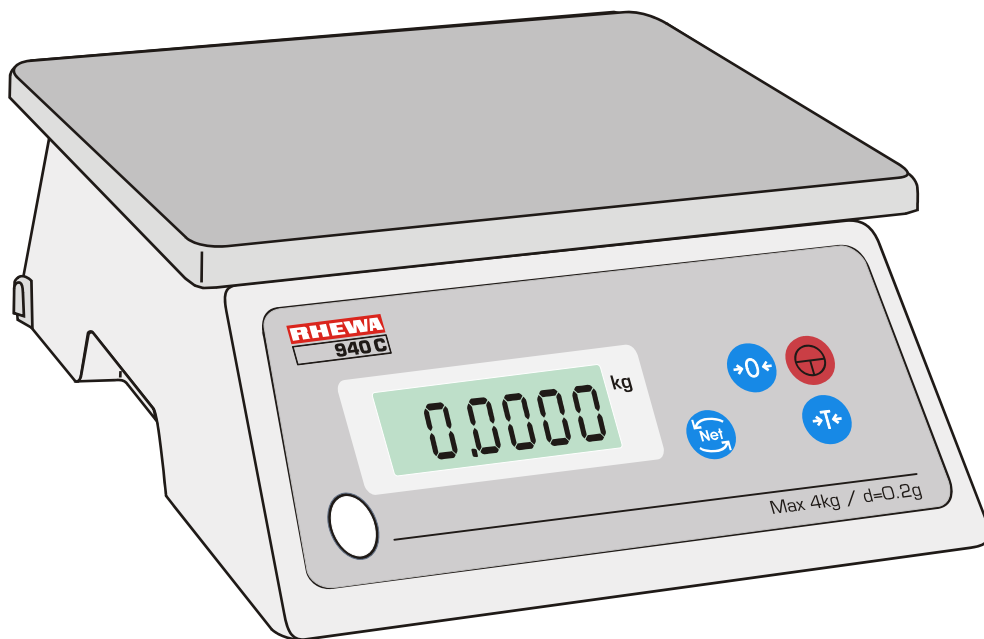


Bench Scale 940C Operating Manual Adjustment Guide



RHEWA-WAAGENFABRIK
August Freudewald GmbH & Co. KG

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Technical modifications

Rapidly advancing technological developments and shorter product cycles prevent us from bringing this documentation exactly into line with the appliance functions and properties. Should any deviations exist, the appliance is to be used analogously.

Disposal information

Information on the disposal of packaging, batteries and used appliances can be found in our terms of delivery and on our website.

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2.1 Safety information

- For safe and troublefree operation of this scale, please ensure you follow the instructions laid down in this operating manual.
- Before connecting a power adapter to the mains, ensure that the mains voltage indicated on the adapter corresponds to the actual mains voltage. If this is not the case, the adapter may not be used.
- If the power adapter is operated at the wrong mains voltage, there is a danger of electric shock.
- The power adapter may not be used if damaged or defective.
- If a damaged power adapter is used, there is a danger of electric shock.
- The scale may be connected only to a properly installed socket outlet.
- The scale may be used in dry rooms only.
- Never subject a powered-off scale to an excessive or long-term load.
- Never attempt to open the scale enclosure.



2.2 Ambient conditions

- Level, stable surface for the scale.
- No moisture, water, liquids or corrosive substances.
- No draughts (open windows or doors)
- No significant temperature fluctuations (e.g. direct sunlight, outlets of air-conditioning or heating systems).
- No vibrations.
- No magnetic fields.
- Do not place in the immediate vicinity of transmitting devices (mobile phones, radio equipment, etc.).

2.3 Care and maintenance

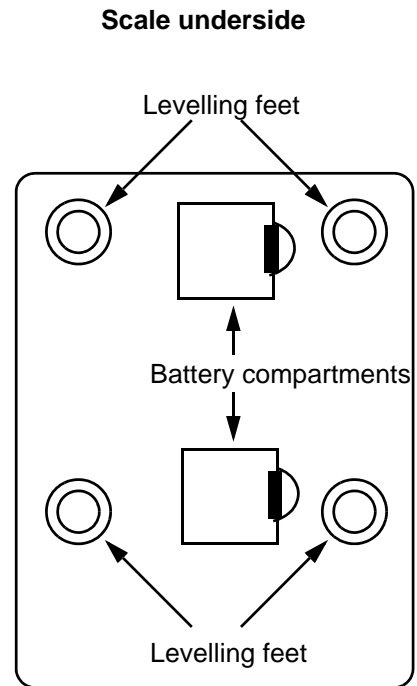
- This scale is a precision instrument for which great importance was attached to exact measurement results during the manufacturing and setting process. When using the scale, please note the following:
- **Never open the scale enclosure and make modifications to its mechanical or electronic components. Noncompliance will void all warranty rights!**
- The scale will be damaged if subjected to a load above Max.
- The scale keypad may be operated by hand only. Never use pointed objects to press the keys.
- Cleaning: Wipe the scale regularly with a damp cloth. Use mild cleaning agents only. No solvent-containing, aggressive and abrasive cleaning agents.
- Calibration of the scale at regular intervals is recommended (annually if used normally).
- If the keypad or display window are damaged, the scale may no longer be operated and must be protected against moisture, liquids and dust, in particular. The keypad or display window must then be replaced by your service partner.



