



User Manual

PCE-ABT 220L Analytical Balance



User manuals in various languages (français, italiano, español, português, nederlands, türk, polski, русский, 中文) can be found by using our product search on: www.pce-instruments.com

Last change: 8 October 2020
v1.0



Contents

1	Safety notes	1
2	Specifications	2
3	Delivery scope	2
4	Commissioning	2
4.1	Unpacking	2
4.2	Structure	2
4.3	Levelling	2
5	Placement	3
6	Control panel	3
7	Calibration of the balance	4
8	Settings	4
8.1	Sensitivity	4
8.2	Measuring rate	5
8.3	Setting the unit	6
8.4	Counting function	7
9	Troubleshooting	8
10	Contact	9
11	Disposal	9

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.



2 Specifications

Measurement range	0 ... 220 g
Resolution	0.1 mg
Repeatability	0.2 mg
Linearity	0.5 mg
Response time	<4 seconds
Weighing area	Ø 80 mm stainless steel weighing plate
Tare range	entire measurement range
Interface	RS232
Power supply	220 V
Operating conditions	10 ... 40 °C
Dimensions	340 x 215 x 350 mm
Weight	7.5 kg

3 Delivery scope

- 1 x analytical balance PCE-ABT 220L
- 1 x fabric gloves
- 1 x test weight
- 1 x cold-device cable
- 1 x user manual

4 Commissioning

4.1 Unpacking

Remove the balance from the packaging by carefully lifting it out of the box. Inside the box, you will find everything you need to start using the balance.

4.2 Structure

- Installation on solid ground, free from vibration
- Remove the adhesive retainers, open the glass sliding doors and carefully place the stainless steel plate in the middle.
- Connect the balance to a suitable power source.

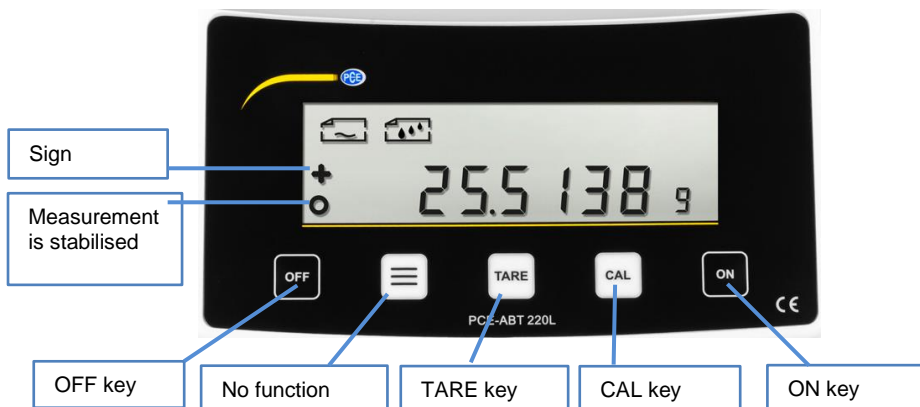
4.3 Levelling

- Levelling is possible by means of the adjustable feet and the integrated spirit level on the back of the analytical balance. Optimise the position until the bubble of the spirit level is perfectly centred.
- For best performance, allow the balance to adjust to the ambient temperature for 30-60 minutes and calibrate before use.

5 Placement

- The balance should not be positioned in a place that could have a negative effect on accuracy.
- Avoid extreme temperatures. Do not set up the balance in direct sunlight.
- Avoid uneven tables. The table or floor must be fixed and must not vibrate.
- Avoid unstable power sources. Do not use the balance near large power consumers such as welding equipment or large motors.
- Do not place the balance near vibrating machines.
- Avoid high humidity which could lead to condensation. Avoid direct contact with water. Do not spray or immerse the balance in water.
- Avoid draughts, e. g. caused by fans or the opening of doors. Do not place the balance near open windows or air vents of air conditioners.
- Keep the balance clean. Do not stack material on the balance when it is not in use.

6 Control panel



7 Calibration of the balance

If the analytical balance PCE-ABT 220L is inaccurate, it must be calibrated.

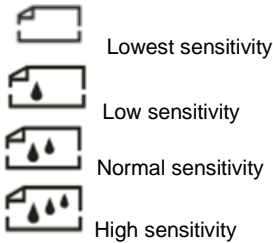
Follow these steps:

- Position the balance on a stable, vibration-free surface. In addition, the balance must remain stationary for one hour to allow it to adjust to the ambient temperature.
- Press the **CAL** key. "CAL-200" is displayed. Then place the 200 g weight on top. Initially, the balance displays "-----". The balance then shows 200.0000 g. This means that the calibration is finished.

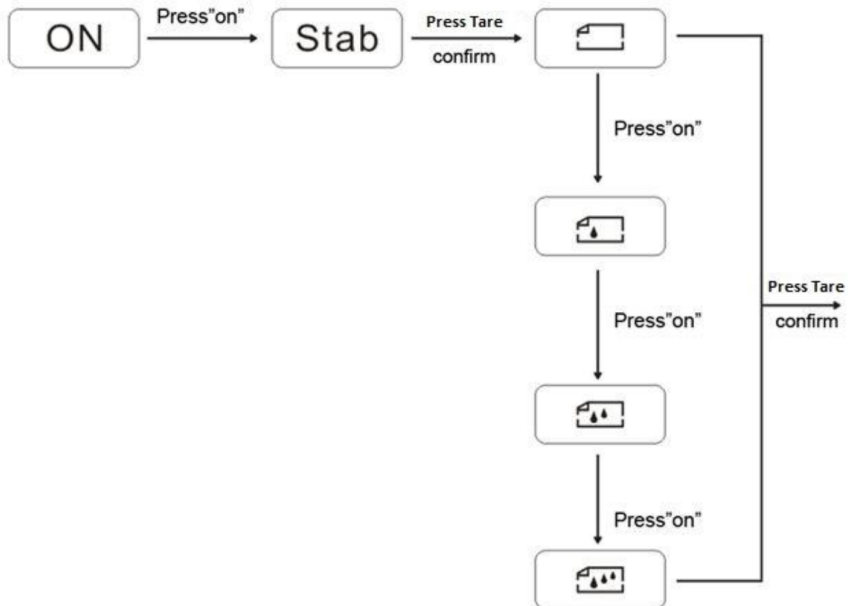
8 Settings

8.1 Sensitivity

With the power on, press **ON** until the word "**Stab**" appears on the display. Press **TARE** to access the setting options; press the **ON** key to change the setting:







Press **TARE** to save the setting.

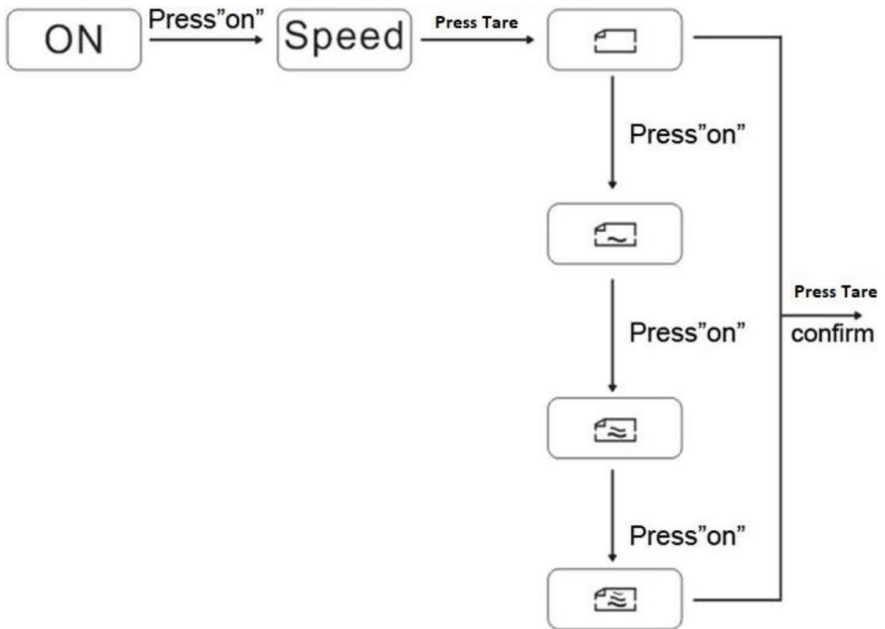


8.2 Measuring rate

With the power on, press **ON** until the word "**Speed**" appears on the display.
Press **TARE** to access the setting options. Press the **ON** key to change the setting:

