English



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

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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.

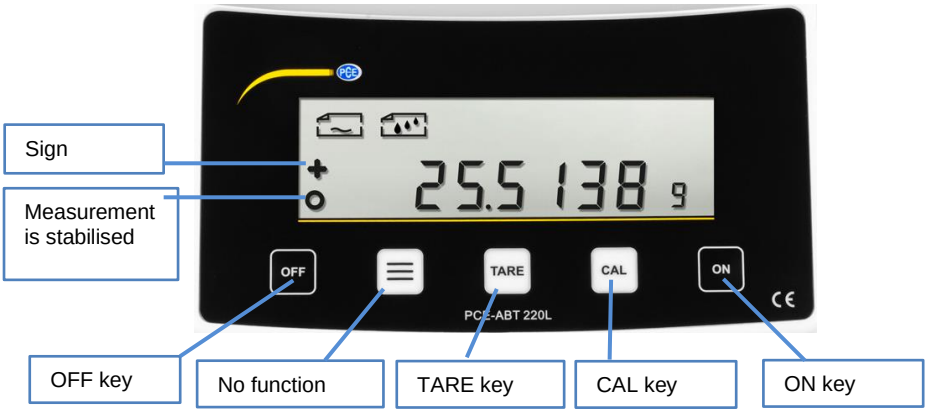
4.3 Levelling

- 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:

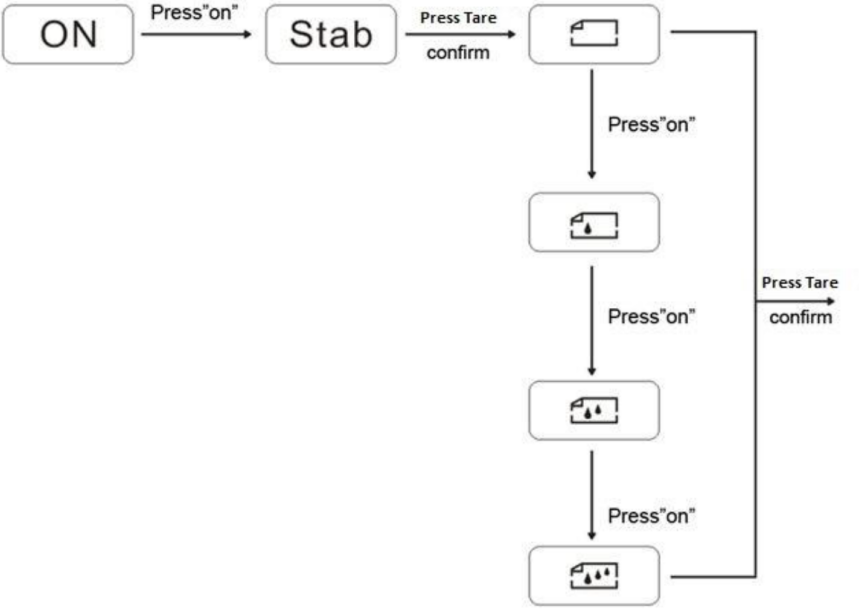

Lowest sensitivity


Low sensitivity


Normal sensitivity


High sensitivity

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:

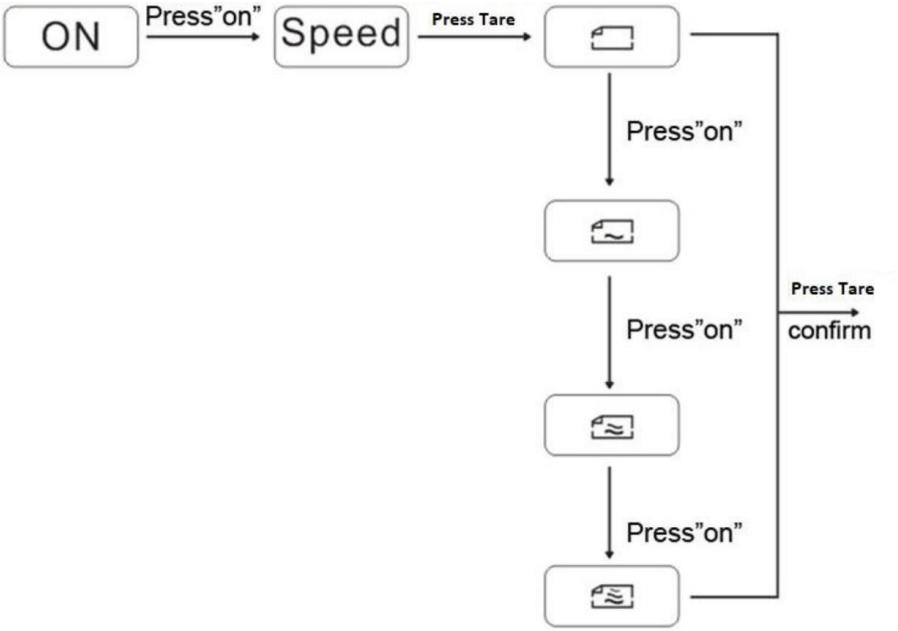
Highest speed

High speed

Normal speed

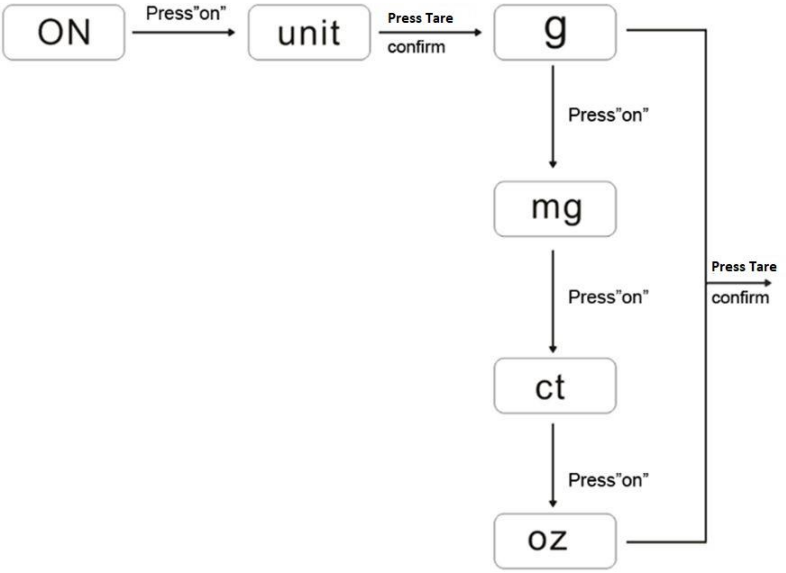
Low speed

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	- Not connected to the power supply - The fuse is defective - Adaptor damaged	- Connect the unit the power supply - Replace the fuse - Replace the adaptor - Contact PCE Instruments
Value unstable during operation	- Poor operating conditions - The wind screen is open - Table is not stable - Power supply fluctuates - Balance was positioned in an unstable manner	- Change the location - Close windows and doors - Close the glass door - Provide a stable power supply
The displayed weight is incorrect	- Balance not calibrated - Not tared before weighing	- 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 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.

www.pce-instruments.com

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