

OPERATING MANUAL



Electronic Precision Scale



Precision Scale Series PFA

PFA-210422-Rev005-UM-en



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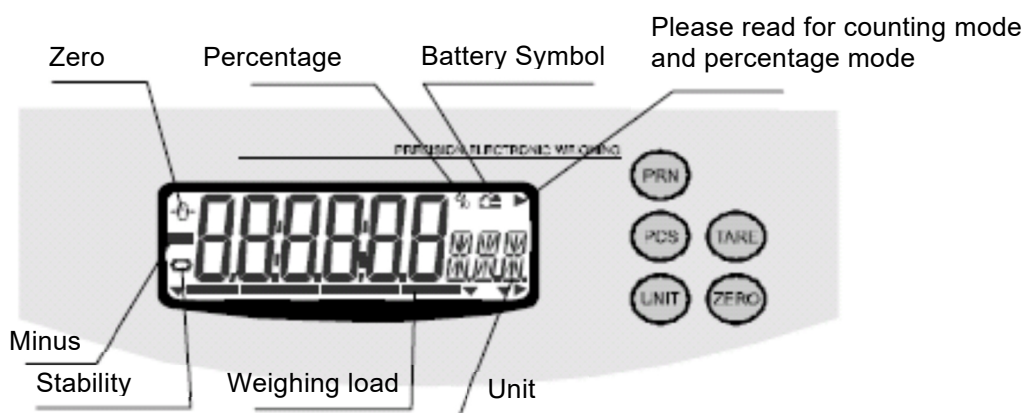
GLOBAL MAP

Key Functions

Pay attention: The switch for switching on the scale is on the right hand side below the scale

Tasten:	Funktionen:
PRN	Push button / Button to finalize a process Print-button in weighing mode for data transmission to PC or printer via RS232-data interface (if interface is included), to save and quit the presetting mode.
PCS	Counting key Sample key in the default mode Shift key in the setting mode.
TARE	Tare key Tares e.g. a container on the weighing platform and stores the tared value in weighing mode, reduces the value in the setting mode.
UNIT	Unit key Changes between units in weighing mode; stores entered value and change to current values for parameters or further functions in presetting mode.
ZERO	Zero key Sets the zero point in weighing mode; Increases value in presetting mode.

Display Functions



Symbol	Meaning
-0-	Zero indication, the scale is return to zero.
%	Percentage mode is activated.
+ -	Indicates that power of battery is low.
O	Indicates that weight is stable.
- - - - -	Overload, at the same time a signal tone sounds – unload the scale immediately.



This symbol means: "Consult operating instructions". To achieve accurate results, read the instructions for use carefully before use and follow all instructions provided therein. Keep the instructions for use for future reference.

Your ADE Precision Scale is a quality product.

In order to achieve precise results please kindly read and follow the Operation Manual in all respects.

Keep this Operating Manual careful to have this information on hand whenever you need it.

Check scope of delivery

- Precision Scale
- Weighing platform
- Power Supply
- RS232-cable (if ordered)
- Windshield dismantled (only model PFA1000)
- Operating Manual including Declaration of Conformity

Mains and battery operation of the scale

The power supply is raised either through mains operation by the provided mains adapter 230V alternating current or through the batteries 6x 1,5V AA (LR6) (not included in this delivery).

a) Mains operation

Connect the supplied mains adapter with the scale. Plug in the pin into the connecting socket on the backside of the scale housing, which is side next to switch for on and off switching on the right hand side of the scale.



Before connecting the mains adapter, it is essential to control whether the imprinted voltage value on the adapter corresponds with the local voltage.


Should the local voltage not correspond with the imprinted value the scale must not get connect!

Connect the mains adapter with the local power supply.

b) Battery operation

Open the battery case at the bottom of the scale.

Insert the batteries (6x 1,5V LR6 – not included in delivery).

As soon as the voltage of the power supply is not enough anymore for operation (less than 5.7V), it will be indicated by an accordant illustration of a battery symbol  in the display and the mains adapter must immediately get connected to the local power supply and charged through the supplied mains adapter.

The batteries should be exchanged against new, unused uniform batteries.

In case the voltage decreases fewer than 5.5 V the scale cannot be used in battery operation.

If the scale will not be used for a longer time please remove the batteries to avoid a damage of the scale because of possible leaking of batteries.

Adjust the scale

Take the scale and the equipment carefully out of the carton and check it for completeness. Adjust the scale in this way that all four feet have contact with the footprint, which should be safe and even.

Check the horizontal stand of the scale by the help of the bubble level which is insert (seen from the operator side) on the backside of housing.