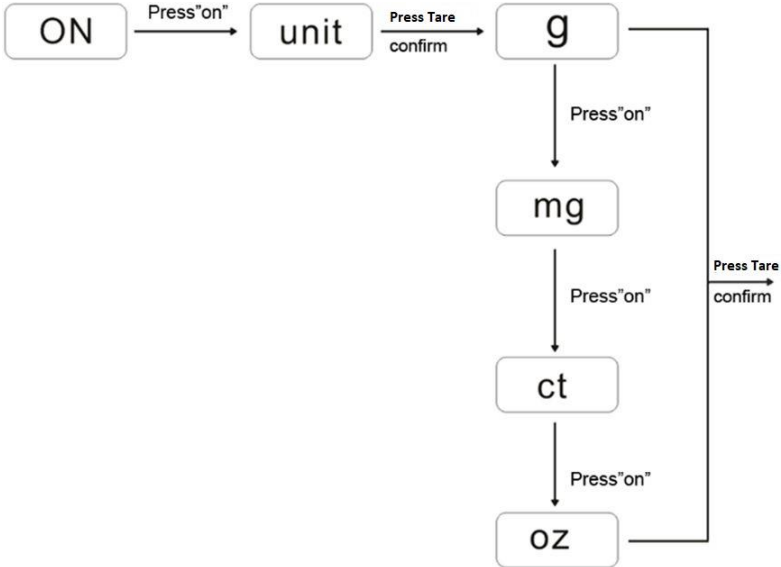
-  Highest speed
-  High speed
-  Normal speed
-  Low speed

Press **TARE** to save the setting.



8.3 Setting the unit

With the power on, press **ON** until the word "Unit" appears on the display. Press **TARE** to access the setting options. Press the **ON** key to change the setting. Press **TARE** to save the setting.



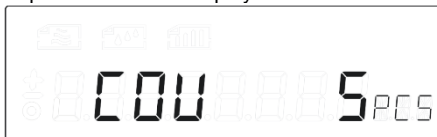
8.4 Counting function

The analytical balance has a counting function. Please make sure that the objects have the same weight and have a minimum weight of 0.5 mg. The counting function is performed as follows:

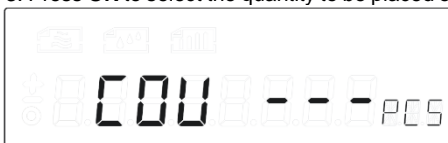
Press the **ON** key until "COU" is displayed.



2. press **Tare**. The display now shows "COU 5pcs".



3. Press **ON** to select the quantity to be placed on the balance and then press **Tare** to confirm.



4. Now you can start counting and continue to place objects with the same weight on the balance.



5. After counting, press **ON** and select "weight". Then confirm with **Tare** to return to normal weighing.



9 Troubleshooting

If an error occurs, you can use the following chart to correct the error.

ERROR	CAUSE	SOLUTION
Nothing is displayed	<ul style="list-style-type: none"> - Not connected to the power supply - The fuse is defective - Adaptor damaged 	<ul style="list-style-type: none"> - Connect the unit to the power supply - Replace the fuse - Replace the adaptor - Contact PCE Instruments
Value unstable during operation	<ul style="list-style-type: none"> - Poor operating conditions - The wind screen is open - Table is not stable - Power supply fluctuates - Balance was positioned in an unstable manner 	<ul style="list-style-type: none"> - Change the location - Close windows and doors - Close the glass door - Provide a stable power supply
The displayed weight is incorrect	<ul style="list-style-type: none"> - Balance not calibrated - Not tared before weighing 	<ul style="list-style-type: none"> - Calibration - Tare before weighing - Adjust the levelling feet

10 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.

11 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 reuse 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

United Kingdom

PCE Instruments UK Ltd
Unit 11 Southpoint Business Park
Ensign Way, Southampton
Hampshire
United Kingdom, SO31 4RF
Tel: +44 (0) 2380 98703 0
Fax: +44 (0) 2380 98703 9
info@pce-instruments.co.uk
www.pce-instruments.com/english

The Netherlands

PCE Brookhuis B.V.
Institutenweg 15
7521 PH Enschede
Nederland
Telefoon: +31 (0)53 737 01 92
info@pcebenelux.nl
www.pce-instruments.com/dutch

United States of America

PCE Americas Inc.
1201 Jupiter Park Drive, 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

France

PCE Instruments France EURL
23, rue de Strasbourg
67250 Soultz-Sous-Forets
France
Téléphone: +33 (0) 972 3537 17
Numéro de fax: +33 (0) 972 3537 18
info@pce-france.fr
www.pce-instruments.com/french

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

China

PCE (Beijing) Technology Co., Limited
1519 Room, 6 Building
Zhong Ang Times Plaza
No. 9 Mentougou Road, Tou Gou District
102300 Beijing, China
Tel: +86 (10) 8893 9660
info@pce-instruments.cn
www.pce-instruments.cn

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

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

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