2.4 Startup

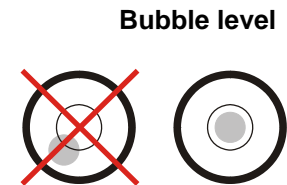
2.4.1 Inserting the batteries

- Remove the weighing platform.
- Carefully turn over the scale.
- Open the two battery compartments on the bottom of the scale.
- Insert the four LR14 (1.5V) batteries supplied.
- Note the polarity marked on the batteries.
- Close the battery compartments.
- Turn the scale back over and place on the levelling feet.



2.4.2 Aligning the scale

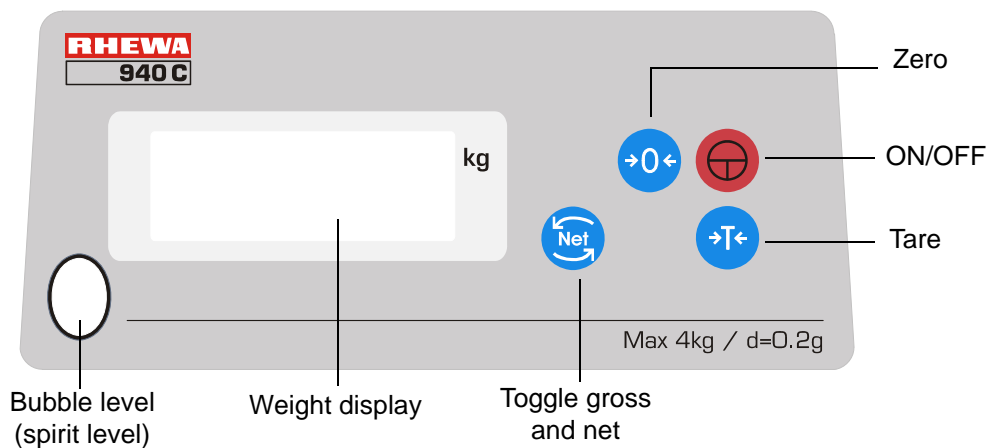
- On the front of the scale there is a bubble level (spirit level) next to the display.
- Using the adjustable feet, align the scale so that the air bubble in the level is in the middle of the circle.
- The scale must sit firmly on all four feet.
- Attach the weighing platform lengthwise or crosswise as required.



2.5 Battery operation

- New batteries have a service life of approx. 500 hours.
- To achieve a long battery life, power off the scale when not in use.
- If the battery symbol on the display flashes on power up, the batteries are exhausted. Backup operation (approx. 30 hours) is possible. Please replace the batteries!

2.6 Keypad



2.6.1 Power on/off

- To switch on, remove any load from the scale and press the Ⓢ key. After a self-test, the display reads *0,0000*.
- To switch off, press the Ⓢ key again.

2.6.2 Zero

- Press the →0← key if the display does not read *0,0000* with the scale at no load and instead shows a slightly deviating value (to approx. $\pm 2\%$ of Max).

2.6.3 Tare

- Place an empty container on the weighing platform.
- The scale displays the weight of the container = TARE.
- Press the →T← key. The display shows *0,0000* and "TARE" at the bottom left as an indication that the tare weight has been subtracted and saved.
- Fill the container. The scale shows the weight of the contents = NET
- Remove the filled container from the weighing platform.
- The scale displays the weight of the empty container with a preceding minus sign.
- On pressing the →T← key again, *0,0000* appears on the display. The tare has been cleared.

2.6.4 Gross display

- With a tared scale, press the Net key. The display toggles between GROSS and NET each time the key is pressed.

2.6.5 Putting mixtures together

- Press the →T← key again each time a component is added.

2.6.6 Discharge weighing

- Place full container on the weighing platform. The scale displays the weight of the full container = GROSS.
- Press the →T← key. The display shows *0,0000* and "TARE" at the bottom left as an indication that the tare weight has been subtracted and saved.
- Remove something from the container. The scale shows the weight of the quantity removed with a preceding minus sign = NET
- Before removing any more material, press the →T← key again.

2.7 Adjustment

Owing to the high resolution of the scale, the different gravitational force (g value) at different places of use must be taken into account.

To this end, the scale should be adjusted using test weights (accuracy class at least M1, preferably F2) before being taken into operation.

Adjustment should be performed only when necessary.

Inaccurate values on the display or replacement of the load cell or the weighing electronics can necessitate an adjustment.

2.7.1 Conditions



- Switch on the scale and wait 15 minutes before performing the adjustment.
- Adjustment can be performed only with fixed weight values. Weights corresponding to half of and the full maximum safe load are required.

2.7.2 Adjustment procedure

- Align the scale exactly using the integral bubble level (spirit level).
- Remove any load from the scale.
- Power off the scale by pressing the \oplus key.
- Press and hold down the $\rightarrow 0 \leftarrow$ key and power on the scale using the \oplus key.
- Hold down the $\rightarrow 0 \leftarrow$ key until such time as the internal measured value appears on the display (approx. 2s).
(e.g. *139779*)
- With the weighing platform at no load, press the $\rightarrow 0 \leftarrow$ key.
- The first adjustment point (zero point) is saved.
- *ZERO* appears briefly on the display.
- The weight value for the second adjustment point (half the maximum safe load of the scale) appears on the display.
- Subject the scale to the weight indicated and confirm by pressing the $\rightarrow 0 \leftarrow$ key.
- *CAL* appears briefly on the display.
- The weight value for the third adjustment point (maximum safe load of the scale) appears on the display.
- Subject the scale to the weight indicated and confirm by pressing the $\rightarrow 0 \leftarrow$ key.
- *CAL* appears briefly on the display and then *PASS*.
- End adjustment by pressing the $\rightarrow T \leftarrow$ key.
- Power off the scale by pressing the \oplus key.

Max / Scale interval	4 kg / 0.2 g 10 kg / 0.5 g 20 kg / 1 g
Automatic shutdown	After approx. 5 minutes of no use (scale at no load).
Automatic initial zeroing	To approx. $\pm 10\%$ of Max.
Manual zeroing	To approx. $\pm 2\%$ of Max.
Permissible weighing error	Approx. ± 3 scale intervals after adjustment at place of use using weight of accuracy class F2.
Ambient temperature	0° to +40°C
Humidity	Max. 85%, non-condensing, protected against splashing water.
Mains operation	Power adapter with coaxial power connector (DC 6 V / 0.3A, inner conductor +). (available as an accessory)
Power supply	4 LR14 batteries (1.5 V) Mains option using 230V/50Hz power adapter (available as an accessory)
Power consumption	0.3 W
Net weight	Approx. 1.5 kg without batteries.

3.1 Error messages

Message	Explanation	Remedy
Cannot power up	Batteries too weak	Replace batteries.
<i>unSt</i>	Indication is unstable. A stable indication is not obtained.	Wait for a stable indication. Keep away from draughts and vibrations. Renew batteries.
<i>AdErr</i>	AD converter is defective.	Contact your service partner.
<i>ErrC</i>	Incorrect adjustment weight.	Adjust scale using correct adjustment weight.
<i>EEEE</i>	Weighing platform is over-loaded.	Load the scale to Max only.
<i>out?</i>	- Weighing error - Defective load cell.	Remove weight from the weighing platform. Switch appliance off and back on again.
<i>HHHHH</i> or <i>LLLLL</i>	- Defective main board. - Defective load cell.	Contact your service partner.
<i>ErrE</i>		Switch appliance off and back on again.

3.2 Declaration of conformity



KONFORMITÄTSERKLÄRUNG

Declaration of conformity
Déclaration de conformité

Die nichtselbsttätige Waage
The non-automatic weighing instrument
L'instrument de pesage à fonctionnement non automatique

Hersteller: Manufacturer: Fabricant:	RHEWA-WAAGENFABRIK August Freudewald GmbH & Co. KG Postfach 10 01 29 D-40801 Mettmann
Typ: Type: Type:	940C/ 4 940C/ 10 940C/ 20
Fabriknummer: Serial number: (to be entered by the customer) Numero de série:	See bottom of indicator

entspricht den Anforderungen der EG-Richtlinien in den jeweils geltenden Fassungen:
corresponds to the requirements of the following EC directives:
correspond aux exigences des directives CE suivantes:

2004 / 108 / EC

Applied standards: EN 61000 - 6-1: 2007
EN 61000 - 6-3: 2007
EN 61000 - 3-2: 2006
EN 61000 - 3-3: 1995 + A1:2001 + A2:2005

RHEWA-WAAGENFABRIK
A.Freudewald GmbH & Co

Signature:  Date: 29.04.2010
Signature: Date:
Signature: Date: