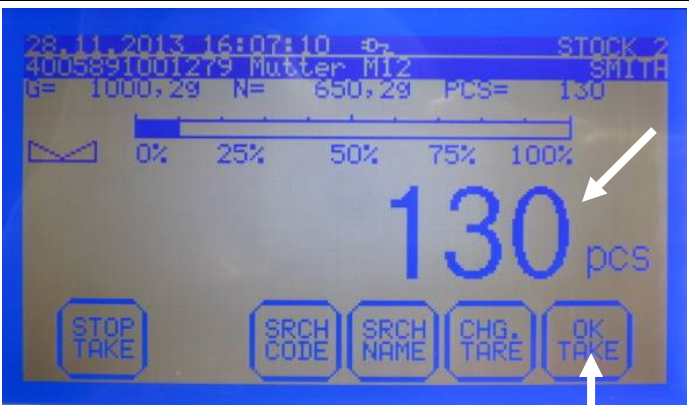
Now press Return.

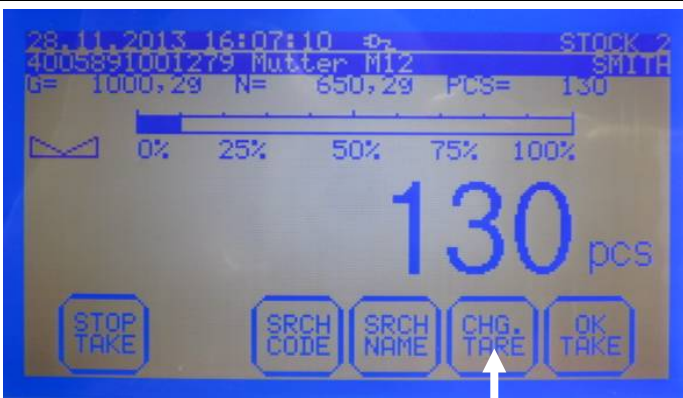
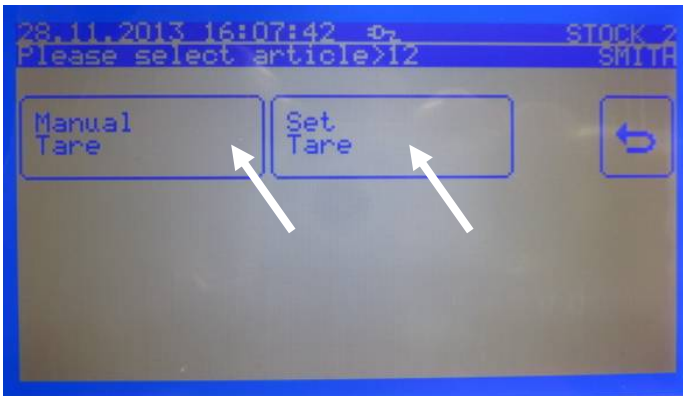
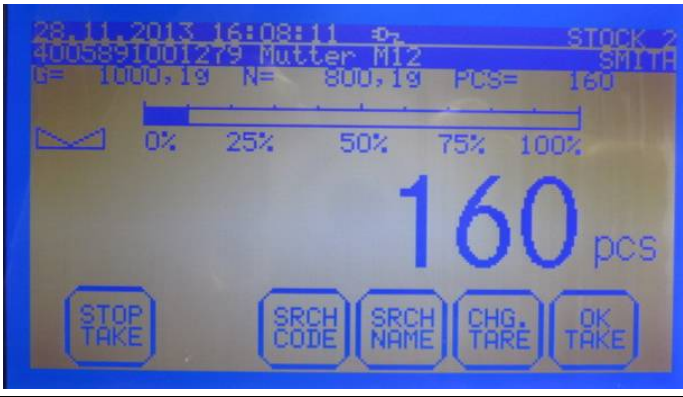
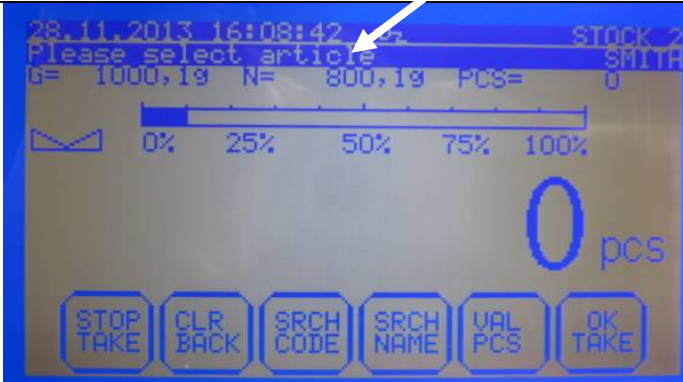


If selected via „SRCH-CODE“, this keyboard input field will appear.

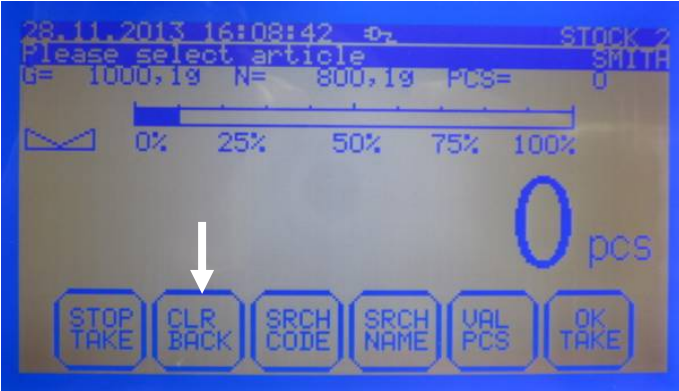
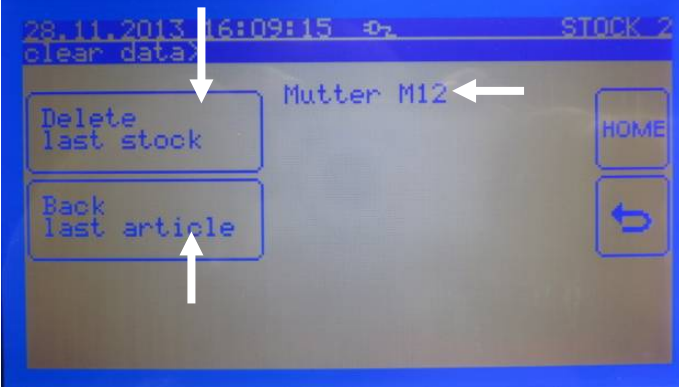
Enter the article number to enable direct selection via selection fields.

Now press Return.

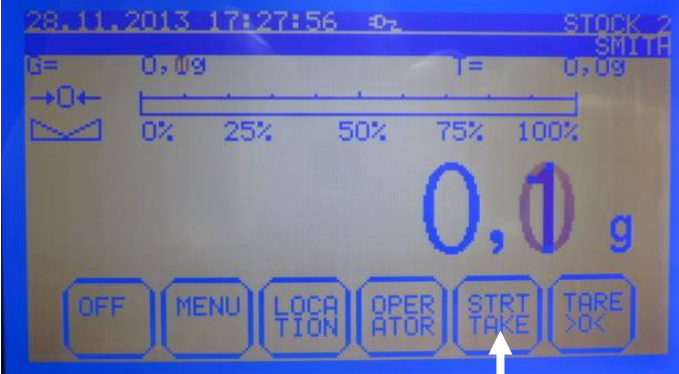
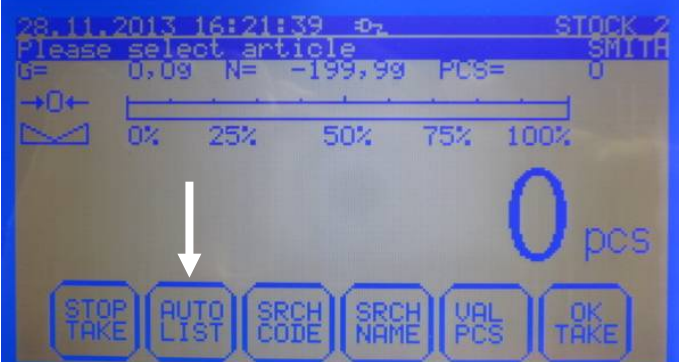
	<p>The screen with the selection fields will now be displayed. Now select the required article by clicking on the respective field.</p>
	<p>Confirm the article to internally accept the saved value for the tare allowance for the storage box and also the article reference value. The selected article will be displayed with number and designation.</p>
	<p>Now the storage box with the selected articles contained therein can be placed on the scales.</p> <p>The quantity of the articles in stock will now be displayed directly.</p> <p>Press the "OK/TAKE" button to save the calculated stock.</p>

