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Operating instructions
Precision balance

KERN 572

Type T572-A

Version 1.0

2022-08

GB

GB

KERN 572

Version 1.0 2022-08

Operating instructions

Precision balance

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1 Technical data

KERN	572-30	572-31	572-32
Item no./ Type	T572-30-A	T572-31-A	T572-32-A
Readability (d)	0.001 g	0.001 g	0.001 g
Weighing range (max)	240 g	300 g	420 g
Reproducibility	0.001 g	0.002 g	0.002 g
Linearity	±0.003 g	±0.005 g	± 0.005 g
Smallest part weight for piece counting - under lab conditions*	1 mg	1 mg	1 mg
Smallest part weight for piece counting - under normal conditions**	10 mg	10 mg	10 mg
Adjustment points	50/100/200 g	100 / 200 / 300 g	100/ 200/ 400 g
Recommended adjustment weight (not supplied)	200 g (F1)	300 g (F1)	400 g (E2)
Warm-up time	120 min		4 h
Stabilization time (typical)	3 sec.		
Weighing Units	kg, g, gn, dwt, tl (Tw), tl (HK), ozt, tl (Singap, Malays), ct, mo, lb, oz		
Humidity of air	max. 80% rel. (non-condensing)		
Allowable ambient temperature	5 °C ... + 35 °C		
Input voltage Appliance	6V, 1A		
Input voltage Mains adapter	100 V - 240 V AC, 50 Hz		
Rechargeable battery operation (Factory option)	Operating period 48 h (background illumination OFF) Operating period 24 h (background illumination ON) Loading time approx. 8 hrs.		
Auto-Off (battery, rechargeable battery)	selectable off, 30s, 1, 2, 5, 30, 60 min		
Dimensions housing (W x D x H) [mm]	180 x 310 x 130		
Weighing plate [mm]	Ø 106 mm Stainless steel		
Net weight (kg)	2.3		
Interfaces	RS-232 (optional), USB device (optional) via KUP		
Underfloor weighing device	Eyelet		

KERN	572-33	572-35	572-37
Item no./ Type	T572-33-A	T572-35-A	T572-37-A
Readability (d)	0.01 g	0.01 g	0.01 g
Weighing range (max)	1 600 g	2 400 g	3 000 g
Reproducibility	0.01 g	0.01 g	0.02 g
Linearity	±0.03 g	± 0.03 g	±0.05 g
Smallest part weight for piece counting - under lab conditions*	10 mg	10 mg	10 mg
Smallest part weight for piece counting - under normal conditions**	100 mg	100 mg	100 mg
Adjustment points	500 / 1000 / 1500 g	500 / 1000 / 2000 g	1000 / 2000 / 3000 g
Recommended adjusting weight F1 (not supplied)	1.5 kg (F1)	2 kg (F1)	2 kg (F1)
Warm-up time	120 min		
Stabilization time (typical)	3 sec.		
Weighing Units	kg, g, gn, dwt, tl (Tw), tl (HK), ozt, tl (Singap, Malays), ct, mo, lb, oz		
Humidity of air	max. 80% rel. (non-condensing)		
Allowable ambient temperature	5 °C ... + 35 °C		
Input voltage Appliance	6V, 1A		
Input voltage Mains adapter	100 V - 240 V AC, 50 Hz		
Rechargeable battery operation (Factory option)	Operating period 48 h (background illumination OFF) Operating period 24 h (background illumination ON) Loading time approx. 8 hrs.		
Auto-Off (battery, rechargeable battery)	selectable off, 30s, 1, 2, 5, 30, 60 min		
Dimensions casing (l x L x h) [mm]	180 x 310 x 90		
Weighing plate [mm]	Ø 150, stainless steel		
Net weight (kg)	2.3		
Interfaces	RS-232 (optional), USB device (optional), wi-fi (optional) via KUP		
Underfloor weighing device	Hook (optional)		

KERN	572-39	572-43	572-45
Item no./ Type	T572-39-A	T572-43-A	T572-45-A
Readability (d)	0.01 g	0.1 g	0.05 g
Weighing range (max)	4 200 g	10 000 g	12 000 g
Reproducibility	0.02 g	0.1 g	0.05 g
Linearity	±0.05 g	±0.3 g	± 0.15 g
Smallest part weight for piece counting - under lab conditions*	10 mg	100 mg	50 mg
Smallest part weight for piece counting - under normal conditions**	100 mg	1 g	500 mg
Adjustment points	1000 / 2000 / 4000 g	2 / 5 / 10 kg	2 / 5 / 12 kg
Recommended adjusting weight F1 (not supplied)	4 kg (E2)	10 kg (F1)	10 kg (F1)
Warm-up time	4 h	120 min	
Stabilization time (typical)	3 sec.		
Weighing Units	kg, g, gn, dwt, tl (Tw), tl (HK), ozt, tl (Singap, Malays), ct, mo, lb, oz		
Humidity of air	max. 80% rel. (non-condensing)		
Allowable ambient temperature	5 °C ... + 35 °C		
Input voltage Appliance	6V, 1A		
Input voltage Mains adapter	100 V - 240 V AC, 50 Hz		
Rechargeable battery operation (Factory option)	Operating period 48 h (background illumination OFF) Operating period 24 h (background illumination ON) Loading time approx. 8 hrs.		
Auto-Off (battery, rechargeable battery)	selectable off, 30s, 1, 2, 5, 30, 60 min		
Dimensions casing (l x L x h) [mm]	180 x 310 x 90		
Weighing plate [mm]	Ø 150, stainless steel	160 x 200, stainless steel	
Net weight (kg)	2.3	2.7	
Interfaces	RS-232 (optional), USB device (optional) via KUP		
Underfloor weighing device	Hook (optional)		

KERN	572-49	572-55	572-57
Item no./ Type	T572-49-A	T572-55-A	T572-57-A
Readability (d)	0.1 g	0.05 g	0.1 g
Weighing range (max)	16 000 g	20 000 g	24 000 g
Reproducibility	0.1 g	0.1 g	0.1 g
Linearity	±0.3 g	±0.15 g	± 0.3 g
Smallest part weight for piece counting - under lab conditions*	100 mg	50 mg	100 mg
Smallest part weight for piece counting - under normal conditions**	1 g	500 mg	1 g
Adjustment points	5 / 10 / 15 kg	5 / 10 / 20 kg	5 / 10 / 20 kg
Recommended adjusting weight F1 (not supplied)	15 kg (F1)	20 kg (F1)	20 kg (F1)
Warm-up time	120 min		
Stabilization time (typical)	3 sec.		
Weighing Units	kg, g, gn, dwt, tl (Tw), tl (HK), ozt, tl (Singap, Malays), ct, mo, lb, oz		
Humidity of air	max. 80% rel. (non-condensing)		
Allowable ambient temperature	5 °C ... + 35 °C		
Input voltage Appliance	6V, 1A		
Input voltage Mains adapter	100 V - 240 V AC, 50 Hz		
Rechargeable battery operation (Factory option)	Operating period 48 h (background illumination OFF) Operating period 24 h (background illumination ON) Loading time approx. 8 hrs.		
Auto-Off (battery, rechargeable battery)	selectable off, 30s, 1, 2, 5, 30, 60 min		
Dimensions casing (l x L x h) [mm]	180 x 310 x 90		
Weighing plate [mm]	160 x 200, stainless steel		
Net weight (kg)	2.7		
Interfaces	RS-232 (optional), USB device (optional) via KUP		
Underfloor weighing device	Hook (optional)		

*** Smallest component weight for part counting - under lab conditions:**

- There are ideal ambient conditions for high-resolution counting
- The parts to be counted are not scattered

**** Smallest component part for part counting – under normal conditions:**

- There are unsteady ambient conditions (draft, vibrations)
- The parts to be counted are being scattered

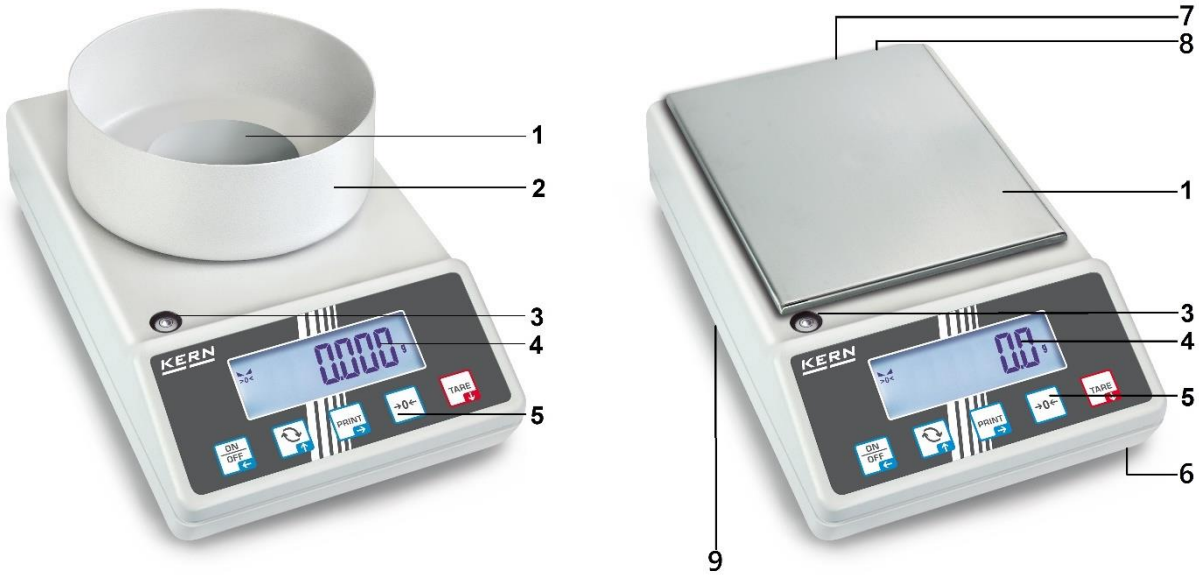
2 Declaration of conformity

The current EC/EU Conformity declaration can be found online in:

www.kern-sohn.com/ce

3 Appliance overview

3.1 Components



Pos.	Designation	Pos.	Designation
1	Weighing pan	6	Foot screws
2	Windshield	7	Mains adapter connection
3	Bubble level	8	KUP connection (KERN Universal Port)
4	Display	9	Underfloor weighing device (depending on model)
5	Keyboard		

3.2 Operating elements

3.2.1 Keyboard overview

Button	Name	Function in Operating mode	Function in Menu
	ON/OFF-button	➢ Turn on/off ➢ Background illumination of the display on/off	➢ Navigation key ← ➢ Menu level back ➢ Exit menu / back to weighing mode.
	⇆-key	➢ Quick change button, see chap. 10.3	➢ Navigation key ↑ ➢ Select menu item
	PRINT button	➢ Calculate weighing data via interface	➢ Navigation key → ➢ Activate menu item ➢ Confirm selection
	ZERO key	➢ Zeroing (Zeroing range 2% maximum)	
	TARE-button	➢ Taring	➢ Invoke application menu (press button long time) ➢ Navigation key ↓ ➢ Select menu item

3.2.2 Numeric entry

Button	Designation	Function
	Navigation key ➔	Select cipher
		Confirm entry. Press button repeatedly for every digit. Wait until the numeric input window extinguishes.
	Navigation key 🡻	Reduce flashing cipher (0 – 9)
	Navigation key 🡹	Increase flashing cipher (0 – 9)

3.2.3 Overview of displays

Position	Display	Description
1		Stability display
2	**>0<**	Zero display
3		Minus display
4		Tolerance marks for check weighing
5		Rechargeable battery charge indicator
6	**Units display / Pcs/ %**	options g, kg, lb, gn, dwt, oz, ozt or Application icon [**Pcs**] for piece counting or [%] for determination of percentage
7		Data transfer running
8	**AP**	Autoprint enabled
-	**G**	Display gross weight value
-	**NET**	Display net weight value
-	Σ	Weighing data can be found in the sum memory

4 Basic Information (General)

4.1 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 center of the weighing pan. As soon as a stable weighing value is reached, the weighing value can be read.

4.2 Improper Use

Our balances are non-automatic balances and not provided for use in dynamic weighing processes. However, the balances can also be used for dynamic weighing processes after verifying their individual operative range, and here especially the accuracy requirements of the application.

Do not leave permanent load on the weighing pan. 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 damage by this.

Never operate the 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.

4.3 Warranty

Warranty claims shall be voided in case:

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

4.4 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. In KERN's accredited DKD calibration laboratory test weights and balances may be calibrated (return to the national standard) fast and at moderate cost.

5 Basic Safety Precautions

5.1 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.

5.2 Personnel training

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

6 Transport and storage

6.1 Testing upon acceptance

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

6.2 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 wind screen, the weighing platform, power unit etc. against shifting and damage.

7 Unpacking, Installation and Commissioning

7.1 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 charge of goods to be weighed or weighing container.
- Do not operate in areas with hazard of explosive material or in potentially explosive atmospheres due to materials such as gasses, steams, mists or dusts.
- Keep away chemicals (such as liquids or gasses), which could attack and damage the balance inside or from outside.
- Keep IP protection of the device.
- In the event of the occurrence of electromagnetic fields, static charges (e.g., when weighing / counting plastic parts) and unstable power supply, large display deviations (incorrect weighing results, as well as damage to the scale) are possible. In that case, the location must be changed.

7.2 Unpacking and checking

Remove device and accessories from packaging, remove packaging material and install the device at the planned work place. Check if that there has been no damage and that all items of delivery scope are present.

Scope of delivery / serial accessories:

- Balance, see chap. 3.1
- Mains adapter
- Operating instructions
- Protective hood

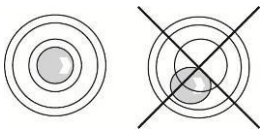
7.3 Assembling, Installation and Levelling

⇨ Remove the transport lock on the underside of the scale.

⇨ Install weighing plate and wind shield if necessary.

⇨ Ensure that the balance is installed in a level position.

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



⇨ Check levelling regularly

7.4 Mains connection

Select a country-specific power plug and insert it in the mains adapter.

Check, whether the voltage acceptance on the scales is set correctly. Do not connect the scales to the power mains unless the information on the scales (sticker) matches the local mains voltage.

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

Important:

➢ Before starting your weighing balance, check the mains cable for damage.

➢ Ensure that the power unit does not come into contact with liquids.

➢ Ensure access to mains plug at all times.

7.5 Rechargeable battery operation (Factory Option)

ATTENTION

- ⇨ The rechargeable battery and the battery match with each other. Only use the delivered mains adapter.
- ⇨ Do not use the balance during the loading process.
- ⇨ The rechargeable can only be replaced by the same or by a type recommended by the manufacturer.
- ⇨ The rechargeable battery is not protected against all environmental influences. If the rechargeable battery is exposed to certain environmental influences, it may set on fire or explode. Persons may be injured or material damage may occur.
- ⇨ Protect the rechargeable battery against fire and heat.
- ⇨ Do not bring the rechargeable battery in contact with fluids, chemical substances or salt.
- ⇨ Do not expose the rechargeable battery to high pressure or microwaves.
- ⇨ Under no circumstances the rechargeable batteries and the charging unit may be modified or manipulated.
- ⇨ Do not use a defective, damaged or deformed rechargeable battery.
- ⇨ Do not connect or short-circuit the electrical contacts of the rechargeable battery with metallic objects.
- ⇨ Liquid may squirt out from a damaged rechargeable battery. If the liquid gets into contact with the skin or the eyes, the skin and the eyes may be irritated.
- ⇨ Ensure the correct polarity when inserting or changing the rechargeable battery (see instructions in the battery compartment)

- ⇨ The rechargeable battery operation is overridden when the mains adapter is connected. For weighing in mains operation > 48 hrs. the rechargeable batteries must be removed! (Danger of overheating).
- ⇨ If the rechargeable battery starts to smell, being hot, changing the colour or being deformed, it must be immediately unplugged from mains supply and from the balance if possible.

7.5.1 Load rechargeable battery

The rechargeable battery pack (Factory Option) is charged using the mains cable supplied.

Before the first use, the rechargeable battery package should be charged by connecting it to the mains power cable for at least 15 hours.

To save the rechargeable battery, in menu (see chap.13.3.1.) the automatic switch-off function <AUtoFF> can be activated.

If the capacity of the rechargeable batteries is exhausted, <Lo bAt> appears in the display. Connect the power cable as soon as possible to load the rechargeable battery. Charging time until complete recharging is approx. 8 h.

7.6 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.

7.7 Initial Commissioning

In order to obtain exact results with the electronic balances, your balance must have reached the operating temperature (see warming up time chap. 1). During this warming up time the balance must be connected to the power supply (mains, accumulator).

The accuracy of the balance depends on the local acceleration of gravity.

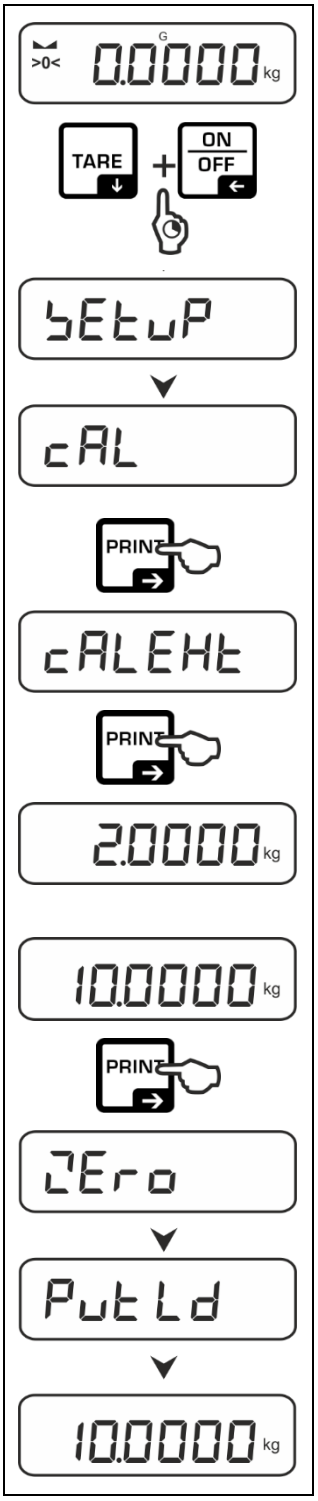
Strictly observe hints in chapter Adjustment.

7.8 Adjustment

As the acceleration value due to gravity is not the same at every location on earth, each display unit with connected weighing plate 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 weighing system has not already been adjusted to the location in the factory). This adjustment process must be carried out for the first commissioning, after each change of location as well as in case of fluctuating environment temperature. To receive accurate measuring values it is also recommended to adjust the display unit periodically in weighing operation.

- Arrange the required adjustment weight, see chap. 1.
  Carry out adjustment as near as possible to the highest load of the balance (recommended adjustment weight see chap. 1). Weights of different nominal values or tolerance classes may be used for adjustment but are not optimal for technical measuring. The accuracy of the adjustment weight must correspond approximately to or, if possible, be better than, the readability **[d]** of the balance. Info about test weights can be found on the Internet at: http://www.kern-sohn.com
- Observe stable environmental conditions. A warm up time (see chapter 1) is required for stabilization.
- Ensure that there are no objects on the weighing pan.

7.8.1 External adjustment < cALEHt >



⇨ Press and hold the TARE and ON/OFF buttons simultaneously to enter the setup menu.

⇨ Wait until the first menu item < cAL > is displayed.

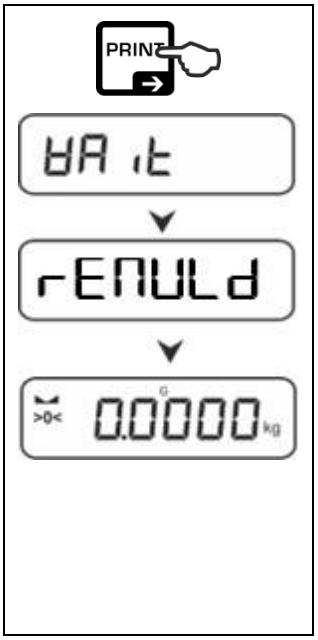
⇨ Confirm by ➔ button, < cALEHt > will be displayed.

⇨ Confirm by pressing the ➔-key, the first selectable adjustment weight is displayed.

⇨ Use the navigation keys 🡻🡹 to select the desired adjustment weight, see chap. 1 „Adjustment points“ or „Recommended adjustment weight“ Numerical input, see chap. 3.2.2.

⇨ Prepare the required adjustment weight.

⇨ Acknowledge selection by ➔-button. < ZEro >, < PtLd > followed by the weight value of the adjustment weight to be placed will be displayed.

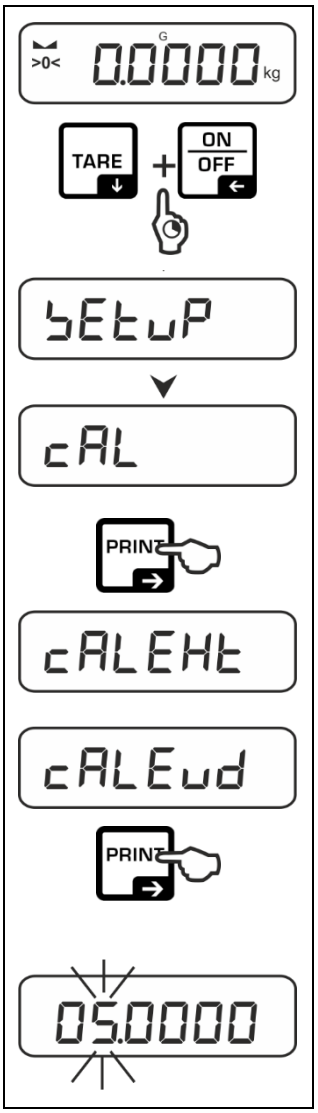


⇨ Place the adjustment weight and confirm with ➔-button, < WAIT > followed by < rEMOLd > will be displayed.

⇨ Once < rEMOLd > is displayed, remove the adjustment weight.

⇨ After successful adjustment the balance automatically returns to weighing mode.
In case of an adjustment error (e.g. objects on the weighing plate) the display will show the error message < Wrong >.
Switch off balance and repeat the adjustment process.

7.8.2 External adjustment with user-defined adjustment weight < cALEud >



⇨ Press and hold the TARE and ON/OFF buttons simultaneously to enter the setup menu.

⇨ Wait until the first menu item < cAL > is displayed.

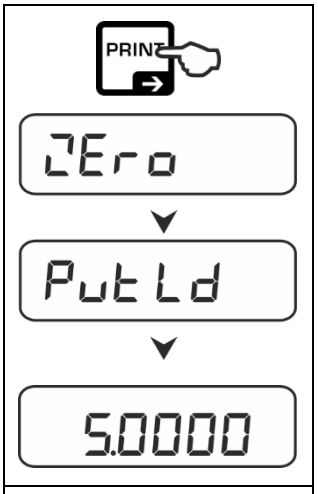
⇨ Confirm by ➔ button, < cALEHt > will be displayed.

⇨ Use the navigation keys to select 🡻 🡹 < cALEud >.

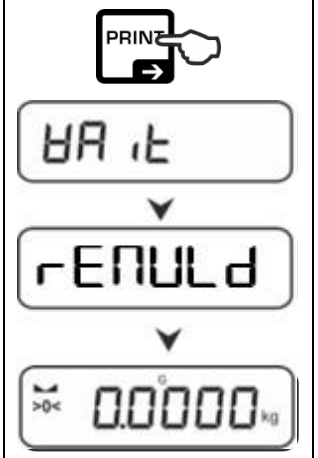
⇨ Acknowledge by ➔-button. The numeric input window for the weight value of the adjustment weight appears. The active digit is flashing.

⇨ Provide adjustment weight.

⇨ Enter weight value, numeric input see chap. 3.2.2



⇨ Acknowledge selection by ➔-button. <ZEro>, <PtLd> followed by the weight value of the adjustment weight to be placed will be displayed.

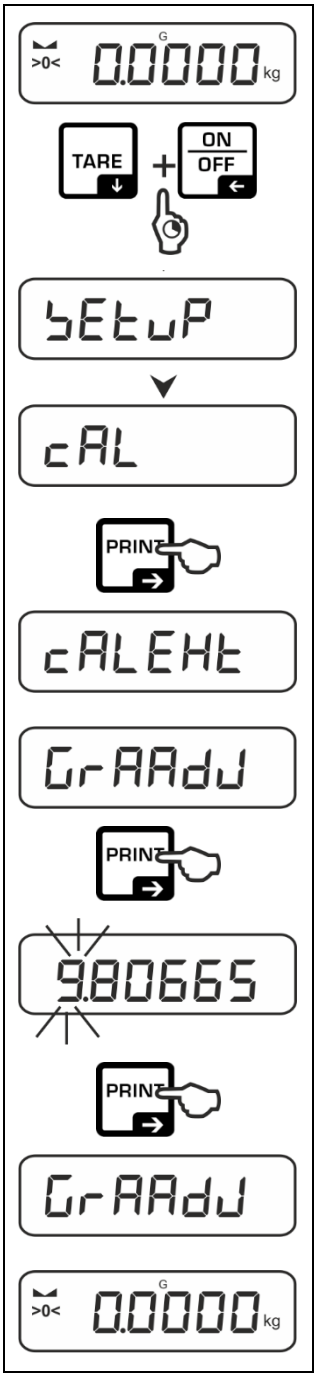


⇨ Place the adjustment weight and confirm with ➔-button, <WAit> followed by <rENULd> will be displayed.

⇨ Once <rENULd> is displayed, remove the adjustment weight.

⇨ After successful adjustment the balance automatically returns to weighing mode.
In case of an adjustment error (e.g. objects on the weighing plate) the display will show the error message <WronG>.
Switch off balance and repeat the adjustment process.

7.8.3 Gravitational constant adjustment location < GrAAdJ >



⇨ Press and hold the TARE and ON/OFF buttons simultaneously to enter the setup menu.

⇨ Wait until the first menu item < CAL > is displayed.

⇨ Confirm by ➔ button, < CALEHt > will be displayed.

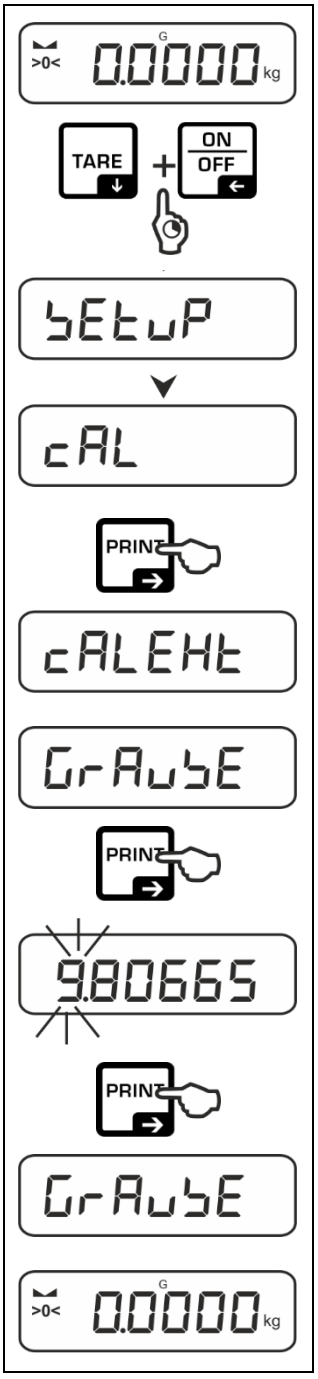
⇨ Use the navigation keys to select 🡻 🡹 < GrAAdJ >.

⇨ Acknowledge using ➔-key, the current setting is displayed. The active digit is flashing.

⇨ Enter weight value and confirm using the ➔-button, numeric entry see chap. 3.2.2.
Weighing balance returns to menu.

⇨ Press repeatedly 🡐-button to exit menu.

7.8.4 Gravitational constant adjustment location < GrAuSE >



⇨ Press and hold the TARE and ON/OFF buttons simultaneously to enter the setup menu.

⇨ Wait until the first menu item < CAL > is displayed.

⇨ Confirm by ➔ button, < CALEHt > will be displayed.

⇨ Use the navigation keys to select 🡻 🡹 < GrAuSE >.

⇨ Acknowledge using ➔-key, the current setting is displayed. The active digit is flashing.-+

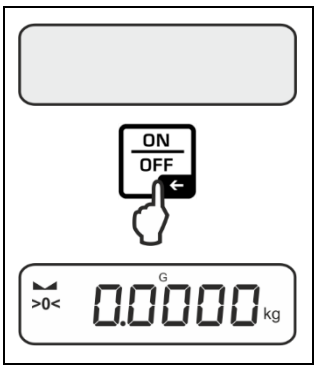
⇨ Enter weight value and confirm using the ➔-button, numeric entry see chap. 3.2.2.
Weighing balance returns to menu.

⇨ Press repeatedly 🡸-button to exit menu.

8 Basic Operation

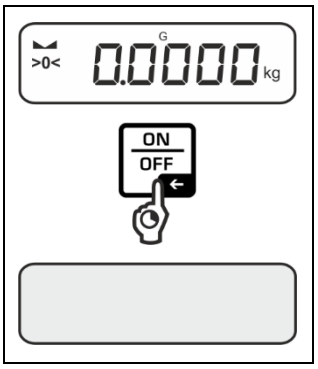
8.1 Turn on/off

Start-up:



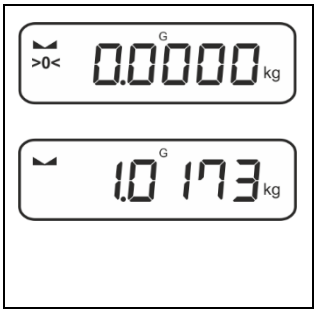
⇨ Press the **ON/OFF** button.
The display lights up and the balance carries out a selftest.
Wait until the weight display appears
The scales are now ready to weigh using the last active application

Switching off:



⇨ Keep **ON/OFF** button pressed until the display disappears

8.2 Simple weighing



⇨ Check zero display [**>0<**] and set to zero with the help of the **ZERO** key, as required.

⇨ Place goods to be weighed on balance

⇨ Wait until the stability display appears (▬).

⇨ Read weighing result.

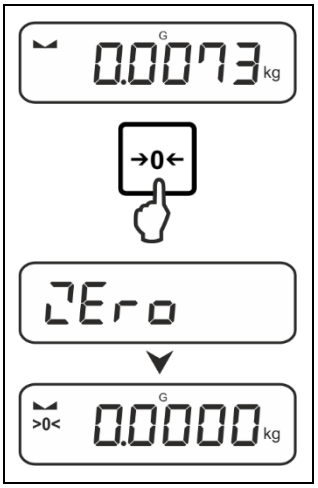
Overload warning
Overloading exceeding the stated maximum load (max) of the device, minus a possibly existing tare load, must be strictly avoided.
This could damage the instrument.
Exceeding the maximum load is indicated by the display "- - -". Unload balance or reduce preload.

8.3 Zeroing

In order to obtain optimal weighing results, reset to zero the balance before weighing.

Zeroing is only possible in the range ± 2% Max.

For values greater than ± 2% maximum the error message < ZL iN it > is displayed

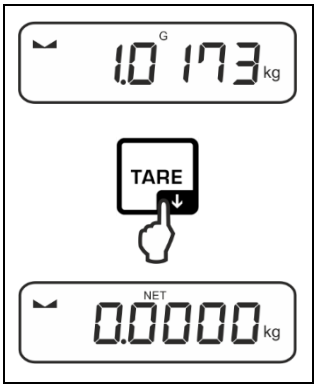


⇨ Unload the balance

⇨ Press the **ZERO** key to set the balance to zero.

8.4 Taring

The dead weight of any weighing container may be tared away by pressing a button, so that the following weighing procedures show the net weight of the goods to be weighed.

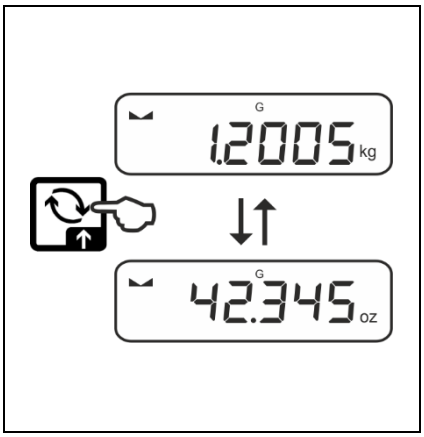


⇨ Put weighing container on the weighing pan.

⇨ Wait until the stability display appears (◣◢), then press **TARE** key. The weight of the container is now internally saved. Zero display and indicator **<NET>** will appear. **<NET>** informs that all shown weight values are net values.

- When the balance is unloaded the saved taring value is displayed with negative sign.
- To delete the stored tare value, unload the weighing plate and press the **TARE** key or the **ZERO** key.
- The taring process can be repeated any number of times, e.g. when adding several components for a mixture (adding). The limit is reached when the taring range capacity is full.
- Numerical input of tare (PRE-TARE)

8.5 Switch-over weighing unit



⇨ Using ⟲ button, it is possible to switch over between the enabled unit 1 and unit 2.
(To activate the unit, see chap. 10.3.1.)

i When switching-on the balance, the unit in which the balance has been switched off, will be displayed.

8.6 Underfloor weighing

Objects unsuitable for placing on the weighing scale due to size or shape may be weighed with the help of the flush-mounted platform.

Proceed as follows:

- ⇨ Switch off the balance.
- ⇨ Open closing cover at the balance bottom.
- ⇨ Place weighing balance over an opening.
- ⇨ Completely screw-in the hook
- ⇨ Hook-on the material to be weighed and carry out weighing.

CAUTION

- **Always ensure that all suspended objects are stable enough to hold the desired goods to be weighed safely (danger of breaking).**
- **Never suspend loads that exceed the stated maximum load (max) (danger of breaking)**

Always ensure that there are no persons, animals or objects that might be damaged underneath the load.

NOTICE

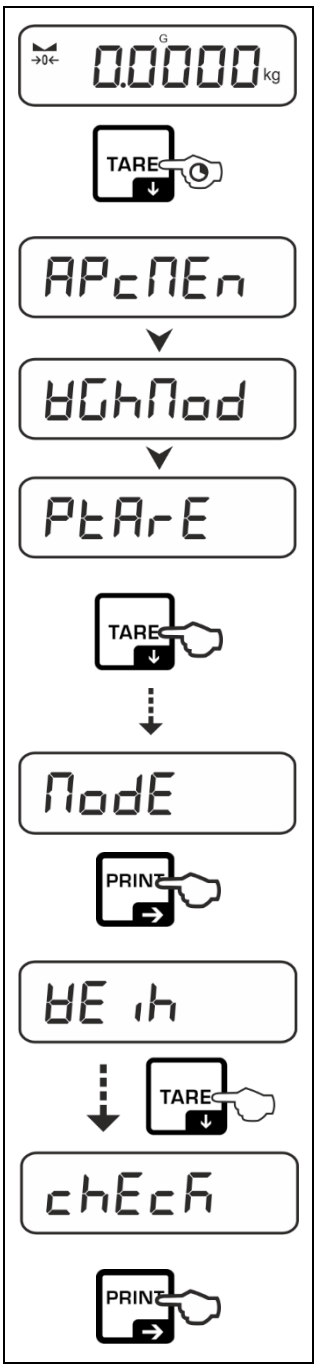
After completing the underfloor weighing the opening on the bottom of the balance must always be closed (dust protection).

9 Operating concept

From factory the balance is delivered with various applications (normal weighing, check weighing, counting). After the first start-up the balance is in the <Weighing> application.

In the **application menu** (see chap.13.2.) however, you can define, selecting an application, in which mode the balance after switching-on has to continue working. Either as per standard in weighing mode or e.g. as check balance or counting balance

Selecting an application:



⇨ Press the **TARE** key and hold it until <APcNEn> is displayed.

⇨ The display changes to <WGhNodE> followed by <PtArE>.

⇨ Use the **TARE**-button to select the menu setting <NodE> and acknowledge with ➔-button.

⇨ The last active application e.g. <WE iGh> is displayed.

⇨ Use the **TARE**-button to select the desired mode, selectable

WE iGh	Weighing mode
count	Counting mode
chEcK	Check mode

⇨ Acknowledge selection by ➔-button.

According to the selected application in the application menu just appear the application-specific settings, so that you reach the target quickly without deviation.

- Information about the application-specific settings you will find in the description of the respective application.
- All basic settings and parameters, which influence the whole operation of the balance, are resumed in the **Setup Menu** (see chap.13.3.).
  These settings remain valid for all applications.
- The number of the available applications depends on the model.

Change application:

⇨ Press the **TARE** button and keep it pressed until the first menu item of the setup menu will be displayed

⇨ Use the **TARE**-button to select the menu setting < MODE > and acknowledge with ➔ button. The current setting will be displayed.

⇨ Use the **TARE**-button to select the desired mode and acknowledge with ➔ button.

10 Application <Weighing>

How to carry out a simple weighing and taring, please refer to chap. 8.2 or 8.4.
Further specific settings you will find in the following chapters.

Shouldn't the application <Weighing> already be enabled, select the menu setting < ModE ➡ WE iGh >, see chap. 9

10.1 Application-specific settings

Call up menu:

⇨ Press the **TARE** key and hold it until <APcMEn> is displayed.

⇨ The display changes to < WGhMod > followed by < PtArE >.

⇨ Navigation in menu see chap. 13.1

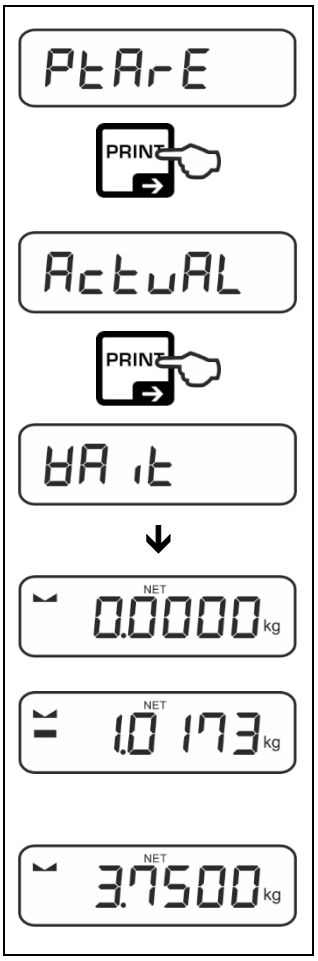
Overview:

Level 1	Level 2	Level 3	Description / Chapter
PtArE PRE-TARE	ActuAL	Take over the placed weight as PRE-TARE value, see chap. 10.2.1	
	MAnuAL	Numerical input of the tare weight, see chap. 10.2.2.	
	cLEAr	Delete PRE-TARE value	
hoLd	-	Start-Hold function, see chap. 10.2.3	
un it Units	available weighing units, see chap. 1	This function defines in which weighing unit the result will be displayed.	
	FFA	Multiplication factor see chap. 10.2.5	
	Pcs	Application unit counting	
	%	Application unit for determining percentages see chap. 10.2.4	
	mol	Mol weighing mode, see chap. 10.2.6	
ModE Application mode	WE iGh	Weighing mode	see chap. 9.
	count	Counting mode	
	chEcK	Check mode	

10.2 Description of individual functions

10.2.1 Take over the placed weight as PRE-TARE value

< PtArE➡ActuAL >



⇨ Deposit weighing receptacles

⇨ Invoke menu setting < PtArE > and confirm by ➔-button.

⇨ To take over the placed weight as a PRE-TARE value, use the navigation keys ⇵ to select < ActuAL >

⇨ Acknowledge by ➔-button. < WAit > is displayed.

⇨ The weight of the weighing container is stored as tare weight. Zero display and indicators **<PTARE>** and **<NET>** will appear.

⇨ Remove the weighing container, the indicator (NET) and the tare weight with minus sign will appear.

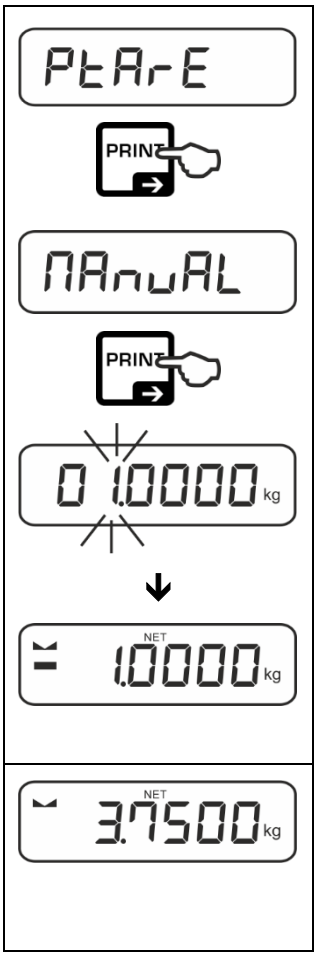
⇨ Place the filled weighing container.

⇨ Wait until the stability display appears (▬).

⇨ Read net weight.

i The entered tare weight remains invalid until a new tare weight is input. To delete press the TARE key or confirm the menu setting <cLEAr> using the ➔ button.

10.2.2 Enter the known tare weight numerically < PtArE➡nAnuAL >



⇨ Invoke menu setting < PtArE > and confirm by ➔-button.

⇨ Use the navigation keys ⇃↾ to select the setting <nAnuAL > and confirm with ➔ button.

⇨ Enter known tare weight, numerical input see chap. 3.2.2, the active digit flashes.

⇨ The input weight is saved as tare weight, the indicators **<PTARE>** and **<NET>** and the tare weight with minus sign will appear.

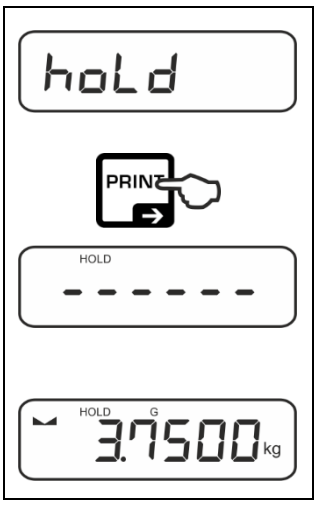
⇨ Place the filled weighing container.

⇨ Wait until the stability display appears (▬).

⇨ Read net weight.

ℹ The entered tare weight remains invalid until a new tare weight is input. To delete enter the zero value or confirm the menu setting <cLEAr> using the ➔-button.

10.2.3 Data-Hold function < hoLd >



⇨ Menu setting < hoLd >

⇨ Place goods to be weighed.

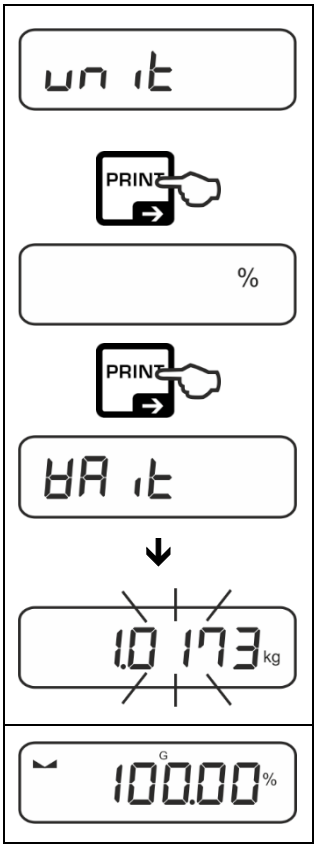
⇨ Acknowledge by ➔-button.

⇨ The first stable weight value is symbolised by [HOLD] in the upper edge of the display. After the load is removed, the value is left in the display for another 10 seconds.

⇨ If no stable value could be determined after 15 secs, an average value is displayed.

10.2.4 Percent weighing

The application **<Percent weighing>** allows to check the weight of a sample in percent, based on a reference weight.



⇨ Select menu setting < unit >.

⇨ Put a reference weight which corresponds to 100 %.

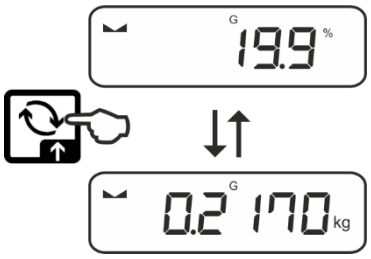
⇨ Acknowledge by ➔-button.

⇨ Use the navigation keys ⇵ to select the setting < % > and confirm on ➔ button.

⇨ Confirm the flashing weight value of the reference weight using ➔ button.

⇨ From now on the weight of the sample will be shown in percent based on the reference weight

- Using ⟳ button, it is possible to switch over between the enabled unit 1 and unit 2 (enabling the unit).

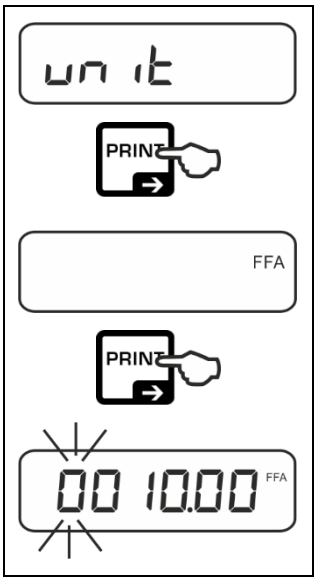


The required settings can also be defined quickly and conveniently by pressing the ⟳ key (without calling up the <unit> menu), see chap. 10.3.2.

10.2.5 Weighing with multiplication factor

Here you determine with which factor the weighing result (in gram) will be multiplied.

By that way, e.g. a known error factor in the weight determination can be immediately taken into account.



⇨ Select menu setting < unit > and confirm on ➔ button.

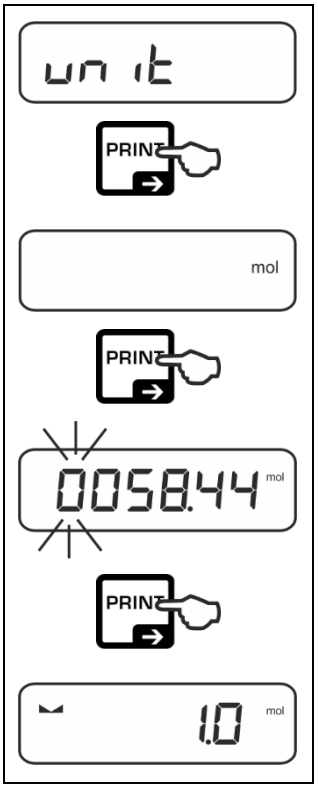
⇨ Use the navigation keys ⇵ to select the setting < FFA > and confirm on ➔ button.

⇨ Enter multiplication factor, numerical input see chap. 3.2.2, the active digit flashes.

i The required settings can also be defined quickly and conveniently by pressing the ↻ key (without calling up the < unit > menu), see chap. 10.3.2.

10.2.6 Molar weighing mode

This function calculates the amount of a substance (in mol) based on the molar mass and the weight of the substance.



⇨ Select menu setting < unit > and confirm on ➔ button.

⇨ Use the navigation keys ⇵ to select the setting < mol > and confirm on ➔ button.

⇨ Enter molar mass of substance, numerical input see chap. 3.2.2, the active digit flashes.

⇨ Preweigh the substance. The weight is displayed in mol.

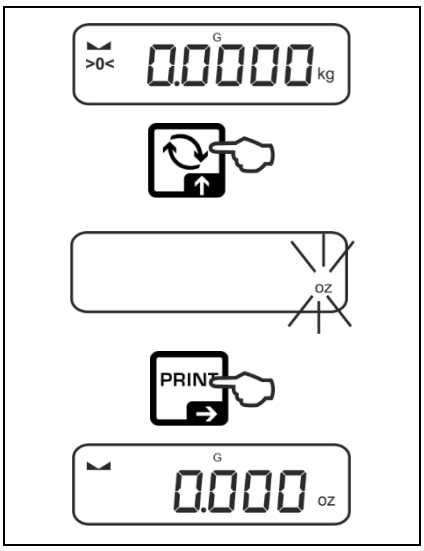
i The required settings can also be defined quickly and conveniently by pressing the ↻ key (without calling up the < unit > menu), see chap. 10.3.2.

10.3 Quick change key

The quick-change button can be allocated with a unit where, if needed, it is possible to switch over fast and conveniently into another enabled unit.

10.3.1 Weighing Units

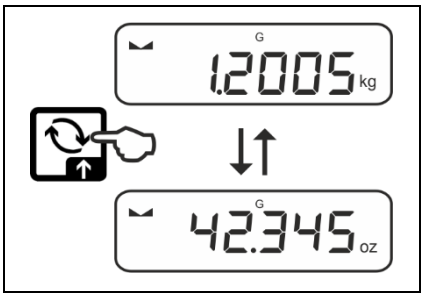
Enable unit:



⇨ Press the key, wait until the display flashes.

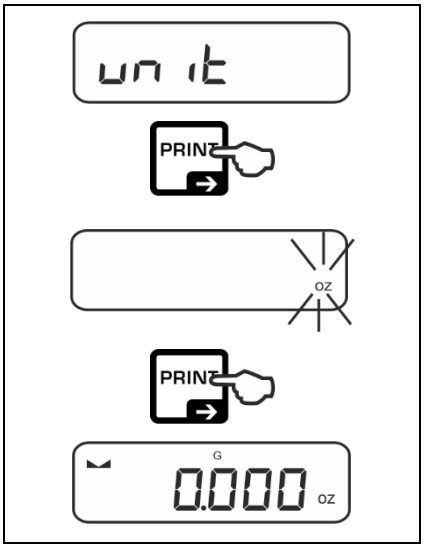
⇨ Press the key to select the required unit and confirm by pressing the ➔ key.

Switch over unit:



⇨ Using button, it is possible to switch over between the enabled unit 1 and unit 2.

Disable unit:



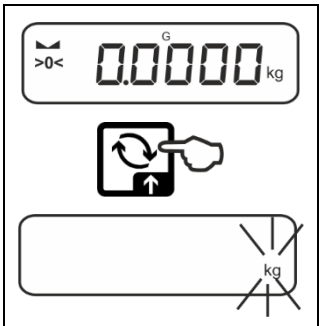
⇨ Select menu setting < unit > and confirm on ➔ button.

⇨ Wait until the display starts flashing and confirm on ➔ button.
From here on, with the button, all units can be selected anew.

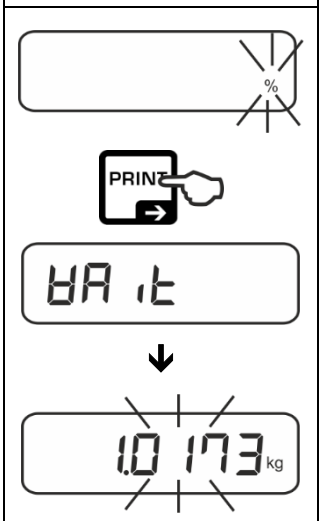
10.3.2 Application units

When selecting an application unit (%, Pcs, FFA), the required settings can be selected right after being invoked, using the ⇆ button.

Setting example „Percent weighing“:



⇨ Press the ⇆ key, wait until the display flashes.



⇨ Use ⇆ button to select the unit <%>.

⇨ Put a reference weight which corresponds to 100 %.

⇨ Acknowledge by ➔-button.

⇨ Confirm the flashing weight value of the reference weight using ➔ button.

⇨ From now on the weight of the sample will be shown in percent based on the reference weight.

11 Application <Counting>

Shouldn't the application <Counting> already be enabled, select the menu setting < ModE ➡ count >, see chap. 9

11.1 Application-specific settings

Call up menu:

⇨ Press the **TARE** key and hold it until< APcMEn > is displayed.

⇨ The display changes to < couMod > followed by < rEF >.

⇨ Navigation in menu see chap. 13.1

Overview:

Level 1	Level 2	Description / Chapter	
rEF Reference quantity	5	Reference quantity 5	
	10	Reference quantity 10	
	20	Reference quantity 20	
	50	Reference quantity 50	
	FrEE	Optional, numeric input, see chap. 3.2.2.	
	inPut	Input piece weight	
PtArE PRE-TARE	ActuAL	Take over the placed weight as PRE-TARE value, see chap. 10.2.1	
	MAnuAL	Numerical input of the tare weight, see chap. 10.2.2.	
	cLEAr	Delete PRE-TARE value	
tArGEt Check counting,	VALuE	Target value entry	
	ErruPP	Upper tolerance	
	ErrLoW	Lower tolerance	
	rESEt	Reset settings to factory defaults	
ModE Application mode	WE iGh	Weighing mode	see chap. 9.
	count	Counting mode	
	chEcK	Check mode	

11.2 Using the application

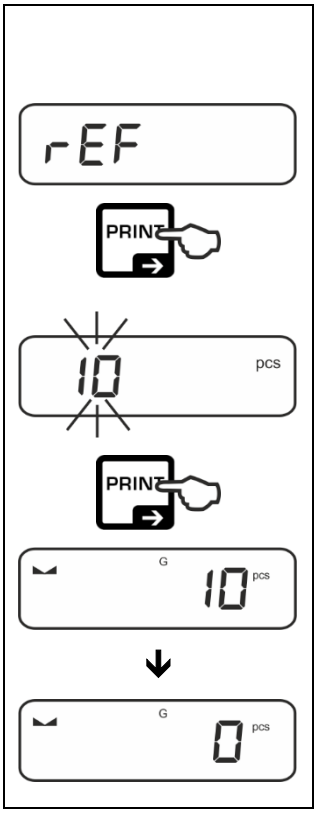
11.2.1 Piece counting

Before the balance can count parts, it must know the average part weight (i.e. reference). Proceed by putting on a certain number of the parts to be counted. The balance determines the total weight and divides it by the number of parts, the so-called reference quantity. Counting is then carried out on the basis of the calculated average piece weight.

- The higher the reference quantity the higher the counting exactness.
- Especially high reference must be selected for small parts or parts with considerably different sizes.
- Smallest counting weight see table „Technical data“.

1. Set reference

Reference quantity 5, 10, 20 or 50



⇨ If necessary, put on and tare the weighing container.

⇨ Put on the desired quantity of reference pieces.

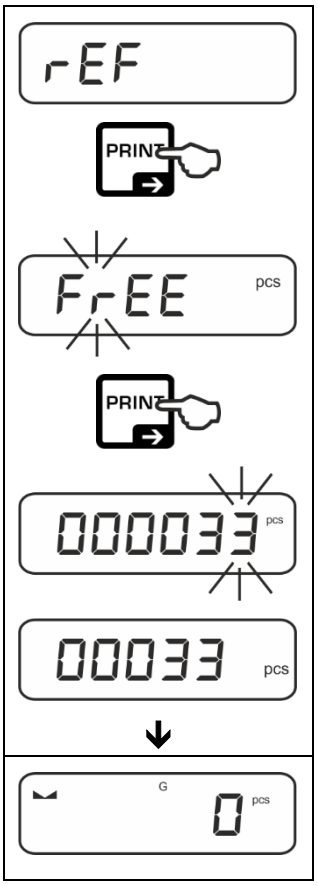
⇨ Invoke menu setting < rEF > and confirm by ➔ button.

⇨ Use the navigation keys ↓↑ to select the reference piece quantity (5, 10, 20, 50) according to the placed reference and confirm with the ➔ button.

⇨ The balance will calculate the average item weight and then displays the quantity of pieces.

⇨ Remove reference weight. The balance is now in piece counting mode counting all units on the weighing plate.

Reference piece quantity user-defined:



⇨ If necessary, put on and tare the weighing container.

⇨ Put on the desired quantity of reference pieces.

⇨ Invoke menu setting <rEF> and confirm by ➔ button.

⇨ Use the navigation keys ↓↑ to select the setting <FrEE> and confirm on ➔ button.

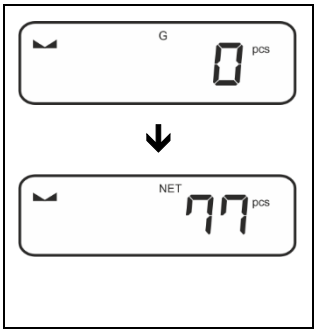
⇨ The numeric input window appears.

⇨ Enter and confirm the quantity of the placed reference parts, numeric input see chap. 3.2.2

⇨ The balance will calculate the average item weight and then displays the quantity of pieces.

⇨ Remove reference weight. The balance is now in piece counting mode counting all units on the weighing plate.

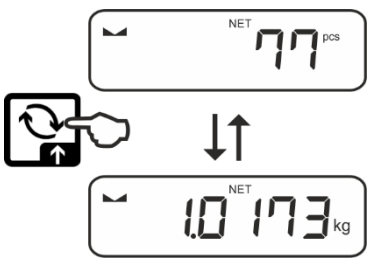
2. Parts counting



⇨ If necessary, put on and tare the weighing container.

⇨ Fill the counting quantity. The piece quantity is shown directly in the display.

i With the ⇆ key you can switch between piece quantity and weight display.



11.2.2 Check counting

The balance allows weighing of goods within set tolerances in keeping with a determined target quantity. With this function one can also check if the weighing good is within a defined tolerance range.

Reaching the target value is indicated by an acoustic (if activated in menu) and an optic signal (tolerance marks

).

Optical signal:

The tolerance marks provide the following information:

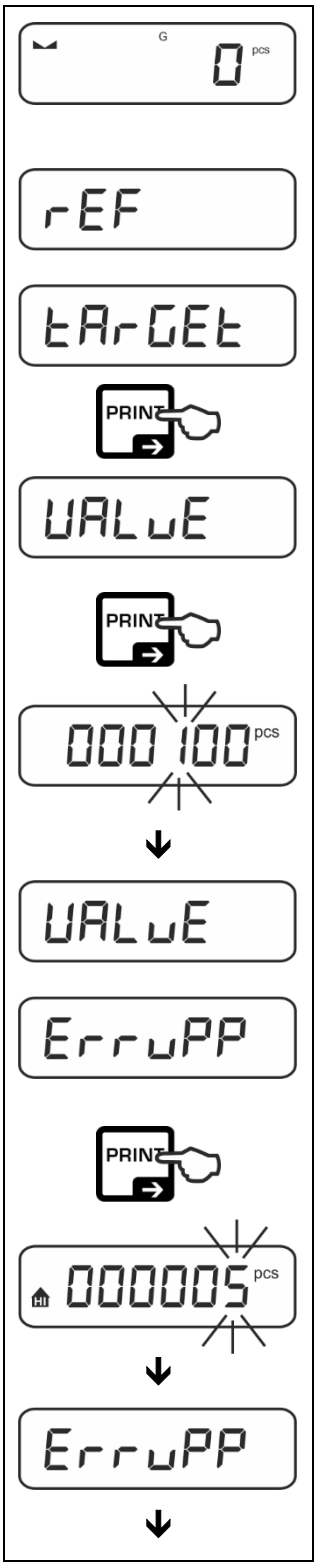
	Target quantity exceeds defined tolerance
	Target quantity within defined tolerance
	Target quantity below defined tolerance

Acoustic signal:

The acoustic signal depends on the menu setting
<SEtuP ➡ bEEPEr>, see chap. 13.3.1.

Procedure:

1. Define target quantity and tolerances



⇨ Make sure that the scale is in counting mode and that an average piece weight has been defined (see chap. 11.2). If necessary, switch over with the key.

⇨ Call up menu setting < rEF >.

⇨ Use the navigation keys ⇵ to select the setting <tArGEt > and confirm with ➔ button.

< UALuE > is displayed.

⇨ Confirm on ➔ button, the numeric input window appears. The active digit is flashing.

⇨ Enter the target number of pieces (numerical input see chap. 3.2.2) and confirm the entry.

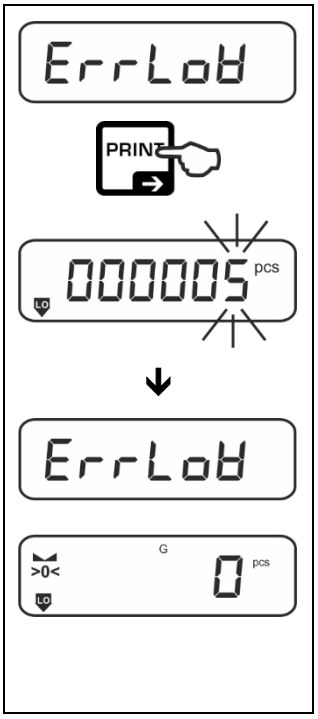
The balance returns to the < UALuE > menu.

⇨ Use the navigation buttons ⇵ to select setting < ErruPP>.

⇨ Confirm on ➔ button, the numeric input window appears. The active digit is flashing.

⇨ Enter the upper tolerance (for numerical entry see chap. 3.2.2) and confirm the entry.

The balance returns to the < ErruPP > menu.



⇨ Use the navigation buttons ⇵ to select setting <ErrLoH >.

⇨ Confirm on ➔ button, the numeric input window appears. The active digit is flashing.

⇨ Enter the lower tolerance (for numerical entry, see chap. 3.2.2) and confirm the entry.

⇨ The balance returns to the < ErrLoH > menu.

⇨ Press repeatedly ←-button to exit menu.

Finished the setting works, the weighing balance will be ready for check counting.

2. Start tolerance check:

⇨ Determine the average item weight, see chap. 11.2.1

⇨ Place the weighed material and check by means of the tolerance marks / acoustic signal if the weighed material is within the defined tolerance.

Load below specified tolerance	Load within specified tolerance	Load exceeds specified tolerance

12 Application <Checkweighing>

12.1 Application-specific settings

ℹ Shouldn't the application <Checkweighing> already be enabled, select the menu setting < MODE ➡ CHECK >, see chap. 9

Call up menu:

⇨ Press the **TARE** key and hold it until< APCMEN > is displayed.

⇨ The display changes to < CHANGE > followed by < TARGET >.

⇨ Navigation in menu see chap. 13.1

Overview:

Level 1	Level 2	Description / Chapter	
TARGET Target weighing,	VALUE	Target value entry	
	ERRUPP	Upper tolerance	
	ERRLOW	Lower tolerance	
	RESET	Reset settings to factory defaults	
LIMITS Checkweighing,	LIMLOD	Lower limit value, numeric input see chap. 3.2.2	
	LIMUPP	Upper limit value, numeric input see chap. 3.2.2	
	RESET	Reset settings to factory defaults	
PTARE PRE-TARE	ACTUAL	Take over the placed weight as PRE-TARE value, see chap. 10.2.1	
	MANUAL	Numerical input of the tare weight, see chap. 10.2.2.	
	CLEAR	Delete PRE-TARE value	
MODE Application mode	WEIGH	Weighing mode	see chap. 9.
	COUNT	Counting mode	
	CHECK	Check mode	

12.2 Using the application

12.2.1 Target weighing

The target weighing application allows weighing of goods within set tolerance limits in keeping with a determined target weight.

Reaching the target weight is indicated by an acoustic (if activated in menu) and an optic signal (tolerance marks).

Optical signal:

The tolerance marks provide the following information:

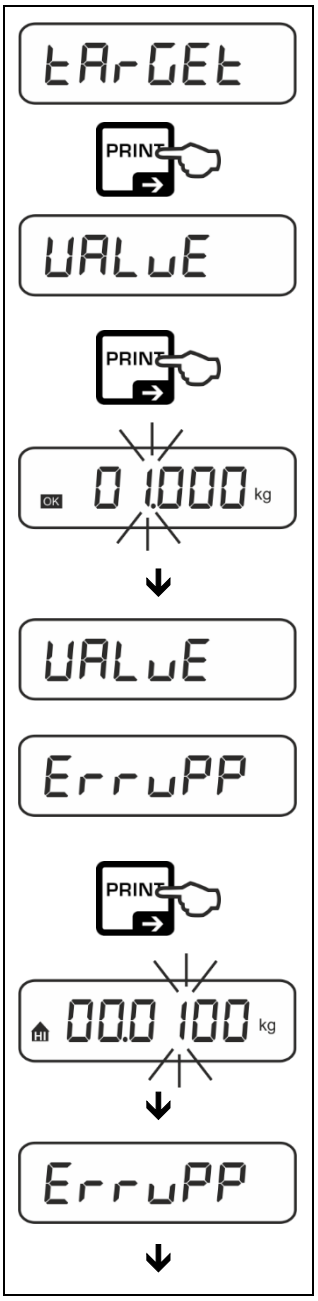
	Upper limit
	Target weight
	Lower limit

Acoustic signal:

The acoustic signal depends on the menu setting
<SEtuP ➡ bEEPEr>, see chap. 13.3.1.

Procedure:

1. Define target weight and tolerances



⇨ Use the navigation keys ↓↑ to select the setting <tArGEt > and confirm with ➔ button.

< UALuE > is displayed.

⇨ Confirm on ➔ button, the numeric input window appears. The active digit is flashing.

⇨ Enter target weight (numeric entry see chap. 3.2.2) and confirm the entry.

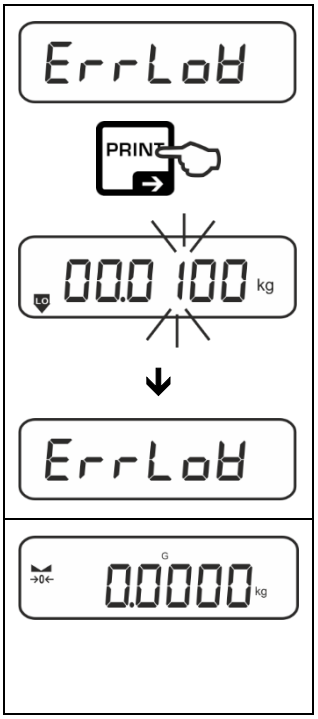
The balance returns to the < UALuE > menu.

⇨ Use the navigation buttons ↓↑ to select setting <ErruPP >.

⇨ Confirm on ➔ button, the numeric input window appears. The active digit is flashing.

⇨ Enter the upper limit for the weight deviation (for numeric entry, see chap. 3.2.2) and confirm the entry.

The balance returns to the < ErruPP > menu.



⇨ Use the navigation buttons ⇵ to select setting <ErrLoH >.

⇨ Confirm on ➔ button, the numeric input window appears. The active digit is flashing.

⇨ Enter lower limit for weight deviation (numeric entry see chap. 3.2.2) and confirm the entry.

⇨ The balance returns to the <ErrLoH > menu.

⇨ Press repeatedly ←-button to exit menu.

Finished the setting works, the weighing balance will be ready for checkweighing.

3. Start tolerance check:

⇨ Place the weighed material and check by means of the tolerance marks / acoustic signal if the weighed material is within the defined tolerance.

Load below specified tolerance	Load within specified tolerance	Load exceeds specified tolerance

12.2.2 Checkweighing

With the <**Checkweighing**> application you can check if the weighing good is within a predefined tolerance range.

When limit values are exceeded below or above, an acoustic signal (if enabled in menu) will sound and an optical signal (tolerance marks) will be displayed

Optical signal:

The tolerance marks provide the following information:

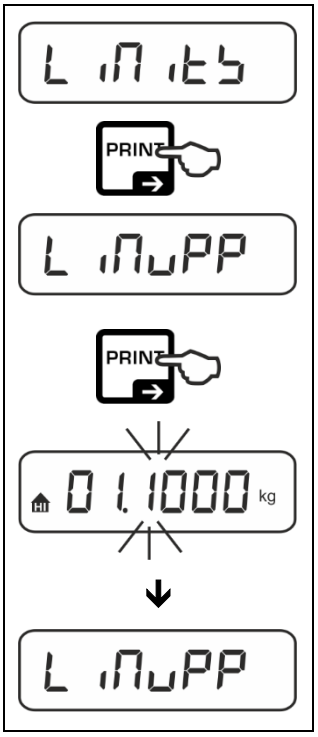
HI	Weighed-in goods exceed predefined tolerance
OK	Weighed-in goods within predefined tolerance
LO	Weighed-in goods below predefined tolerance

Acoustic signal:

The acoustic signal depends on the menu setting
< SEtuP ➡ bEEPEr >, see chap. 13.3.1.

Procedure:

1. Define limit values



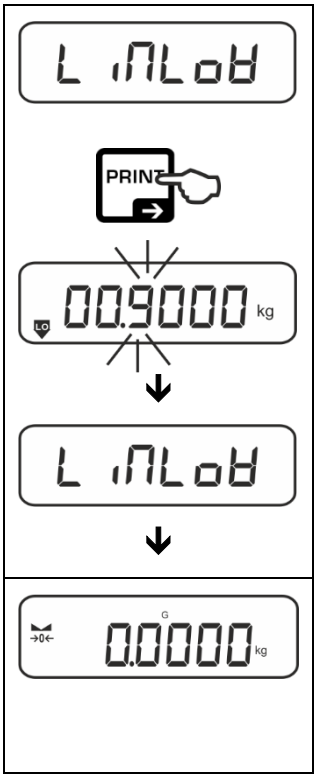
⇨ Use the navigation keys ⇵ to select the setting <Li Mits> and confirm with ➔ button.

<LiMuPP> will appear.

⇨ Press ➔ button to confirm, the numeric input window for entering the upper limit value will appear.
The active digit is flashing.

⇨ Enter upper limit value (numerical input see chap. 3.2.2) and confirm the entry.

The balance returns to the <LiMuPP> menu.



⇨ Use the navigation keys ⇵ to select setting < L inLoH >.

⇨ Press ➔ button to confirm, the numeric input window for entering the lower limit value will appear. The active digit is flashing.

⇨ Enter lower limit value (numerical input see chap. 3.2.2) and confirm the entry.

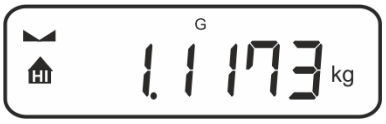
The balance returns to the < L inLoH > menu.

⇨ Press repeatedly ←-button to exit menu.

Finished the setting works, the weighing balance will be ready for checkweighing.

4. Start tolerance check:

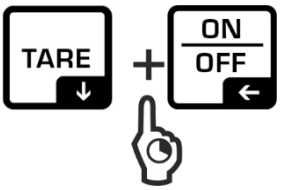
⇨ Place the weighed material and check by means of the tolerance marks / acoustic signal if the weighed material is within the defined tolerance.

Load below specified tolerance	Load within specified tolerance	Load exceeds specified tolerance
		

13 Menu

13.1 Navigation in the menu

Call up menu:

Application menu	Setup menu
	
Press the **TARE** button and keep it pressed until the first menu item will be displayed	Press the **TARE** and **ON/OFF** button at the same time and keep them pressed until the first menu item will be displayed

Select and adjust parameter:

Scrolling on one level	Use the navigation buttons to select the individual menu blocks one by one. Use the navigation key 🡻 to scroll down. Use the navigation key 🡹 to scroll up.
Activate menu item / **Confirm selection**	Press navigation key 🡺
Menu level back / back to weighing mode	Press navigation key 🡸

13.2 Application menu

The application menu allows you a fast and targeted access to the respectively selected application (see chap. 9.).

An overview of the application-specific settings you will find in the description of the respective application.

13.3 Setup menu

In the setup menu you have the possibility to adapt the behaviour of the balance to your requirements (e.g. environmental conditions, especial weighing processes).

These settings are global and do not depend on the selected application.

13.3.1 Overview < SEtuP >

Level 1	Level 2	Level 3	Level 4 / Description
		Description	
CAL Adjustment	CALEHt	➔ For external adjustment, see chap. 7.8.1	
	CALEud	➔ External adjustment, user-defined, see chap. 7.8.2	
	GrAAdJ	➔ Gravity constant adjustment site, see chap.7.8.3	
	GrAuSE	➔ Gravity constant installation site, see chap. 7.8.4	
CoM Communication	rS232 ⇕ uSb-d ⇕	bAud	600
			1200
			2400
			4800
			9600
			14400
			19200
			38400
			57600
			115200
			128000
			256000
		dAtA	7db itS
			8db itS
		PAr itY	nonE
			odd
			EUEn
		StoP	1b it
			2b itS
		hAndSh	nonE
		Protoc	AcP
			ScL (only selectable in USB)
	BLAn	**Not documented**	

Pr int Data output	intFcE		rs232			RS 232 interface *
			usb-d			USB interface* *only in connection with KUP interface
	SuM		on oFF			Switch on / off add-up mode, see chap. 14.2.1
	PrModE	tr iG	MAnuAL			on, oFF Data output by pressing the **PRINT** button (see chap. 14.2.2)
			Auto			on, oFF Automatic data output with stable and positive weighing value see chap.14.2.3. Another output only after zero display and stabilisation, depending on the settings **< ZrAnGE >**, selectable **(off, 1, 2, 3,4,5)**
			cont	oFF		Continuous data output
				on	SPEEd	Setting output interval see chap. 14.2.4.
					ZEro	on, oFF 0 (unloaded) also transmit continuously
					StAbLE	on, oFF Transmit stable values only
		WE iGht	SGLPrt		on, oFF	Displayed weight value is transmitted
			GntPrt		GroSS	on, oFF
					nEt	on, oFF
					tArE	on, oFF
					FormAt	LonG **(**detailed measurement report)
						Short (standard measuring protocol)
		LAYout	nonE			Standard layout
			usEr		ModEL	on, oFF Output model designation of the scale
					SEr iAL	on, oFF Output serial number of the scale
		rESEt	Reset settings to factory defaults			

bEEPEr Acoustic signal	KEYS	oFF	Switch on / off acoustic signal by pressing button	
		on		
	chEcK	ch-oK	oFF	Acoustic signal off
			SLoW	Slow
			Std	Standard
			FASt	Fast
			cont.	Continuous
		ch-LoW	oFF	Acoustic signal off
			SLoW	Slow
			Std	Standard
			FASt	Fast
			cont.	Continuous
		ch-hiGh	oFF	Acoustic signal off
			SLoW	Slow
			Std	Standard
			FASt	Fast
			cont.	Continuous

AutoFF Automatic switch-off function in rechargeable battery operation	ModE	oFF	Automatic switch-off function switched off
		Auto	The balance is automatically switched-off according to the time without load change or without operation defined in menu item <t iME>
		onLyO	Automatic switch-off only with zero display
	t iME	30S	After the set time without load change or operation the balance will switch off automatically
		1M in	
		2M in	
		5M in	
		30M in	
		60M in	

buttons Allocate function key	**Not documented**		
bL iGht Display background illumination	Mode	ALWAYS	Background lighting of display is switched on permanently
		t iMEr	The background illumination is automatically switched-off according to the time without load change or without operation defined in menu item < t iME >
		nobL	Display background illumination always switched off
	t iME	5 s 10 s 30 s 1 M in 2 M in 5 M in 30 M in	Definition, after which time the background illumination is automatically switched-off without load change or without operation.
tArEr G Taring range	100% ⇕ 10%	Definition max. taring range, selectable 10% - 100%. Numerical input, see chap. 3.2.2.	
ZtrAcK Zerotracking	on	Automatic zero tracking [≤3d]	
	oFF	ℹ	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“. (e.g. slow flow of liquids from a container placed on the balance, evaporating processes). When apportioning involves small variations of weight, it is advisable to switch off this function.
un its Units	selectable units, see chap. 1	Here is determined which units must be available in menu <unit>. Using ⇆ button, you can switch over to the units set to <on>	
	FFA	Weighing with multiplication factor, see chapter 10.2.5	
	mol	Mol weighing mode, see chap. 10.2.6	
Modes Applications see chap. 9.	WE iGh	Application <Weighing>	
	count	Application <Counting>	
	chEcK	Application <Checkweighing>	
rESEt	Reset balance settings to factory settings		

14 Communication with peripheral devices via KUP connection

Via the interfaces weighing data may be exchanged with connected peripheral devices.

Issue may be made to a printer, PC or check displays. In reverse order, control orders and data inputs may be made via the connected devices.

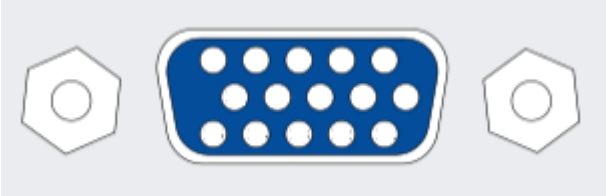
The balances of the 572 series are equipped with a KUP connection (KERN Universal Port) as per standard.

The following options are available as interfaces:

Interface adapter with cable	
Interface examples	Application examples
RS232	Serial printer
USB	PC

The available interfaces can be used in parallel using the KUP Extension Box.

Connector assignment balance:



Warning: Only for use with KUP interfaces

14.1 KERN Communications Protocol (KERN Interface Protocol)

KCP is a standardized set of interface orders for KERN balances, which allows many parameters and device functions to be called up and controlled. KERN devices that have KCP can use it to connect easily to computers, industrial control systems and other digital systems. A detailed description you will find in the „KERN Communications Protocol“ manual, available in the download area on our KERN homepage (www.kern-sohn.com).

To activate KCP please observe the menu overview of your balance’s operating instructions.

KCP is based on simple ASCII orders and replies. Every interaction consists of an order, possibly with arguments separated by spaces and finished by <CR>< LF>.

The KCP orders supported by your balance may be queried emitting the order „I0“ followed by CR LF.

Extract of the mostly used KCP orders:

I0	Shows all implemented KCP orders
S	Sending stable value
SI	Sending current value (also instable)
SIR	Sending current value (also instable) and repeating
T	Taring
Z	Zeroing

Example:

Order	S	
Possible replies	S␣S␣␣␣␣100.00␣g S␣I S␣+ or S␣-	Order accepted, execution of the order started, currently another order is executed, timeout reached, over- or underload

14.2 Issue functions

14.2.1 Add-up mode < SUM >

With this function the individual weighing values are added into the summation memory by pressing a button and edited, when an optional printer is connected.

Activate function:

⇨ In Setup menu invoke the menu setting < Pr int ➡ SUM > and confirm with button ➔.

⇨ Use the navigation keys ⇵ to select the setting < on > and confirm on ➔ button.

⇨ To exit the menu press the navigation key ⬅ repeatedly

ℹ Condition: Menu setting < PrModE ➡ tr iG ➡ MAnuAL ➡ on >

Add-up weighed goods:

⇨ If required, place empty container on scale and tare.

⇨ Place first good to be weighed on balance. Wait until stability display (◣◢) appears and then press the PRINT-button. The display changes to < SUM 1 >, followed by the current weighing value. The weighing value is stored and edited by the printer. The symbol ∑ pops up. Remove the weighed good.

⇨ Place second good to be weighed on balance. Wait until stability display (◣◢) appears and then press the PRINT-button. The display changes to < SUM2 >, followed by the current weighing value. The weighing value is stored and edited by the printer. Remove the weighed good.

⇨ Add-up more weighed goods as described above.

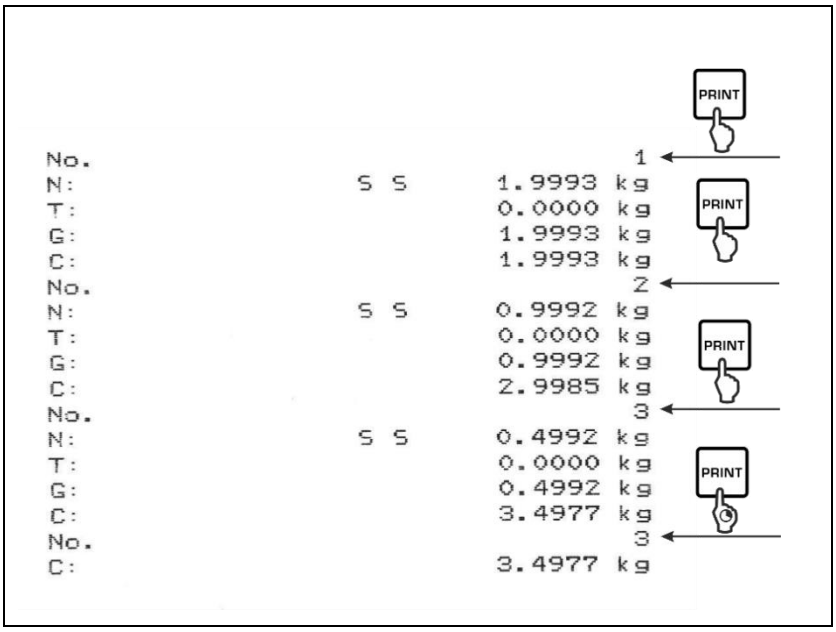
⇨ You can repeat this process until the capacity of the scales is exhausted.

Display and edit sum „Total“:

⇨ Press the **PRINT** key long time. The number of weighings and the total weight are edited.
The sum memory is deleted; the symbol [.∑.] extinguishes.

Sample log (KERN YKB-01N):

Menu setting PrModE ➡ WEIGHt ➡
GntPrt ➡ on&ForMAt ➡ short



First weighing

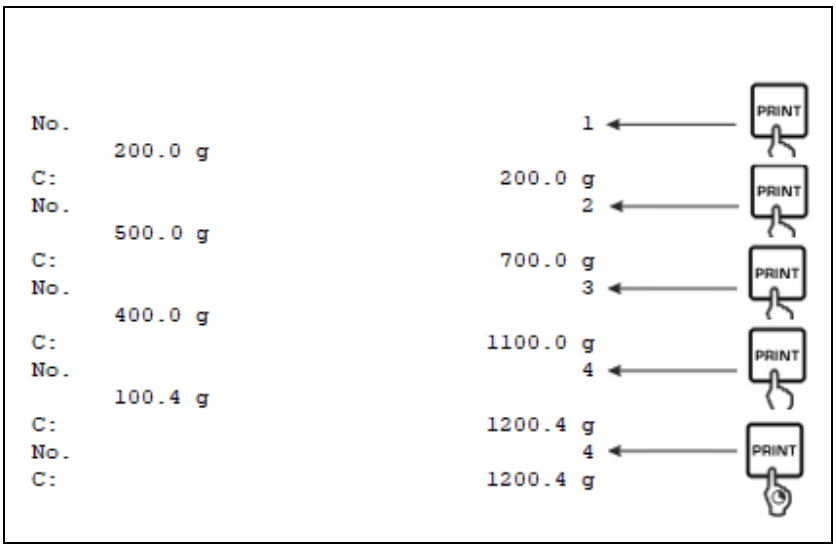
Second weighing

Third weighing

Number of weightings/
Total

Sample log (KERN YKB-01N):

Menu setting PrModE ➡ WEIGHt ➡ SGLPrt ➡ on



First weighing

Second weighing

Third weighing

Fourth weighing

Number of weightings/
Total

14.2.2 Data output after pressing the PRINT button <MANUAL>

Activate function:

- ⇨ In Setup menu invoke the menu setting <Print ➡ PrMode ➡ tr iG> and confirm with ➔ button.
- ⇨ For a manual data output select the menu setting <MANUAL> with the navigation keys ⇵ and confirm on the ➔ button.
- ⇨ Use the navigation keys ⇵ to select the setting <on> and confirm on ➔ button.
- ⇨ To exit the menu press the navigation key ⇦ repeatedly.

Place goods to be weighed on balance:

- ⇨ If required, place empty container on scale and tare.
- ⇨ Place goods to be weighed. The weighing value is edited by pressing the PRINT-button.

14.2.3 Automatic data output < Auto >

Data output happens automatically without having to press the **PRINT**-key as soon as the corresponding output condition has been met, dependent on the setting in the menu.

Enable function and set the output condition:

- ⇨ In Setup menu invoke the menu setting < Pr int ➡ PrModE ➡ tr iG > and confirm with ➔ button.
- ⇨ For an automatic data output select the menu setting < Auto > using the navigation keys ↓↑ and confirm by the ➔ button.
- ⇨ Use the navigation keys ↓↑ to select the setting < on > and confirm on ➔ button. < ChAnGE > is displayed.
- ⇨ Acknowledge by ➔-button and set the required output condition with the navigation keys ↓↑.
- ⇨ Acknowledge by ➔-button.
- ⇨ To exit the menu press the navigation key ➔ repeatedly.

Place goods to be weighed on balance:

- ⇨ If required, place empty container on scale and tare.
- ⇨ Place weighed goods and wait until the stability display (◣◢) appears. The weighing value is issued automatically.

14.2.4 Continuous data output < cont >

Enable function and set the output interval:

- ⇨ In Setup menu invoke the menu setting <Pr int ➡ PrModE ➡ tr iG> and confirm with ➔ button.
- ⇨ For a continuous data output select the menu setting < cont > using the navigation keys ↓↑ and confirm on ➔ button.
- ⇨ Use the navigation keys ↓↑ to select the setting < on > and confirm on ➔ button.
- ⇨ < SPEEd > is displayed.
- ⇨ Acknowledge with the ➔-button and set the required time interval with the navigation keys ↓↑ (numeric input see chap. 3.2.2)
- ⇨ <ZEro> & <StABLE> set the required output condition.
- ⇨ To exit the menu press the navigation key ➔ repeatedly.

Place goods to be weighed on balance

- ⇨ If required, place empty container on scale and tare.
- ⇨ Place goods to be weighed.
- ⇨ The weighing values are issued according to the defined interval.

Sample log (KERN YKB-01N):

```
S D      1.9997 kg
S D      1.9999 kg
S D      1.9999 kg
S D      1.9999 kg
S S      2.0000 kg
S S      2.0000 kg
S S      2.0000 kg
S S      2.0000 kg
S D      1.9998 kg
S D      1.9998 kg
S D      2.0002 kg
S D      2.4189 kg
S D      2.9998 kg
S D      2.9996 kg
S D      2.9996 kg
S D      2.9997 kg
S D      2.9997 kg
S S      2.9996 kg
         2.9996 kg
```

14.3 Data format

⇨ In the setup menu call up the menu setting <PrInt ➡ PrModE ➡ WEIGht ➡ CntPrt> and confirm with key ➔.

⇨ Use the navigation keys ⇵ to select the menu setting < FormAt > and confirm on ➔ button.

⇨ Use the navigation buttons ⇵ to select the desired setting.
Options:

< short > Standard measuring protocol

< LonG > Detailed measuring protocol

⇨ Confirm setting with ➔-button.

⇨ To exit the menu press the navigation key ➔ repeatedly.

Sample log (KERN YKB-01N):

FormAt ➡ short			FormAt ➡ LonG		
N:	S S	0.4536 kg	Net weight:	S S	0.4536 kg
T:		0.0000 kg	Tara weight:		0.0000 kg
G:		0.4536 kg	Gross weight:		0.4536 kg

15 Servicing, maintenance, disposal

Before any maintenance, cleaning and repair work disconnect the appliance from the operating voltage.

15.1 Cleaning

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. Polish 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.

15.2 Servicing, maintenance

⇨ The appliance may only be opened by trained service technicians who are authorized by KERN.

⇨ Before opening, disconnect from power supply.

15.3 Disposal

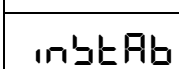
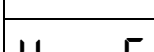
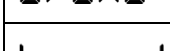
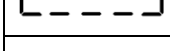
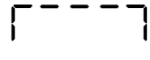
Disposal of packaging and appliance must be carried out by operator according to valid national or regional law of the location where the appliance is used.

16 Instant help for troubleshooting

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.

Fault	Possible cause
The weight display 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 foreign objects. • Electromagnetic fields / static charging (choose different location/switch off interfering device if possible)
The weighing result is obviously incorrect	• The display of the balance is not at zero • Adjustment is no longer correct. • The balance is on an uneven surface. • Great fluctuations in temperature. • Warm-up time was ignored. • Electromagnetic fields / static charging (choose different location/switch off interfering device if possible)

17 Error messages

Error message	Explication
	Zero setting range exceeded
	Zero setting range not achieved
	Load instable
	Adjustment error
	Underload
	Overload
	Capacity of batteries / rechargeable batteries exhausted