At correct adjustment, the bubble must be in the centre of the circle.

In case of an uneven stand, you can balance the level by the help of the four levelling feet. For this purpose, rotate the relevant foot out of the housing more in or out.

Before first time use place the stainless steel weighing platform on the weighing plate and if necessary adjust the draft shield on the scale in that way that all four corners are outside of the rubber mounts and find one's feet.

For protection against outside influences during the weighing procedures, place the cover on the draft shield frame.

Assembling of wind shield



**The wind shield is only applicable for round weighing platforms.
(Model PFA1000)**

1. Remove packaging and protection films before assembling.

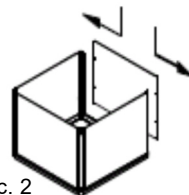
2. Insert four shores to the frame as the arrow shown. Please see the order alternation of notch (Pic 1).



Pic. 1



3. Insert 4 side sheets into frame and shores ordinarily (Pic 2).



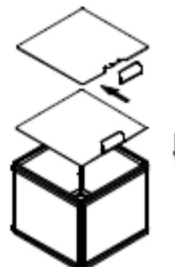
Pic. 2

4. A second frame has to be mounted on the top of the four side sheets (Pic 3)



Pic. 3

5. Insert handle and top sheet then place them on the top of the frame as the arrow shows (Pic 4).



Pic.. 4

The scale can be used with or without windshield.

Weight Analysis

Both, in mains and in battery operation, switch-on the scale using the right hand on the membrane keyboard arranged ON-/Off-key.

The test routine starts with the indication of type and version number and starts thereupon to run downward from 999999 till 000000; a peep-tone confirm the end of the pass.

The scale will show the battery charge condition for a while before switching to weighing mode.

To achieve precise measuring results the scale should be switched-on about 30 minutes before starting the weighing procedure to get working temperature.

Zeroseetting of the scale

In case the scale should not automatically reach the zero position, the Zero-key have to be depressed. By pressing the Zero-key, the measuring inaccuracies will be compensate and set to zero before the actual weighing procedure.

Zero setting will be indicating in the display by -0-. This indication effects only when the weighing platform is unloaded.

The scale is now ready for operation.

Tare Function

With the assistance of this function, you can balance weighing goods together with other objects (e.g. bowl, foil, tissue etc.) without impairment of the weighing result for the weight of these objects.

1. For this operation switch-on the scale and wait until the test routine ends.
If necessary, adjust the scale to zero by pressing the Zero-key.
In the display appears the zero symbol as well as the indication that the weight indication is stable.
2. Place the object to tare (e.g. bowl, foil, tissue etc.) on the weighing platform.
Press the Tare key to tare the object. The Display shows 0,0 and „Net“ appears.
3. Place the object to weigh additionally on the weighing platform.
4. The indicated weight in the display is the net weight of the added weighing good.

The scale has a tare-storage at one's disposal.

When repeated weighing operations with the same object to tare will be performed (e.g. always with the same bowl) the scale deducts automatically the stored weight and the net weight of the weighing goods appears in the display. When the tared object (including the weighing goods) will taken-off the platform, the tared weight appears as negative value. If the scale will be switched-off or disconnected from the voltage supply, the data content of the tare-storage will be deleted.

Shall the tare value be revised or cleared remove the weighing goods completely and press the Tare key again. Now the display indicates 0.0 and „Net“ expires.

Selection of weight unit

Select between the different units of weight by pressing the UNIT key.

Select by successive single pressing between the units g – ct – oz – dwt – mm - lb – dr – tl.H – tL.J – GN – ozt – t – tl.T and again g.



If through the menu “Presetting of Weighing Units” several weighing units become deactivate, are these **not dialable**!

Conversion Table

1ct (MET. CARAT)	=	0.2 g
1 lb (Avoirdupois Pound)	=	453.59237 g
1 oz (Avoirdupois Ounce)	=	28.349523125 g
1 dr (Avoirdupois Dram)	=	1.7718451 g
1 GN (Grain U.K.)	=	0.06479891 g
1 ozt (Troy Ounce)	=	31.1034768 g
1 dwt (Pennyweight)	=	1.55517384 g
1 MM (Momme)	=	3.749996 g
1 tl.J (Hongkong Jewelry Tael)	=	37.4290018 g
1 tl.T (Tael, Taiwan)	=	37.49995 g
1 tl.H (Hongkong Tqel)	=	37.799375 g
1 t (Tola, Indien)	=	11.6638038 g

After switch-on the scale, always the last selected unit before switching-off the scale will be indicating.

Counting mode



The counting mode is only available at unit „g“.

While using a tare object it has to be tared before changing to counting mode.

