English

User Manual

Tabletop scale PCE-BSH series

User manuals in various languages (Deutsch, français, italiano, español, português, nederlands, türk, polski, русский, 中文) can be downloaded here:

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Last change: 28 October 2016
v1.0

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English

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Thank you for purchasing tabletop scales from PCE Instruments.

1 Safety notes

Please read this manual carefully and completely before you use the device for the first time. The device may only be used by qualified personnel and repaired by PCE Instruments personnel. Damage or injuries caused by non-observance of the manual are excluded from our liability and not covered by our warranty.

- The device must only be used as described in this instruction manual. If used otherwise, this can cause dangerous situations for the user and damage to the meter.
- The instrument may only be used if the environmental conditions (temperature, relative humidity, …) are within the ranges stated in the technical specifications. Do not expose the device to extreme temperatures, direct sunlight, extreme humidity or moisture.
- Do not expose the device to shocks or strong vibrations.
- The case should only be opened by qualified PCE Instruments personnel.
- Never use the instrument when your hands are wet.
- You must not make any technical changes to the device.
- The appliance should only be cleaned with a damp cloth. Use only pH-neutral cleaner, no abrasives or solvents.
- The device must only be used with accessories from PCE Instruments or equivalent.
- Before each use, inspect the case for visible damage. If any damage is visible, do not use the device.
- Do not use the instrument in explosive atmospheres.
- The measurement range as stated in the specifications must not be exceeded under any circumstances.
- Non-observance of the safety notes can cause damage to the device and injuries to the user.

We do not assume liability for printing errors or any other mistakes in this manual.

We expressly point to our general guarantee terms which can be found in our general terms of business.

If you have any questions please contact PCE Instruments. The contact details can be found at the end of this manual.

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2 Specifications

2.1 Technical specifications

Model	Range	Resolution	Accuracy
PCE-BSH 6000	6000 g	0.1 g	±0.3 g
PCE-BSH 10000	10000 g	0.2 g	±0.6 g
Display	LC display with backlight 20 mm character height		
Platform	160 x 180 mm		
Data interface	USB		
Taring	Multiple taring over full range		
Operating temperature	0 ... 40 °C		
Power supply	6 x 1.5 V AA batteries		
	Mains adaptor 12 V / 500 mA		
Dimensions	200 x 265 x 100 mm		
Weight	Approx. 1800 g (without batteries)		

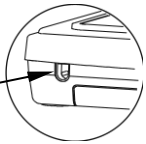
2.2 Delivery contents

1 x tabletop scale PCE-BSH 6000 or PCE-BSH 10000
1 x weighing pan
1 x mains adaptor
1 x instruction manual

3 System description

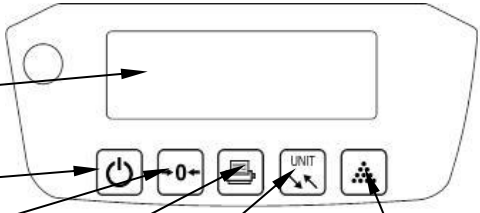
Right side

Mains adaptor connection



Control panel

Display



ON/OFF key
Turn the scales ON/OFF

ZERO key
Zero the display

PRINT key
Print the current reading

UNIT key
Switch the measuring unit: g ,ct, oz, tola

PCS key
Piece counting function

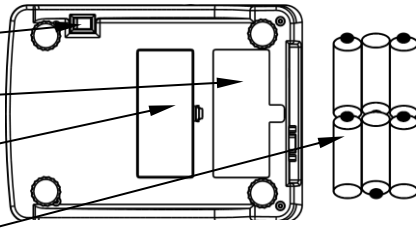
Bottom side

Power switch

Battery compartment

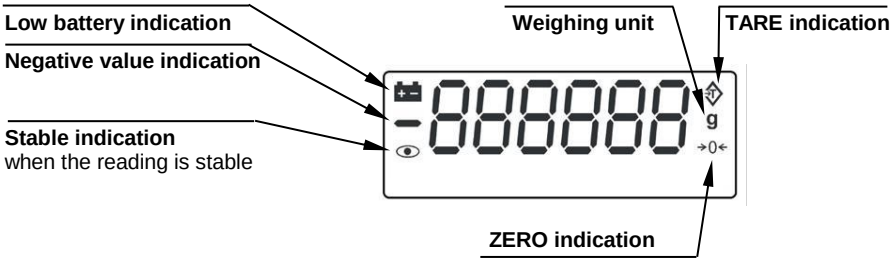
Cover of the battery compartment

Batteries
Use 6 x 1.5 V AA batteries



English

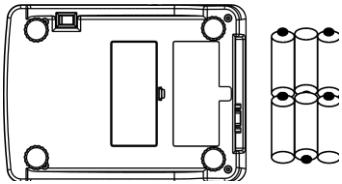
Display



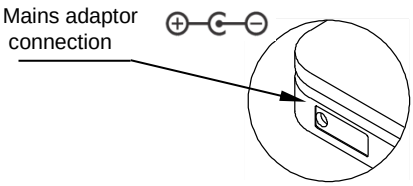
4 Getting started

Power supply

Batteries
Remove the cover of the battery compartment and insert six 1.5 V AA batteries (not included). Make sure that the batteries are put in properly.



Mains adaptor
Connect the mains adaptor to the scales.



5 Operation

5.1 Measurement

Press the [ON/OFF] key to turn on the scales.

After turning on the scales, it performs a self-test and counts down to “0” (7, 6, 5, 4, etc.). After that, it switches to weighing mode automatically.

When there is no load on top of the weighing pan, the display should show “0”. If this is not the case, press the **[ZERO]** key to zero the display.
If the reading is stable, a stable indication appears on the display. Now you can read the weight of the object.

Taring

The scales have a taring function which allows you to tare multiple times throughout the full weighing range.
To do so, put a weight on top of the weighing pan, wait for the reading to stabilize and press the **[ZERO]** key. The display now shows “0”. If you remove the load from the weighing pan, the display shows its weight as a negative value.
The taring function is very useful when you want to weigh objects in a container, for example. Put the empty container on the scales, tare its weight and fill it with the objects to be weighed.

Change the weighing unit

To change the weighing unit, press the **[UNIT]** key. There are different units available, such as g, ct, oz, tola, …
The current reading is shown on the display in the selected unit.

5.2 Further functions

5.2.1 Piece counting function

Turn on the scales and wait for the display to show „0“. Press the **[ZERO]** key to zero the display if necessary.
Now press the **[PCS]** key. The display shows a piece number of “0” if the scales are not loaded. By pressing the **[UNIT]** key, you can choose the reference piece number (10, 20, 50 or 100). Select the desired option (e. g. 10 pcs) and put the corresponding number of pieces on the weighing pan.
Press the **[PCS]** key again. The piece counting function is now configured. You can now put any amount of pieces on top of the weighing pan (mind the measuring range) and the scales show the actual number of objects.
You can re-configure the reference number at any time by pressing the **[UNIT]** key.

5.2.2 PRINT

By pressing the **[PRINT]** key, the current reading is sent out via the USB interface. Depending on the setting, the scales either send out the readings when the **[PRINT]** key is pressed, continuously or once the reading is stable.

5.3 Settings

5.3.1 Interface

Press the **[ON/OFF]** key to turn off the scales and press the **[ON/OFF]** key again to turn them back on. The scales now perform the self-test procedure. Once the display shows “-----“, press the **[PRINT]** key.
The display now shows “b 9600”. Here you can set the baud rate of the interface. By pressing the **[UNIT]** key, you can switch between the available options: 1200, 2400, 4800, 9600.
Press the **[ZERO]** key to go to the next setting, where you can set the parity.
You can choose between “P NONE”, “P EVEN” and “P Odd”. Use the **[UNIT]** key to switch between these options.
By pressing the **[ZERO]** key, you get to the transmission settings. Here you can select when the reading are sent out via the data interface.
Press the **[UNIT]** key to switch between the following options: “CON” (continuous transmission), “OFF” (no transmission), “Key” (pressing the **[PRINT]** key transmits the current reading), “Stb” (transmission once the reading is stable).
Press the **[ZERO]** key once again to return to normal weighing mode.

USB output format

Baud Rate :1200、2400、4800、9600

Data Bit :8/7/7

Parity : None/ Even/Odd

Stop Bit :1

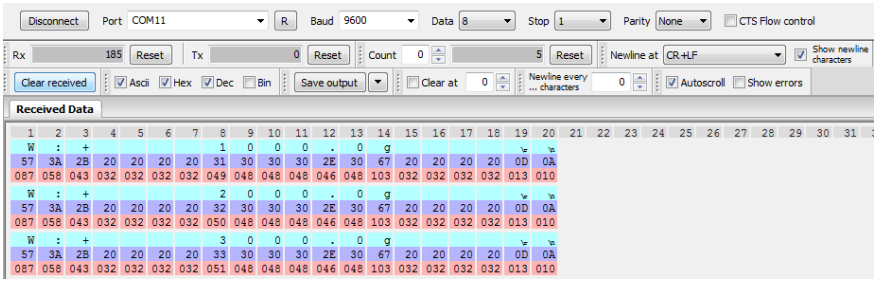
Code :ASCII

Data Format :

W=WEIGHT M=MESSAGE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HEAD		**DATA**											**UNIT**					**CR**	
W/M	:	+/-											g					CR	LF

9600 / P NONE / KEY



USB A scale socket

5.3.2 Weighing unit selection

Press the **[ON/OFF]** key to turn on the scales off and press the **[ON/OFF]** key again to turn it back on. The scales now perform the self-test procedure. Once the display shows "-----", press the **[UNIT]** key.
Now you can select the weighing units between which you can switch in weighing mode by pressing the **[UNIT]** key. You have the following options:

Unit	Conversion	Resolution (10 kg)
G	1 kg = 1,000 g	0.2 g
Oz	1 kg = 35.28 oz	0.1 oz
Lb	1 kg = 2.2045 lb	0.0005 lb
Dwt	1 kg = 643.0 dWt	0.2 dWt
Ozt	1 kg = 32.15 ozt	0.01 ozt
Ct	1 kg = 5000 ct	1 ct
tl.T	1 kg = 26.670 tl.T	0.005 tl.T
tl.H	1 kg = 26.455 tl.H	0.005 tl.H
tl.J	1 kg = 26.715 tl.J	0.005 tl.J
GN	1 kg = 15430 GN	5 GN
Dr	1 kg = 564.4 dr	0,2 dr
MM	1 kg = 266.7 MM	0.1 MM
ToLA	1 kg = 85.74 ToLA	0.02 ToLA
GSM	1 kg = 100000 GSM	20 GSM
TAR	1 kg = 85.11.4 TAR	0.2 TAR
TMR	1 kg = 85. 8.6 TMR	0.2 TMR

Use the **[ZERO]** key to switch between the different units. Use the **[UNIT]** key to activate or deactivate the unit for weighing mode.

5.3.3 Advanced settings

Press the **[ON/OFF]** key to turn off the scales and press the **[ON/OFF]** key again to turn them back on. The scales now perform the self-test procedure. Once the display shows "-----", press the **[PCS]** key.
Now you get to the advanced settings. Here, you can make the following adjustments:

Setting	Display indication	Options
Zero track range	„Zrd 0.8 d“	0.0 / 0.2 / 0.4 / 0.6 / 0.8 / 1.0 / 1.5 / 2.0 d
Zero track time	„Zrt 1.0 sec“	0.5 / 1.0 / 1.5 / 2.0 / 2.5 / 3.0 / 3.5 / 4.0 s
Zero value	„rZd 3 d“	1 / 3 / 5 / 8 d
Filter settings	„FIL 3“	1 / 2 / 3
Zero range at boot-up	„PZr 10 %FS“	1 / 2 / 3 / 4 / 5 / 8 / 10 / 20 % FS
Zero range	„YZr 10 %FS“	3 / 4 / 5 / 10 % FS
Taring range	„Ytr 100 %FS“	100 / 50 % FS
Overload indication	„Our 0 %FS“	2 / 5 / 10 / 0 %FS
Key sounds	„bZ ON“	ON / OFF
Activate taring function	„Zt ON“	ON / OFF
Auto power-off	„A OFF“	OFF / 3 / 5 / 10 min
Backlight	„L Au“	OFF / ON / Au

Press the **UNIT** key to change the selected setting. Press the **[ZERO]** key to go to the next setting.

Explanation

- Zero tracking: If there are very small load changes in a certain period of time, the zero tracking function makes sure that these changes do not affect the zero point.

- Zero range at boot-up: When starting the device, all loads within this range will be set to zero.

- Zero range: When pressing the **[ZERO]** key, all loads within this range will be set to zero.

- Taring range: Load range in which the tare function can be used.

6 Calibration

6.1 When to calibrate?

The scales are factory calibrated. However, we recommend calibrating the device on a regular basis (once a year) to guarantee accurate readings.
To calibrate the device, you need a calibration weight which is available in our online shop.
Before performing a calibration, the scales should be running for at least 15 minutes.

6.2 One-point calibration

Press the **[ON/OFF]** key to turn on the scales. The scales now perform the self-test procedure. Once the display shows "-----", press the **[ZERO]** key. The display now shows "CAL". Press the **[ZERO]** key again to confirm.
The display now shows the recommended calibration weight in grams. If you want to use a different weight for calibration, you can set it by using the **[PCS]** and the **[UNIT]** key. Use the **[PCS]** key to increase the value of the selected digit and use the **[UNIT]** key to go to the next digit. After that, put the weight on top of the weighing platform. Wait for the reading to stabilize and press the **[ZERO]** key to confirm.
After a successful calibration, the device automatically switches to weighing mode.

7 Contact

If you have any questions, suggestions or technical problems, please do not hesitate to contact us. You will find the relevant contact information at the end of this user manual.

8 Disposal

For the disposal of batteries in the EU, the 2006/66/EC directive of the European Parliament applies. Due to the contained pollutants, batteries must not be disposed of as household waste. They must be given to collection points designed for that purpose.

In order to comply with the EU directive 2012/19/EU we take our devices back. We either re-use them or give them to a recycling company which disposes of the devices in line with law.

For countries outside the EU, batteries and devices should be disposed of in accordance with your local waste regulations.

If you have any questions, please contact PCE Instruments.

PCE Instruments contact information

Germany
PCE Deutschland GmbH
Im Langel 4
D-59872 Meschede
Deutschland
Tel.: +49 (0) 2903 976 99 0
Fax: +49 (0) 2903 976 99 29
info@pce-instruments.com
www.pce-instruments.com/deutsch

France
PCE Instruments France EURL
76, Rue de la Plaine des Bouchers
67100 Strasbourg
France
Téléphone: +33 (0) 972 3537 17
Numéro de fax: +33 (0) 972 3537 18
info@pce-france.fr
www.pce-instruments.com/french

Spain
PCE Ibérica S.L.
Calle Mayor, 53
02500 Tobarra (Albacete)
España
Tel. : +34 967 543 548
Fax: +34 967 543 542
info@pce-iberica.es
www.pce-instruments.com/espanol

United States of America
PCE Americas Inc.
711 Commerce Way suite 8
Jupiter / Palm Beach
33458 FL
USA
Tel: +1 (561) 320-9162
Fax: +1 (561) 320-9176
info@pce-americas.com
www.pce-instruments.com/us

United Kingdom
PCE Instruments UK Ltd
Units 12/13 Southpoint Business Park
Ensign Way, Southampton
Hampshire
United Kingdom, SO31 4RF
Tel: +44 (0) 2380 98703 0
Fax: +44 (0) 2380 98703 9
info@industrial-needs.com
www.pce-instruments.com/english

Italy
PCE Italia s.r.l.
Via Pesciatina 878 / B-Interno 6
55010 LOC. GRAGNANO
CAPANNORI (LUCCA)
Italia
Telefono: +39 0583 975 114
Fax: +39 0583 974 824
info@pce-italia.it
www.pce-instruments.com/italiano

The Netherlands
PCE Brookhuis B.V.
Institutenweg 15
7521 PH Enschede
Nederland
Telefoon: +31 (0) 900 1200 003
Fax: +31 53 430 36 46
info@pcebenelux.nl
www.pce-instruments.com/dutch

Chile
PCE Instruments Chile SPA
RUT 76.423.459-6
Badajoz 100 oficina 1010 Las Condes
Santiago de Chile / Chile
Tel. : +56 2 24053238
Fax: +56 2 2873 3777
info@pce-instruments.cl
www.pce-instruments.com/chile

Hong Kong
PCE Instruments HK Ltd.
Unit J, 21/F., COS Centre
56 Tsun Yip Street
Kwun Tong
Kowloon, Hong Kong
Tel: +852-301-84912
jyi@pce-instruments.com
www.pce-instruments.cn

China
Pingce (Shenzhen) Technology Ltd.
West 5H1,5th Floor,1st Building
Shenhua Industrial Park,
Meihua Road,Futian District
Shenzhen City
China
Tel: +86 0755-32978297
lko@pce-instruments.cn
www.pce-instruments.cn

Turkey
PCE Teknik Cihazları Ltd.Şti.
Halkalı Merkez Mah.
Pehlivan Sok. No.6/C
34303 Küçükçekmece - İstanbul
Türkiye
Tel: 0212 471 11 47
Faks: 0212 705 53 93
info@pce-cihazlari.com.tr
www.pce-instruments.com/turkish

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