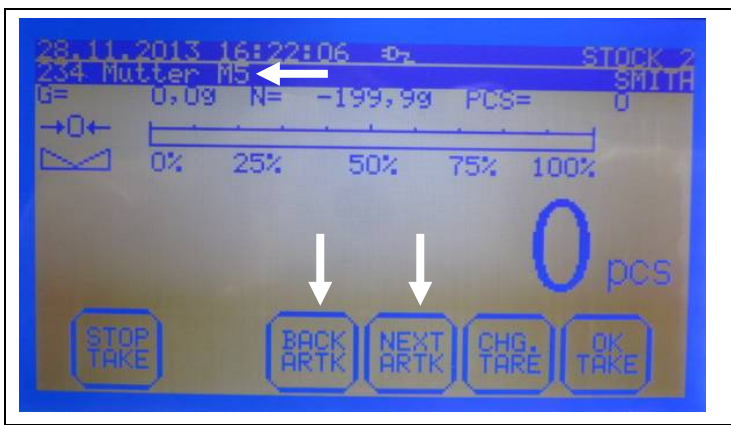
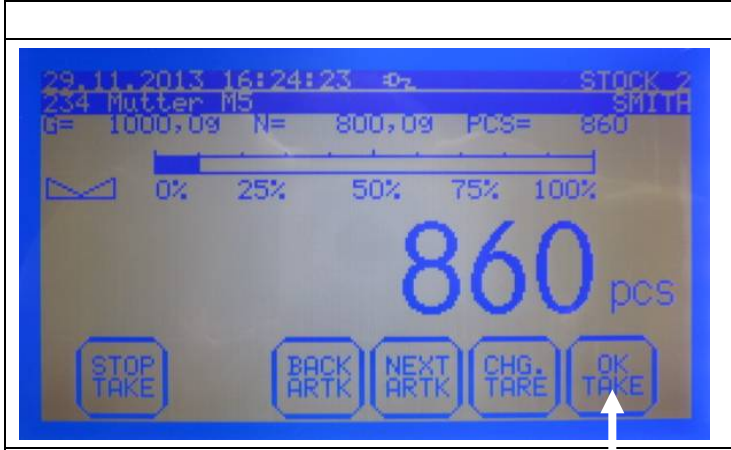
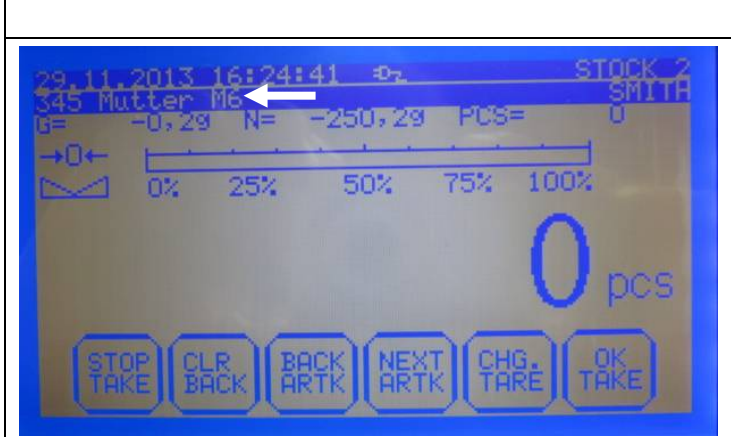
	<p>If the tare weight of the box on the scales differs from the tare weight of the archived value, the tare value can be corrected by pressing the “CHG./TARE” button.</p>
	<p>Press the “Set tare” button to accept the tare weight after placing the empty box on the scales.</p> <p>Press the “Manual Tare” input button to enter the actual tare value directly.</p>
	<p>The quantity will also correct itself as soon as the tare weight of the new box has been entered.</p> <p>Press the OK/TAKE button to accept and save the calculated quantity.</p>
	<p>The instruction to select another article will be displayed in the second information line, once the calculated stock of articles has been saved.</p>

6.6 Inventory deletion / Article repeat / Inventory list

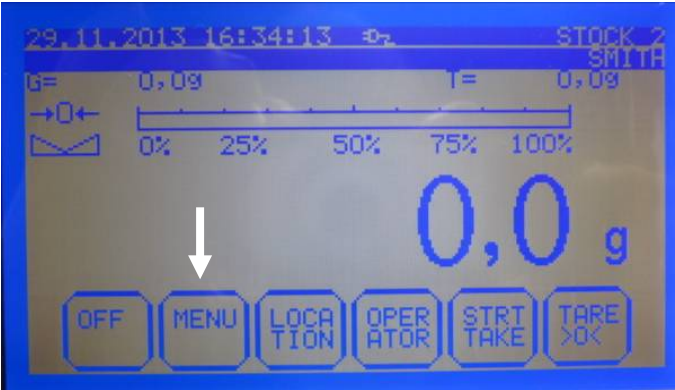

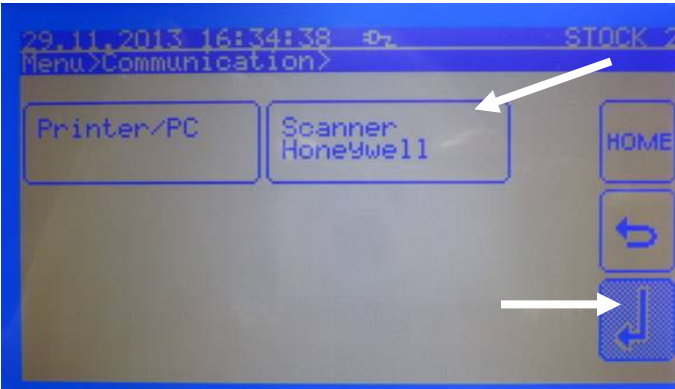
	<p>If the last item of stocktaking shall be deleted or the same article of an other storage box shall be taken over, then press the „CLR/BACK“ button.</p> <p>Proceed as follows if an overview of the last article inventories is displayed</p>
	<p>Press the “Register/Delete” button to delete the last recorded article (top line) .</p> <p>Press the “Last article” button if another storage box with the same articles is to be placed on the scales.</p>

6.7 Stock-taking with automatic list:

	<p>Press the STOP/TAKE button and then the STRT/TAKE button to select from the article list on the stock-taking screen.</p>
	<p>Press the “AUTO/LIST” button, when this screen is displayed.</p>

	<p>The first listed article will be displayed on the second information line (Article number + Article name).</p> <p>Press the BACK/ARTK button to go back one item, and use the NEXT/ARTK button to scroll forwards through the complete list.</p>
	<p>Now place the storage box with the selected articles on the scales and press the OK/TAKE button to accept the calculated quantity.</p>
	<p>Accepting the previous article inventory will cause the next article to be specified for stock-taking.</p>

6.8 Scanner selection

 <p>The screenshot shows the basic screen with a large '0,0 g' display. At the bottom, there are six buttons: OFF, MENU, LOCATION, OPERATOR, STRT TAKE, and TARE ><. A white arrow points to the MENU button.</p>	<p>Press the Menu button to select the scanner from the basic screen (STOP/TAKE).</p>
 <p>The screenshot shows the 'Menu' screen with several options: Adjustment, Configuration, HOME, Language English, Mode Stocktaking, Weighing technology, and Communication. A white arrow points to the Communication button.</p>	<p>Then press the "Communication" button</p>
 <p>The screenshot shows the 'Menu > Communication' screen with options: Printer/PC, Scanner Honeywell, HOME, and a return button. A white arrow points to the Scanner Honeywell button. Another white arrow points to the return button at the bottom right.</p>	<p>Press the Scanner button to select the correct scanner type and confirm by pressing Enter.</p>



Hand scanner
Honeywell

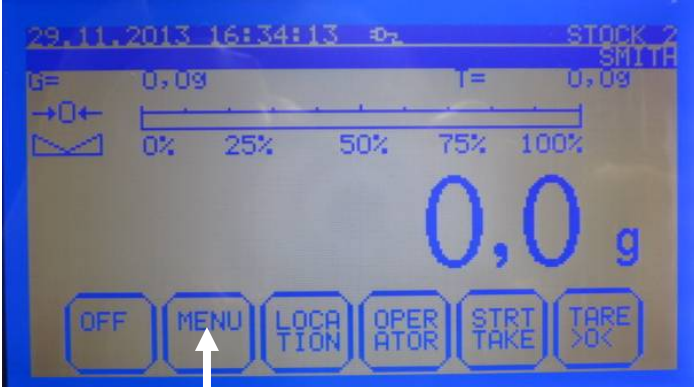
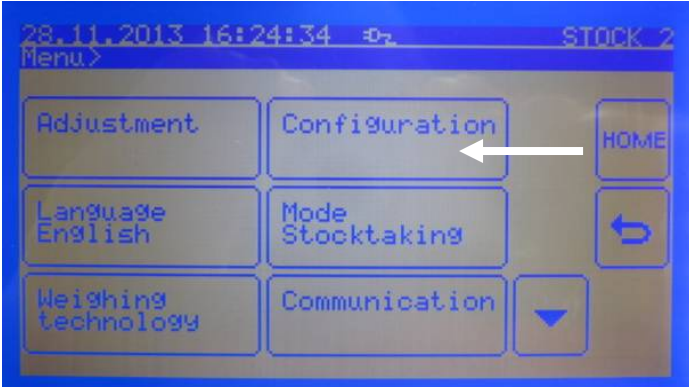
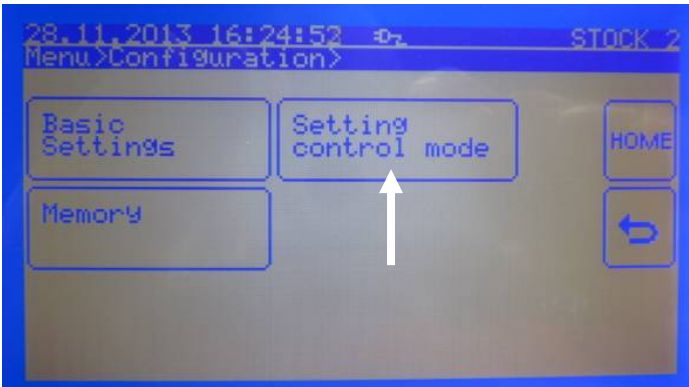
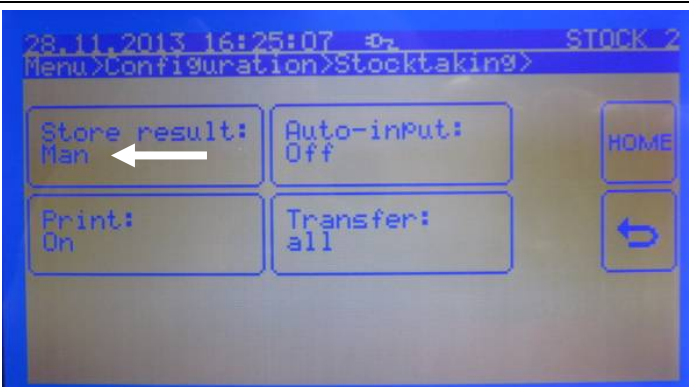


Desk scanner
Datalogic



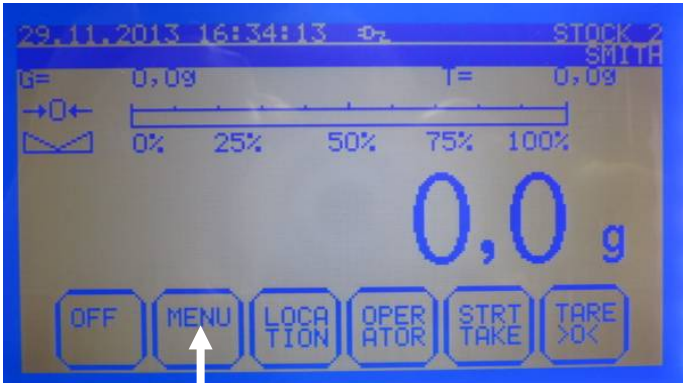

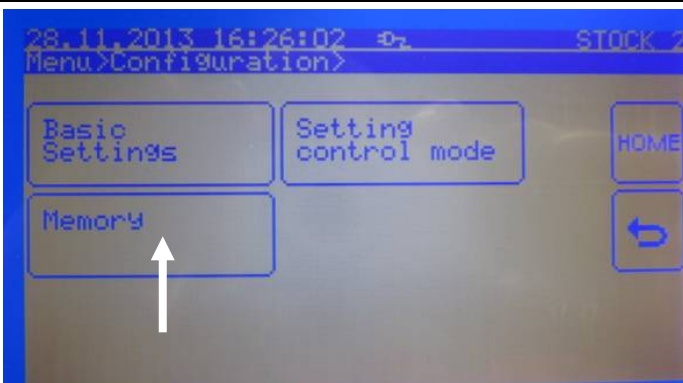
New wireless scanner SMT-A04

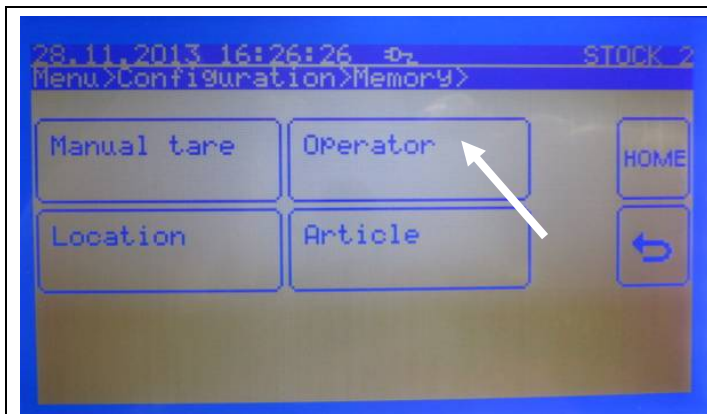
6.9 Automatic registration activation:

	<p>Press the “MENU” button to specify automatic registration on the basic screen.</p>
	<p>If the automatic registration shall be activated, press the „Configuration“ button.</p>
	<p>Now press the „Setting control mode“ button.</p>
	<p>Press the “REGISTER: MAN/AUTO” button and confirm by pressing Enter.</p>

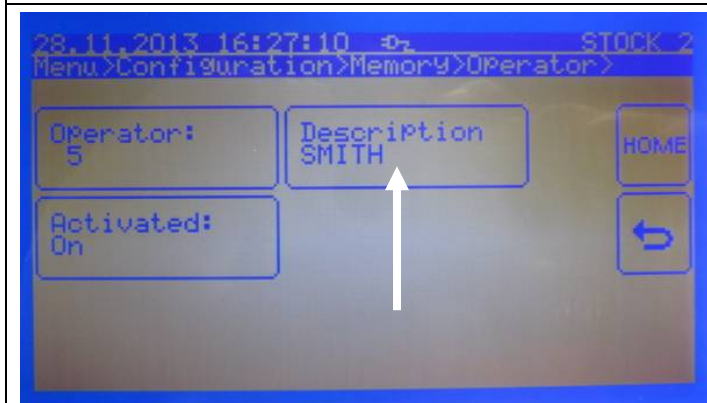
6.10 Operator and location input

Operator input:

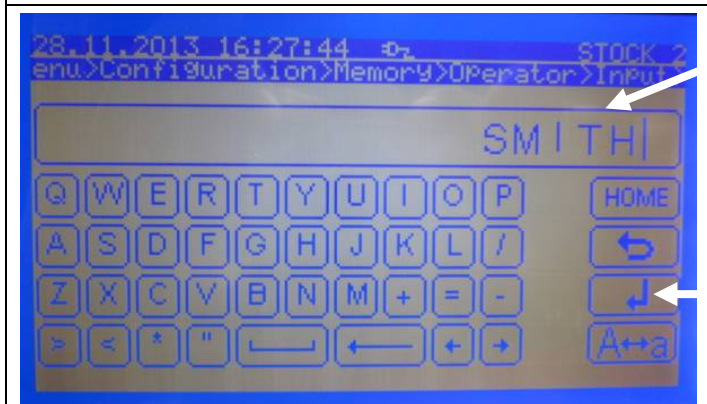
 <p>The screenshot shows a digital scale interface. At the top, it displays the date and time '29.11.2013 16:34:13' and 'STOCK 2'. Below this, there are fields for 'G=' and 'T=' both set to '0,09'. A progress bar is visible with markers at 0%, 25%, 50%, 75%, and 100%. The main display shows '0,0 g'. At the bottom, there are several buttons: 'OFF', 'MENU', 'LOCATION', 'OPERATOR', 'STR TAKE', and 'TARE >OK'. A white arrow points to the 'MENU' button.</p>	<p>Press the „MENU“ button from the basic screen (STOP/TAKE)</p>
 <p>The screenshot shows the 'Menu' screen. At the top, it displays '28.11.2013 16:25:42' and 'STOCK 2'. Below the title 'Menu>', there are several menu items: 'Adjustment', 'Configuration', 'HOME', 'Language English', 'Mode Stocktaking', 'Weighing technology', and 'Communication'. A white arrow points to the 'Configuration' button.</p>	<p>Now press the „CONFIGURATION“ button.</p>
 <p>The screenshot shows the 'Menu>Configuration' screen. At the top, it displays '28.11.2013 16:26:02' and 'STOCK 2'. Below the title 'Menu>Configuration>', there are several menu items: 'Basic Settings', 'Setting control mode', 'HOME', and 'Memory'. A white arrow points to the 'Memory' button.</p>	<p>Now press the „Memory“ button.</p>



The authorised users can be called up and changed using the user number.



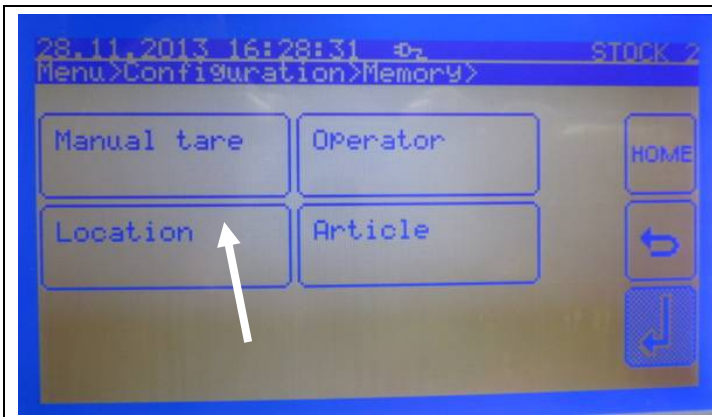
To enter a new operator, overwrite no longer required users or call up empty designation fields by pressing. Then activate the required user.



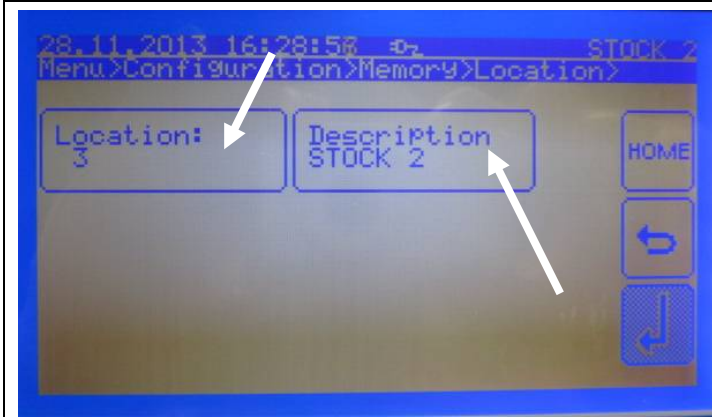
Enter the name via the input keyboard field.

Save the correct name via the Enter button.

Area input:

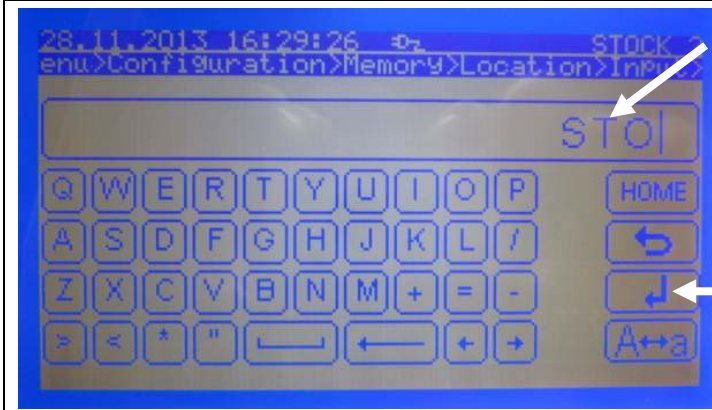


Press the “Location” button to enter a new area.



The areas can be called up and changed using the location numbers.

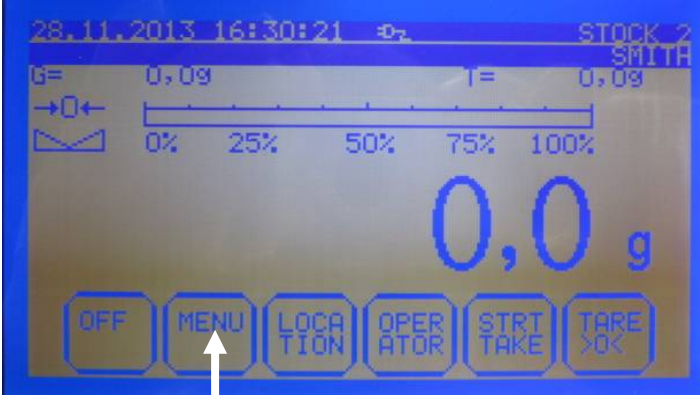

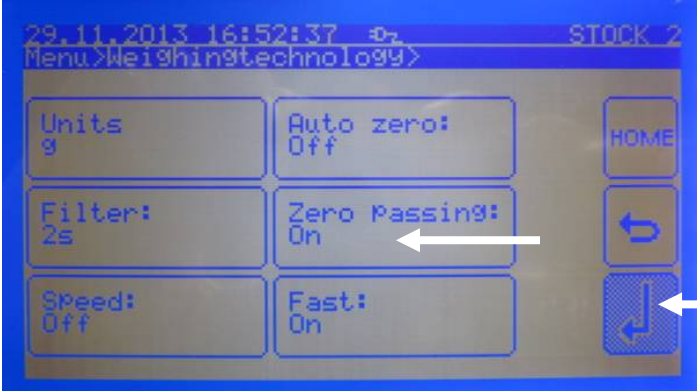
To enter a new area, overwrite no longer required areas or call up empty designation fields by pressing.



Name and enter the area via the input keyboard field.

Press Enter to save the correct area.

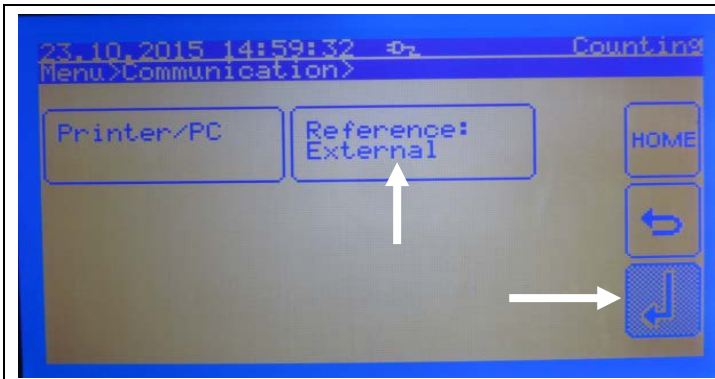
6.11 Activation / Deactivation of zero passing

 <p>The screenshot shows the basic weighing interface. At the top, it displays the date and time '28.11.2013 16:30:21' and 'STOCK 2'. Below this, there are fields for 'G=' (0,09) and 'I=' (0,09). A horizontal bar with percentage markers (0%, 25%, 50%, 75%, 100%) is visible. The central display shows '0,0 g'. At the bottom, there are several buttons: 'OFF', 'MENU' (highlighted with a white arrow), 'LOCATION', 'OPERATOR', 'STRT TAKE', and 'TARE ><'. The 'MENU' button is the target of the instruction.</p>	<p>Press the “MENU” button on the basic screen.</p>
 <p>The screenshot shows the 'Menu' screen. At the top, it displays '28.11.2013 16:30:35' and 'STOCK 2'. Below this, it says 'Menu>'. There are several menu items: 'Adjustment', 'Configuration', 'HOME', 'Language English', 'Mode Stocktaking', 'Weighing technology' (highlighted with a white arrow), 'Communication', and a dropdown arrow. The 'Weighing technology' button is the target of the instruction.</p>	<p>After that press the „Weighing technology“ button.</p>
 <p>The screenshot shows the 'Weighing technology' settings screen. At the top, it displays '29.11.2013 16:52:37' and 'STOCK 2'. Below this, it says 'Menu>Weighingtechnology>'. There are several settings: 'Units g', 'Auto zero: Off', 'HOME', 'Filter: 2s', 'Zero Passing: On' (highlighted with a white arrow), 'Speed: Off', 'Fast: On', and a return arrow. The 'Zero Passing: On' setting is the target of the instruction.</p>	<p>Now press the Zero passing button to make the selection.</p> <p>After that save with the enter button.</p>

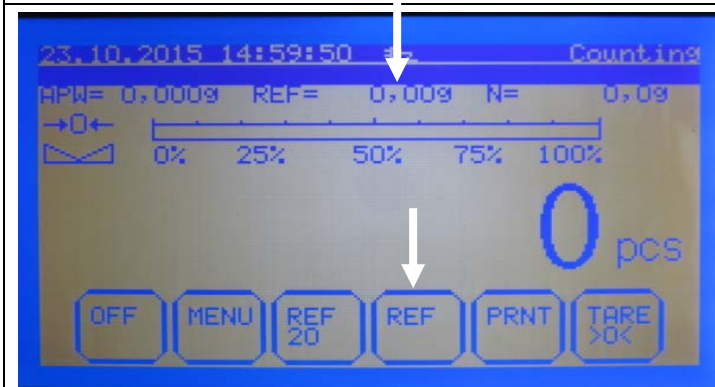
6.12 Application as meter (FKC)

English

	<p>Use the supplied Y-cable to connect the bulk scale (FKA) to the reference scale KB. To that end, screw the plug comprising two cables into the rear side of the FKA scale.</p>
	<p>To activate the counting system press the Menu key.</p>
	<p>Next press the Communication key.</p>

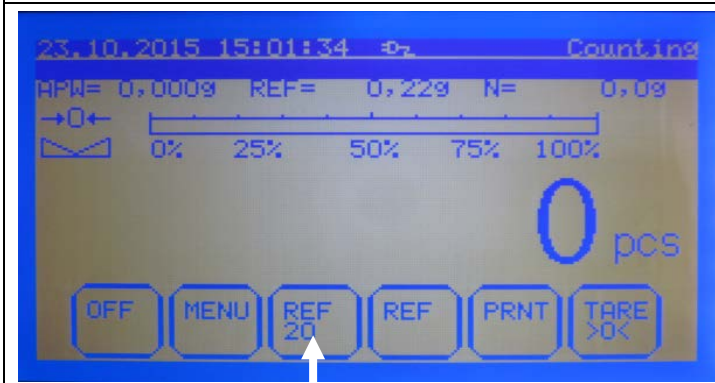


Operate the Reference key for setting external data import and confirm by pressing the Enter key.

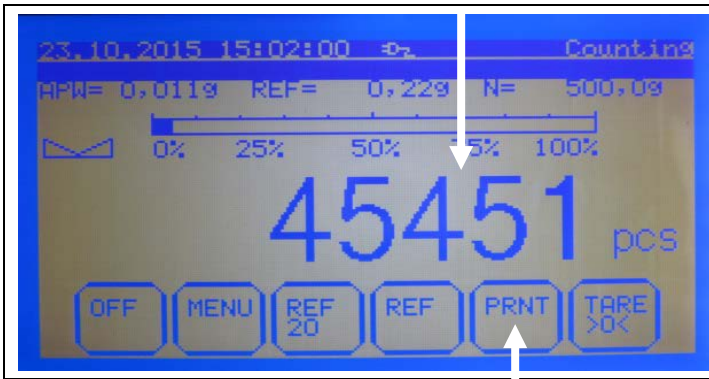


The weighed value for the reference scale will now be shown on the third info line. Place the reference parts on the reference scale.

Select reference quantity.




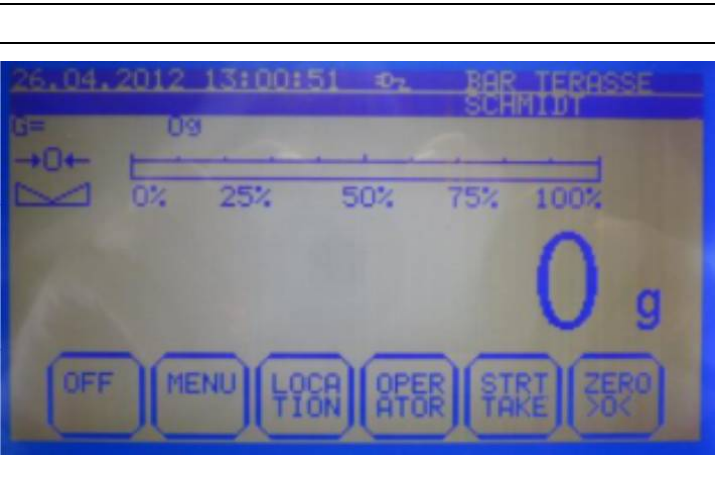
Confirm reference quantity.



Place quantity to be counted on the bulk scale.

Read number of placed parts or forward to printer/PC by pressing the Print key

**6.13 Data Transfer PC-FKA, FKA-PC at inventory / article counting:
INSTALLATION
Scales set-up**

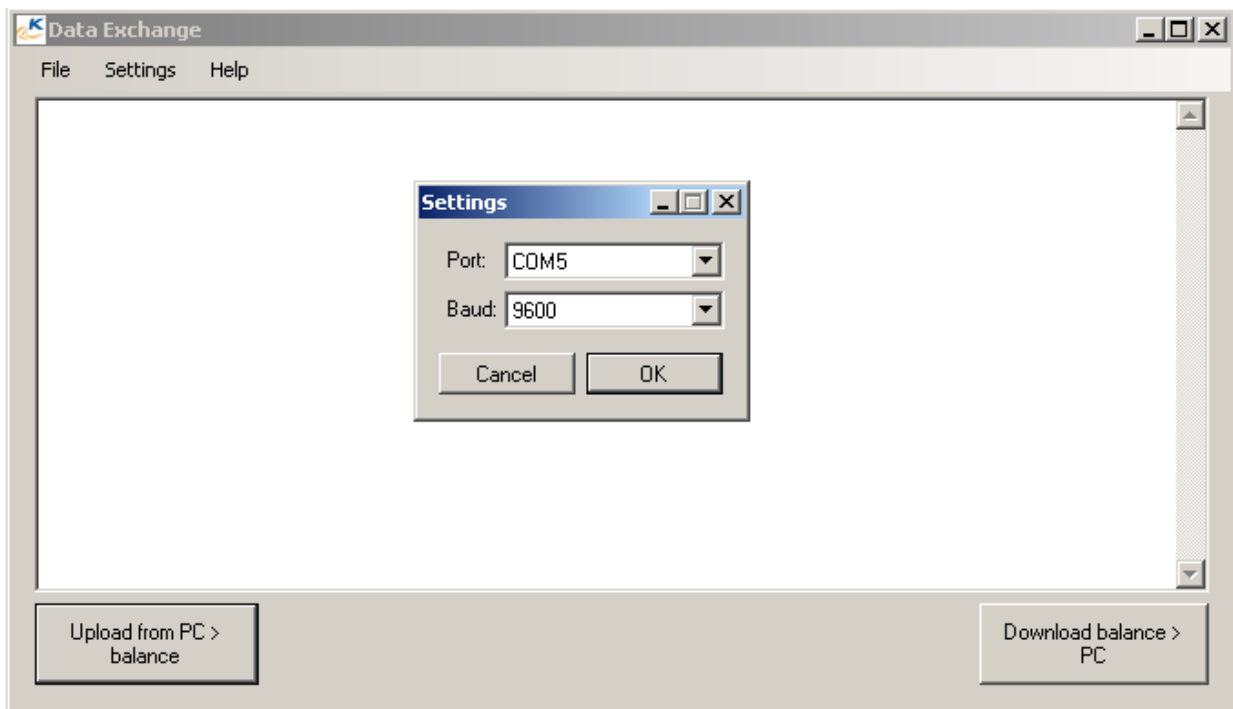
 <p>The screenshot shows a scale interface with a blue background. At the top, it displays the date and time '18.05.2011 12:29:50' and the location 'BAR RIGHT SHUTER'. Below this, it says 'PLEASE SELECT DRINK'. The main display shows '0,0 cl'. A progress bar is visible with markers at 0%, 25%, 50%, 75%, and 100%. At the bottom, there are six buttons: STOP TAKE, CLR BACK, SRCH CODE, SRCH NAME, FRAC VOL, and OK TAKE.</p>	<p>Bring back balance into the basic screen (STOP/TAKE).</p>
 <p>The screenshot shows a scale interface with a blue background. At the top, it displays the date and time '26.04.2012 13:00:51' and the location 'BAR TERRASSE SCHAUDT'. Below this, it says 'G= 0g'. The main display shows '0 g'. A progress bar is visible with markers at 0%, 25%, 50%, 75%, and 100%. At the bottom, there are six buttons: OFF, MENU, LOCATION, OPERATOR, STRT TAKE, and ZERO ><.</p>	<p>Connect the PC to the balance via the RS 232 interface.</p>

APPLICATION SET-UP

Requirements:

- Windows XP or higher
- Microsoft Office 2003 or higher
- .Net Framework 2.0 or higher

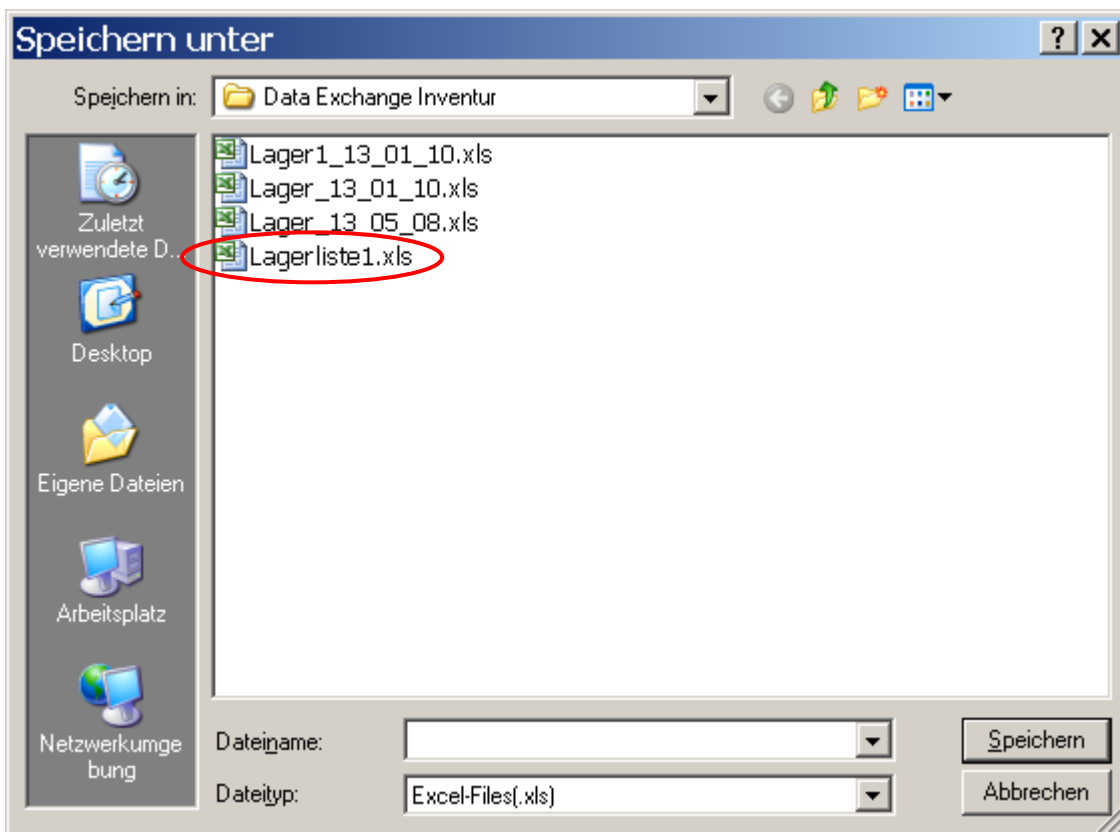
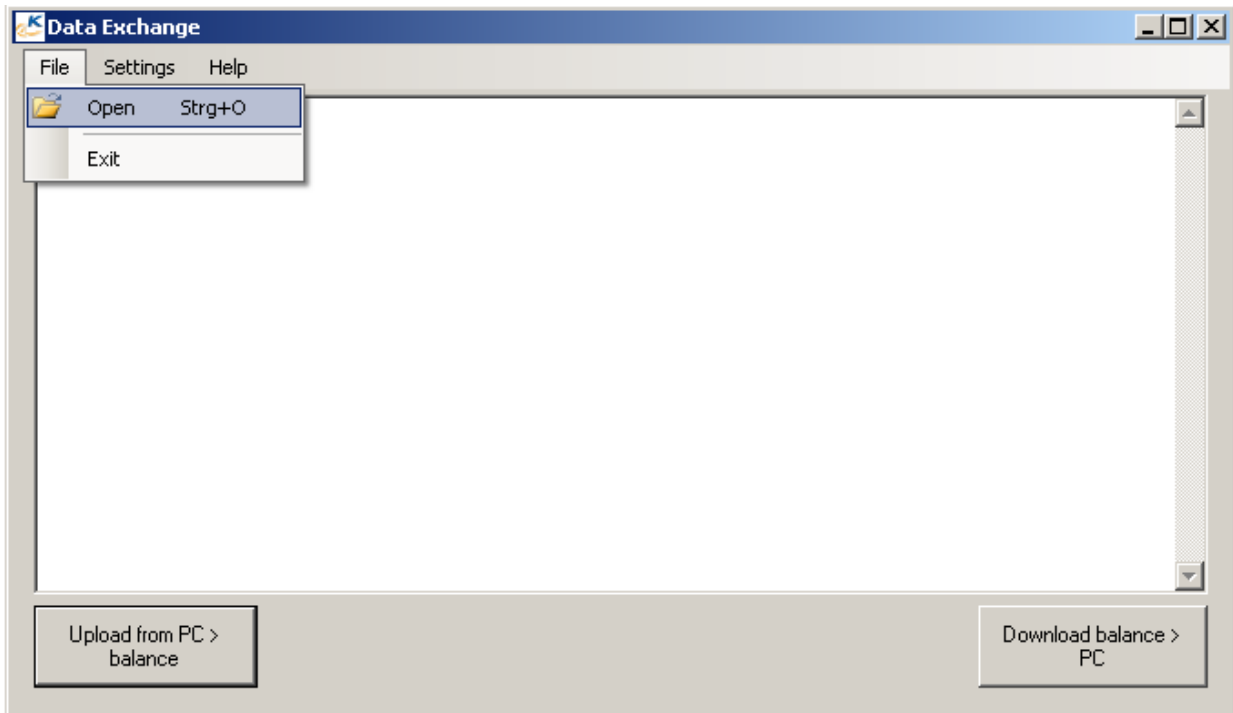
1. Select the menu item settings
2. Select the Com Port to which your scales are connected



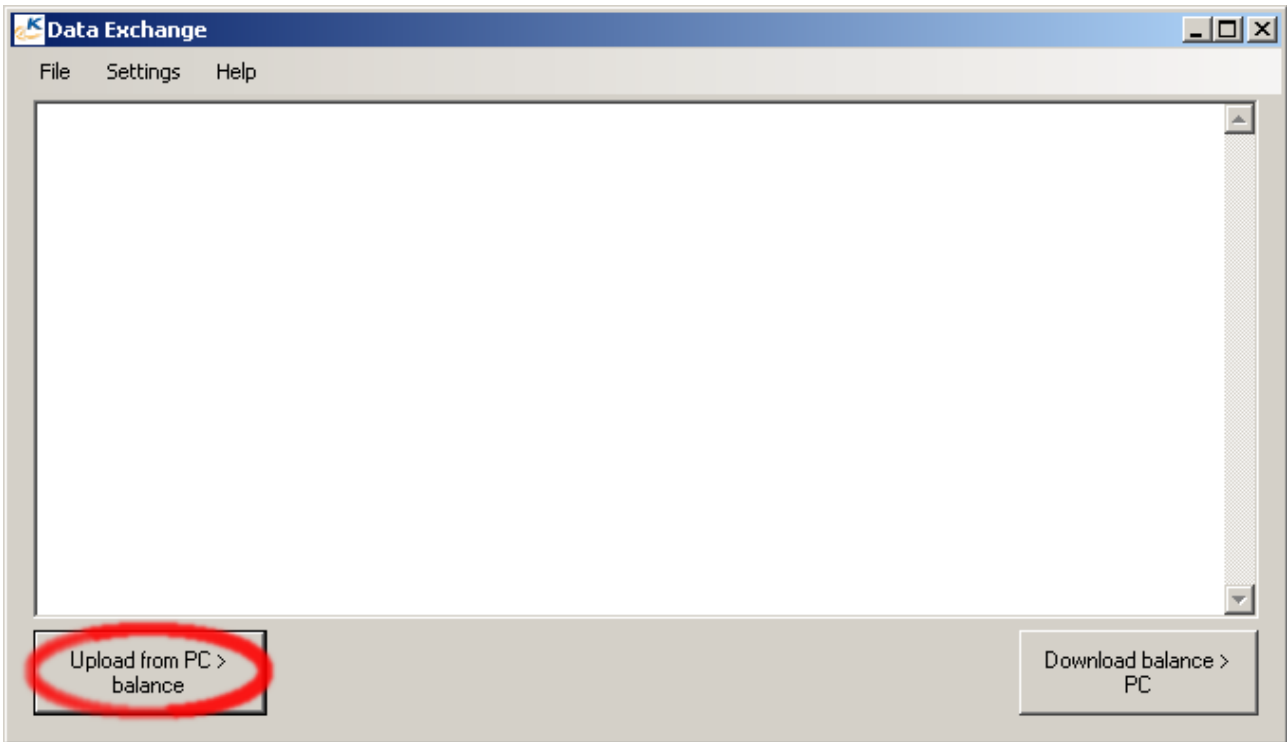
3. Set the baud rate to the value set on your scales (Standard: 9600)

DATA UPLOAD

1. Ensure that the scales are in Weigh mode
2. Select the file for uploading via the menu item File → Open



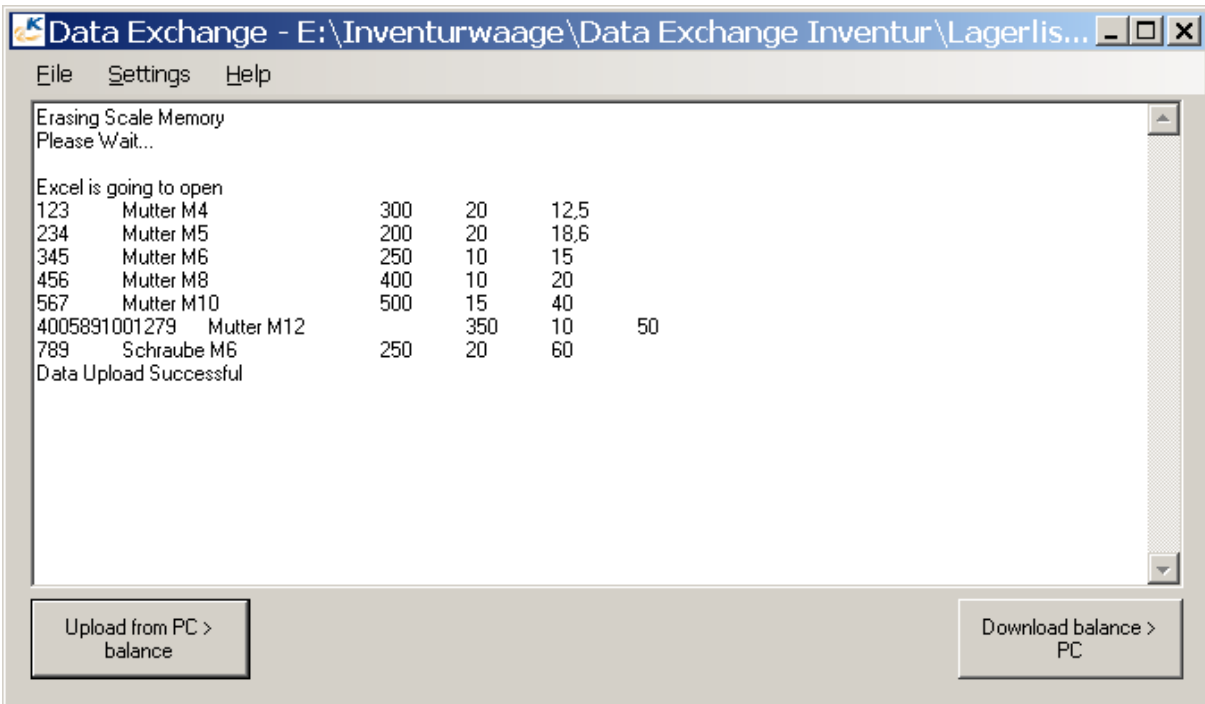
3. Press the "Upload from PC > balance" button to upload the file



English

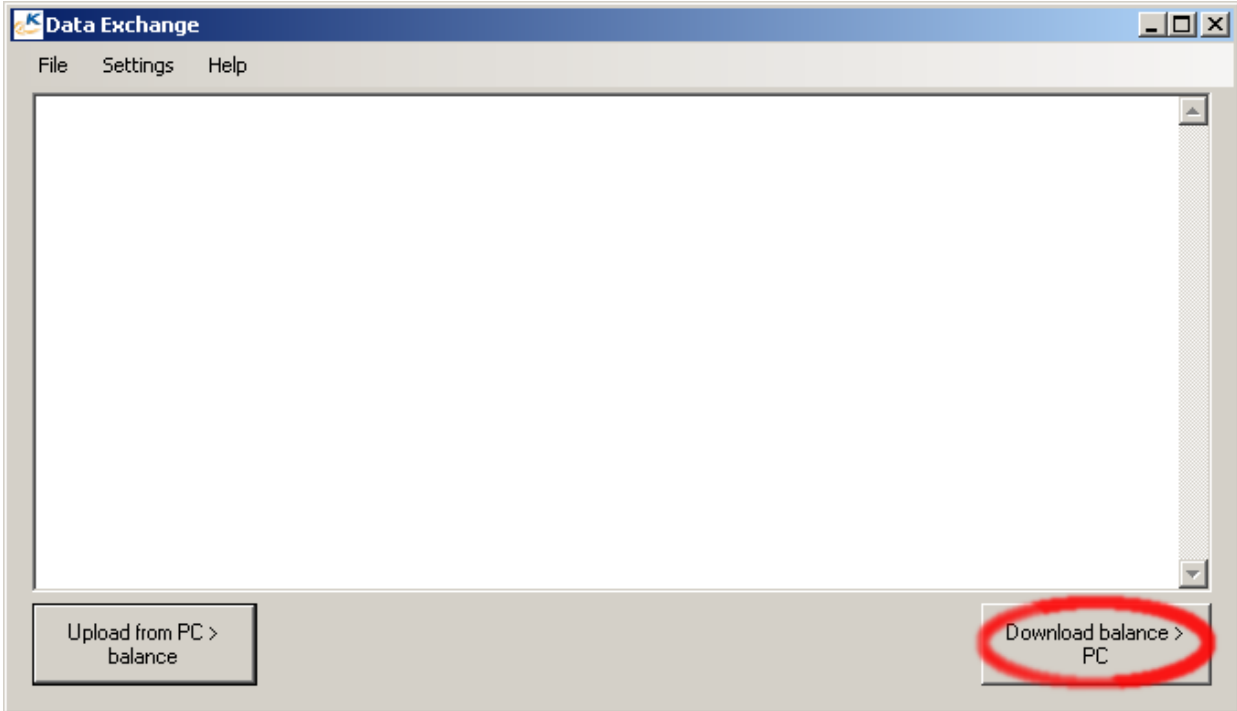
Information:

The same file will always be uploaded when clicking on the button until a new file is selected.

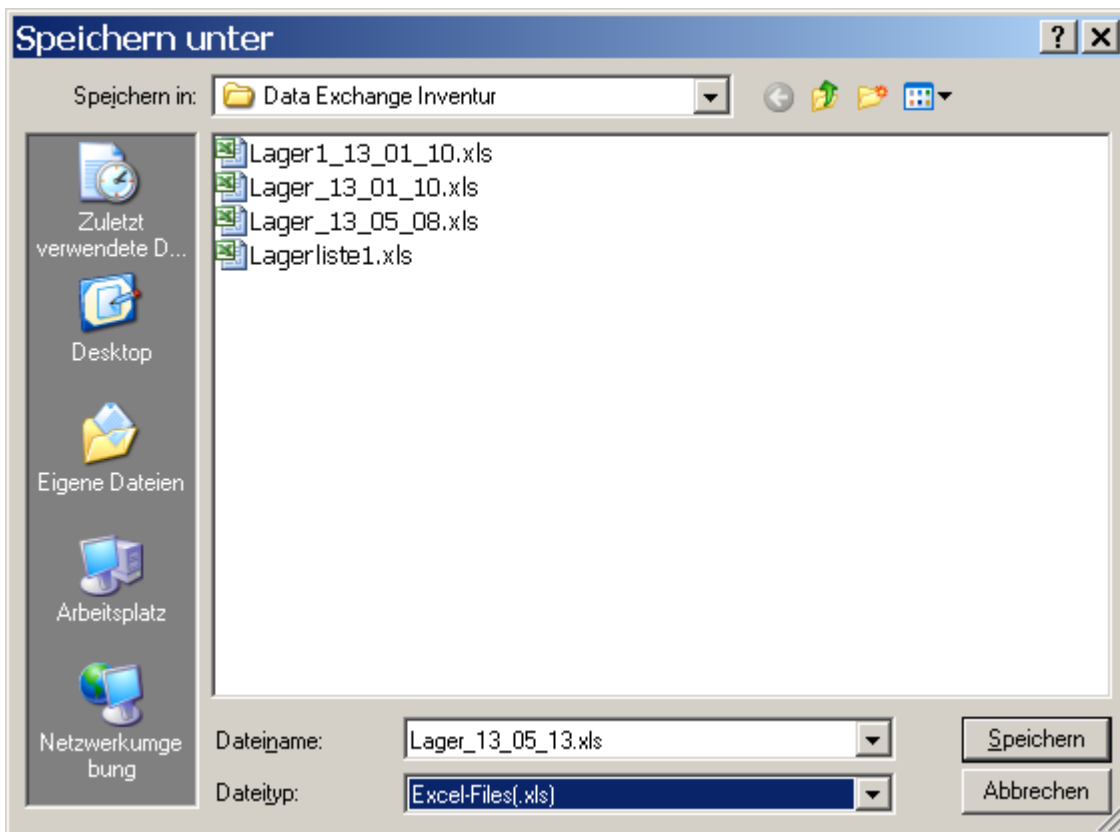


DATA DOWNLOAD

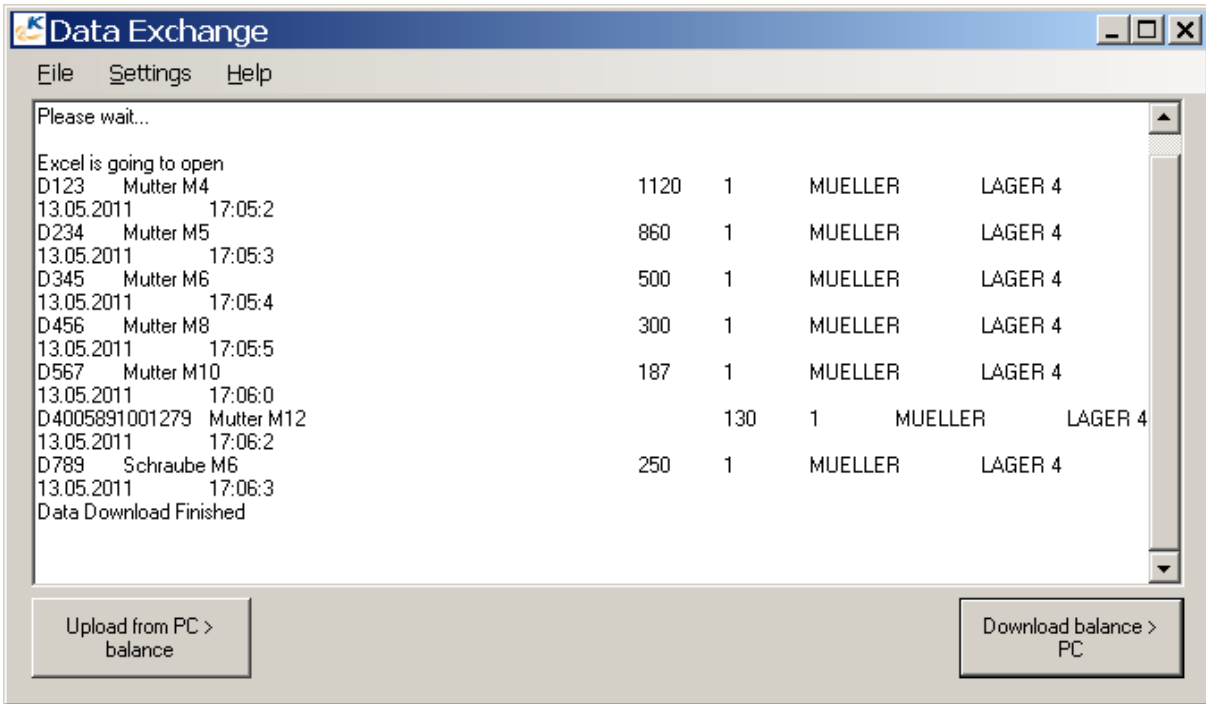
1. Ensure that the scales are in Weigh mode
2. Press the “Download balance PC” button



3. Now enter the desired file name



4. Excel will open automatically and display the downloaded information



English

Excel list of stock at a inventory

Number	Description	free	Tare	Ref. Pieces	Ref.weight	Pieces	Box	Operator	Location	Date	Time
123	Mutter M4					800	2	Schuster	Lager 1	07.11.2014	11:28:30
4334011109701	Mutter M10					524	3	Schuster	Lager 1	07.11.2014	09:33:36
212121	Schraube M4					200	1	Schuster	Lager 1	07.11.2014	11:28:03
4009228004667	Schraube M7					266	1	Schuster	Lager 1	07.11.2014	11:27:38

Excel list from daily totals of a processing list (article counting)

Code	Description	sum total	Operator	Date	Time
123	Mutter M4	1760	Schuster	07.11.2014	17:13
4009420000597	Mutter M12	250	Schuster	07.11.2014	17:13
567567	CU-Scheibe	1625	Schuster	07.11.2014	17:13
987987	Transistor	3001	Schuster	07.11.2014	17:13

6.14 Creating a stock list

Number	Description	free	Tare	Ref.pieces	Ref.weight	Pieces	Box	Operator	Location	Date	Time
123	nut M4		300	20	12,5						
234	nut M5		200	20	18,6						
345	nut M6		250	10	15						
456	nut M8		400	10	20						
567	nut M10		500	15	40						
4005891001279	nut M12		350	10	50						

Enter the item number or
ENA Code in column A.

↑

Enter the product name
in column B.

↑

Enter in column D the
tare in g of the container

↑

Enter the number of the
reference quantity in
column E.

↑

Enter the weight of the
reference amount in
column F.

↑

To create the stock list please use the submission (Excel file) from the CD.

7 Data output RS 232 C

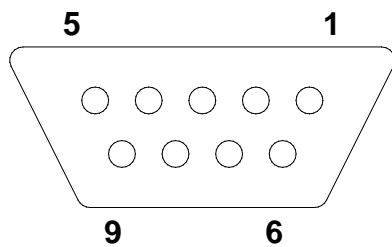
Technical data:

8-bit ASCII Code

- 1 start bit, 8 data bits, 1 stop bit, no parity bit
- Baud rate selectable from 2400, 4800, 9600 Baud (factory setting) and 19200 Baud.
- Sub-D plug 9-channel required
- For operation with interface faultless operation is only ensured with the correct KERN – interface cable (max. 2m)

Pin allocation of the balance output socket (front view)

Sub-D jack 9-channel



Pin 2: Transmit data

Pin 3: Receive data

Pin 5: Signal ground

7.1 Interface RS 232C

Data output via interface RS 232C

General

The previous condition for the data transfer between balance and a peripheral device (e.g. printer, PC ...) is that the appliances are set to the same interface parameters (e.g. baud rate, parity ...).

7.1.1 There are 4 kinds of data output via RS 232C

Data output using the PRINT key

The printing process can be triggered by pressing the PRINT key.

The settings AUTOPRINT and AUTOPRINT should be disabled for this process.

AUTOPRINT (data output according to weight application)

The setting AUTOPRINT is located on the PRINTER path where you can turn it on or off. When AUTOPRINT is active, the current weighing value will be sent via the RS 232 data interface after unloading and subsequent loading of the balance as soon as the balance is in resting position.

Permanent PRINT (continuous data output)

The setting permanent Print is located on the PRINTER path and where you can turn it on or off. When permanent Print is active, the current weighing values will be sent continuously via the RS 232 data interface.

7.1.2 Explanation of the data transfer

Each data transfer is structured as follows:

Bit.Nr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	N	N	N	N	N	B	B	B	B	B	B	B	B	B	B	B	0	•	0	0
Bit.Nr.	21	22	23	24	25	26														
	E	E	E	E	CR	LF														

- N = Numerator
- B*: = Blank or for autotare on in zero range.
- B, 0, ; , g: = Blank or weighing value giving unit according to loading of the balance
- E = Unit
- CR: = Carriage Return
- LF: = Line Feed

8 Service, maintenance, disposal

8.1 Cleaning

Before cleaning, please disconnect the appliance from the operating voltage.

Please do not use aggressive cleaning agents (solvents or similar agents), but a cloth dampened with mild soap suds. Ensure that no liquid penetrates into the device and wipe with a dry soft cloth. Loose residue sample/powder can be removed carefully with a brush or manual vacuum cleaner.

Spilled weighing goods must be removed immediately.

8.2 Service, maintenance

The appliance may only be opened by trained service technicians who are authorized by KERN. Before opening, disconnect from power supply.

8.3 Disposal

Disposal of packaging and appliance must be carried out by operator according to valid national or regional law of the location where the appliance is used.

9 Instant help

In case of an error in the program process, briefly turn off the balance and disconnect from power supply. The weighing process must then be restarted from the beginning.

Help:

Fault

Possible cause

The displayed weight does not glow.

- The balance is not switched on.
- The mains supply connection has been interrupted (mains cable not plugged in/faulty).
- Power supply interrupted.

The displayed weight is permanently changing

- Draught/air movement
- Table/floor vibrations
- Weighing plate has contact with other objects.
- Electromagnetic fields / static charging (choose different location/switch off interfering device if possible)

The weighing value is obviously wrong

- The display of the balance is not at zero
- Adjustment is no longer correct.
- Great fluctuations in temperature.
- Electromagnetic fields / static charging (choose different location/switch off interfering device if possible)

Should other error messages occur, switch balance off and then on again. If the error message remains inform manufacturer.

10 Declaration of conformity

KERN®

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Fax: 0049-[0]7433-9933-149

Internet: www.kern-sohn.de

Declaration of conformity

EC-Konformitätserklärung
EC- Déclaration de conformité
EC-Dichiarazione di conformità
EC- Declaração de conformidade
EC-Deklaracja zgodności

EC-Declaration of Conformity
EC-Declaración de Conformidad
EC-Conformiteitverklaring
EC- Prohlášení o shode
EC-Заявление о соответствии

D	Konformitäts- erklärung	Wir erklären hiermit, dass das Produkt, auf das sich diese Erklärung bezieht, mit den nachstehenden Normen übereinstimmt.
GB	Declaration of conformity	We hereby declare that the product to which this declaration refers conforms with the following standards.
CZ	Prohlášení o shode	Tímto prohlašujeme, že výrobek, kterého se toto prohlášení týká, je v souladu s níže uvedenými normami.
E	Declaración de conformidad	Manifestamos en la presente que el producto al que se refiere esta declaración está de acuerdo con las normas siguientes
F	Déclaration de conformité	Nous déclarons avec cela responsabilité que le produit, auquel se rapporte la présente déclaration, est conforme aux normes citées ci-après.
I	Dichiarazione di conformità	Dichiariamo con ciò che il prodotto al quale la presente dichiarazione si riferisce è conforme alle norme di seguito citate.
NL	Conformiteit- verklaring	Wij verklaren hiermede dat het product, waarop deze verklaring betrekking heeft, met de hierna vermelde normen overeenstemt.
P	Declaração de conformidade	Declaramos por meio da presente que o produto no qual se refere esta declaração, corresponde às normas seguintes.
PL	Deklaracja zgodności	Niniejszym oświadczamy, że produkt, którego niniejsze oświadczenie dotyczy, jest zgodny z poniższymi normami.
RUS	Заявление о соответствии	Мы заявляем, что продукт, к которому относится данная декларация, соответствует перечисленным ниже нормам.

Electronic Balance: KERN FKA

EU Directive	Standards
2004/108/EC	EN 55022: 2010/AC:2011 (Limit class B) EN 55011: 2009+A1 : 2010 (Limit class B) EN 61000-3-2:2006-04+A1 : 2009+A2 : 2009 EN 61000-3-3:2008 EN 55024: 1998-09+A1 : 2001-10+A2 : 2003-10 OIML R 76-1 :2006 EN 45501:1992-10+AC:1993-08
2006/95/EC	EN 60950
2011/65/EU	EN 50581:2012

Datum 17.07.2014
Date

Ort der Ausstellung 72336 Balingen
Place of issue

Signatur
Signature



Albert Sauter
KERN & Sohn GmbH
Geschäftsführer
Managing director

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