1. Place a reference quantity on the weighing surface while operating in counting mode. This quantity has to be 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000 units of the units you want to count.
2. Press the button PCS, to get into counting mode / percentage mode. The display will show „P NUM“.
3. By pressing ZERO (upwards) respectively Tare button (downwards) the actual reference quantity may be adjusted. This will happen in the following order: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 100% (see percentage weighing) and again 10.
4. After accordance of reference quantity (on the weighing surface) and the quantity shown on the display press the button „PCS“. The single weight as well as the weight of the reference quantity has to be a minimum weight of 1d (please read. page 13, technical details). In case the weight is too low the display will show „►“. Put a higher reference quantity on the weighing surface and repeat the procedure. Now the scale is ready for counting.
5. Place the quantity you want to count on the weighing surface. The display will show the quantity lying on the weighing surface.
6. You may repeat the procedure as often as you like.
7. By pressing the UNIT-button the scale will change to weighing mode.
8. The band in the display will show the usage of the weighing capacity.

Percentage mode



**The percentage mode is only available at unit „g“.
While using a tare object it has to be tared before changing to percentage mode.**

1. Place a reference unit on the weighing surface during operation in weighing mode.
2. Press the button PCS, to switch to Counting- / percentage-mode.
The display will show „P NUM“.
3. By pressing ZERO (upwards) respectively Tare button (downwards) it is possible to choose the percentage mode (100%).
This will happen in the following order: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 100% and again 10.
4. After accordance of reference weight (on the weighing surface) and the quantity shown on the display press the button „PCS“
The single weight as well as the weight of the reference quantity has to be a minimum weight of 1d (please read. page 13, technical details). In case the weight is too low the display will show „▶“. Put a higher reference quantity on the weighing surface and repeat the procedure. Now the scale is ready for counting.
5. Place the object to weigh on the weighing surface. The display shows the percentage of the weighing good according to the reference weight.
6. You may repeat the procedure as often as you like.
7. Durch Drücken der UNIT-Taste kehren Sie zur Gewichtsanzeige zurück.
8. Das Band der Gewichtsanzeige gibt die Auslastung der Kapazität wieder.

ALARM FUNCTIONS OF THE SCALE

Overload

When the scale is overloaded, a peep-tone as well as the indication “-----” in the display will signalize it. In this case, immediately take off the load from the weighing platform to avoid scale's damage.

Battery Alert

It is also possible to provide the scale with voltage via the integrated battery.
Should the voltage be too low the battery symbol in the display will indicate.
The batteries should be charged or exchanged immediately.

PRESETTING OF THE SCALE

Presetting mode:

It is possible to set a plenty of presetting.

Press and hold the „Zero-Button“ while turning on the scale to get into the presetting mode.

The scale will switch to presetting mode without running the test routine.

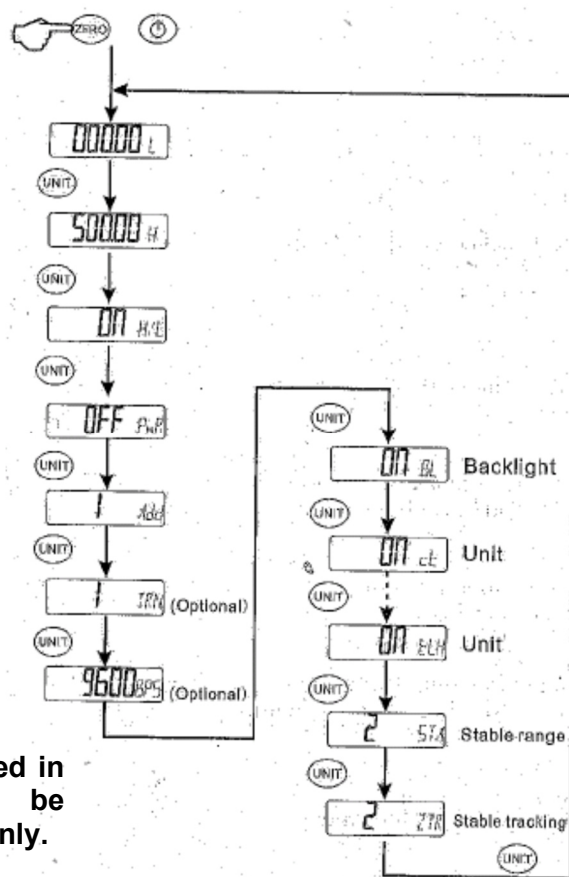
Press PCS-button to change the value from left to right.

Press the UNIT-button, to enter the next parameter.

Press PRN-button in order to save settings.
The scale will run the test routine and change to weighing mode.



All presetting which are not described in the consecutively details may be conducted by authorized personnel only.



Acoustical alarm setting

You may set a minimum and maximum weight. An acoustical alarm sounds if the weight of the weighing good is below the entered minimum value or above the maximum value.
The minimum value has to be lower than the maximum value.

Setting up the minimum weight

Start the presetting mode as described before.
Set the minimum value.
Press PCS-button to change the value from left to right.
The value you want to set is blinking.
Press „-0-“ button to increase the value by one.
Press „TARA“ button to decrease the value by one.
Press the UNIT-button to save the presetted value and change to the next step.



Setting up the maximum weight

Start the presetting mode as described before.
Press the UNIT-button until correspondent menu appears.
Set the maximum value.
Press PCS-button to change the value from left to right.
The value you want to set is blinking.
Press „-0-“ button to increase the value by one.
Press „TARA“ button to decrease the value by one.
Press the UNIT-button to save the presetted value and change to the next step.



Setting for acoustical alarm for minimum / maximum weight

If a minimum and maximum weight has been entered an acoustical signal may be activated.

The sound will appear as long as the weighing good is below the minimum value and above the maximum value.

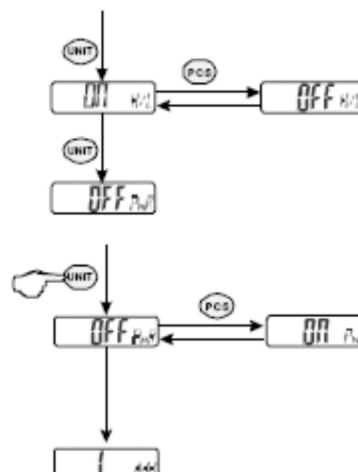
Start the presetting mode as described before.

Press the UNIT-button until correspondent menu appears.

Press the PCS button, to activate or deactivate the alarm.

ON means Alarm is active, OFF means Alarm is not active.

Press the UNIT-button to save the presetted value and change to the next step.



Auto shut off mode

Start the presetting mode as described before.

Press the UNIT-button until correspondent menu appears.

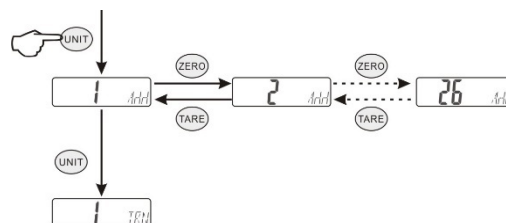
Press the button PCS to activate or deactivate the auto shut off mode

ON means active, OFF means deactive function.

In case the auto shut off mode is activated the scale will automatically shut off after 90 seconds.

To use the scale after auto shut off the scale has to been turned on again.

Press the UNIT-button to save the presetted value and change to the next step.



Presetting of communication address

There are address no. 1-26 for setting available.

Presse ZERO to increase the number by one or press

TARE to decrease the number by one.

To confirm press PRN.

Press the UNIT-button to save the presetted value and change to the next step.

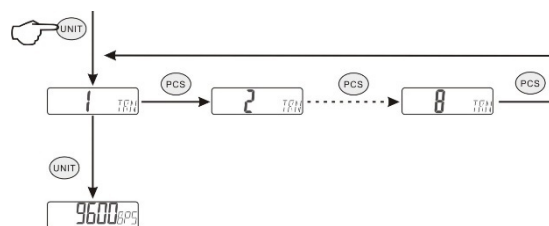
Selection of transmission way

This function is active while the balance is connected with printer, computer and the relative equipment.

Press PCS to choose the number of 1-8 and then press PRN to save or exit.

Press UNIT to go to the next function mode selection.

This function is activated, when scale is connected with printer or PC.



Explanation:

In weighing mode

1. Continuous transfer mode
2. Stable transfer mode
3. Serial print key transfer mode
4. Serial print stable transfer mode

In counting mode

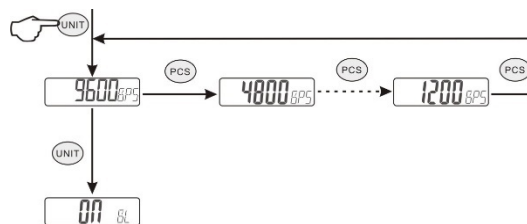
5. Continuous transfer mode
6. Stable transfer mode
7. Serial print key transfer mode
8. Serial print stable transfer mode

Presetting of baud rate BPS (optional)

In this parameter speed of communication can be setted.
Press PCS for selecting baud rates „9600“, „4800“, „2400“ und „1200“.

Then press PRN to store and leaving.

Press the UNIT-button to save the presetted value and change to the next step.



Backlight

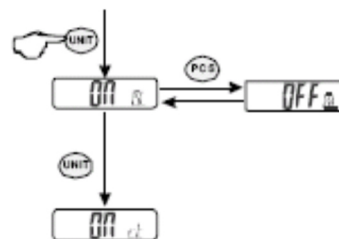
Start the presetting mode as described before.

Press the UNIT-button until correspondent menu appears.

Press the button PCS, to activate or deactivate the backlight.

ON means active, OFF means deactive function.

Press the UNIT-button to save the presetted value and change to the next step.



Presetting of weighing units

You may choose between 13 different weighing units.

The scale can be presetted that only required units will be shown.

Therefore you may activate or deactivate weighing units which are not required.

Start the presetting mode as described before.

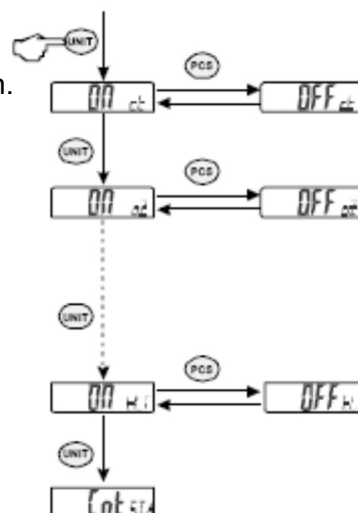
Press the UNIT-button until correspondent menu appears.

Press the button PCS, to activate or deactivate the weighing units.

ON means active, OFF means deactive function.

Press the UNIT-button to save the presetted value and change to the next step.

While choosing a weighing unit only activated weighing units will be available.



MAINTENANCE AND SERVICE

Cleaning

Before cleaning, disconnect the device from operating voltage. Do not use acid cleaning agents but only a damp cloth or common disinfection products for cleaning.



Pay attention that no fluid penetrates the scale – since this might cause lasting damage of the electronic!

Service

Display indication  Voltage of battery is too low.
Charge the battery.

In case of error messages, at first check whether the power supply is correct locked and the weighing procedures are realized in accordance to this user manual.

If necessary switch-off the scale respectively collect the scale from the power supply and start the weighing operation once again.

Should the error message further appear, please contact your local dealer or service partner.

Safety Verification

A risk less operation is not assure anymore

- if the mains adaptor or the voltage supply shows visible damages,
- if the mains adaptor is not working properly,
- if you notice any abnormal conditions at the scale,
- after long storage in humid spaces.

For your own security, contact your local dealer or service partner in these cases.

Storage and Transport Terms

Keep all original cartons and parts of the packing for an eventual necessary send back in order to avoid any possible damage during the transport.

Disconnect all cables before transport to avoid unnecessary damages.

Warranty

ADE will repair or replace this product within a period of 1 years from date of delivery applying to defects occurred due to poor material or workmanship (presentation of invoice is necessary). All moveable parts e.g. cables, mains units, rechargeable batteries, etc. been excluded. This warranty does not include outer natural wear, damages caused by incorrect or negligent handling, overuse, or unsuitable or improper storage. In the event of warranty claims and claims for damages the insert of original accessory- and replacement parts of ADE are required. Any warranty claim will reject if unauthorized persons opened the equipment.

By this agreement, the customer rights regulated by law are in no way affected.

For complaints, customer service and spare parts please contact the local dealer where the scale was bought.



Declaration of conformity by the manufacturer

These scales have been manufactured in accordance with the harmonised European standards. They conform to the regulations of the EC-directives listed below:



- EMC Directive 2014/30/EC
 - Low Voltage Directive 2014/35/EC
 - RoHS Directive 2011/65/EC
- in the currently valid versions.

This declaration loses its validity if modifications are made to the scale without our approval.

Hamburg, April 2021

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TECHNICAL SPECIFICATIONS

Model	PFA1000	PFA3000	PFA6000
Capacity	1000 g	3000 g	6000 g
Graduation = d	0.01 g	0.1 g	0.1 g
Weighing platform (stainless steel)	Ø 130 mm	160 x 160 mm	160 x 160 mm
Dead weight	1.7 kg	1.5 kg	1.5 kg
Dimensions (WxDxH)	190 x 260 x 78 mm		
Display	Big LCD-Display with backlight, height of digits 17mm		
Housing	Robust plastic housing Easy-to-clean keypad		
Power supply	Mains operation 240V-50Hz / 12V AC 150mA Battery operation 6x 1,5V AA (LR6)		

Retailer: