

OPERATING MANUAL

ADE

Platform Scale Series -EH



Platform Scale – Series EHR + EHQ

(EHR_EHQ-210517-Rev009-UM-en)



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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 scale is a high-quality product. In order to achieve precise results please kindly read and follow the Operation Manual in all respects.



The scale is equivalent to the latest state of technology considering the general regulations and guidelines.

The safety instructions in this operating manual, country specific installation standard as well as the applicable safety regulations and accident prevent regulations are to observe by the user.

- Before commissioning, make sure that mains voltage and kind of current (indicated at the type label) correspond with the mains voltage and kind of current at the place.
- Make sure that the mains cable does not turn out to be a tripping hazard.
- Only use solely authorized accessories and peripheral devices.
- Only operate the device within the admissible surrounding terms.
- In any case, make sure that the display unit is installed vibration-free, dry and protected against falling down.
- Unplug the device before cleaning.
- Do not use the device in dangerous or unstable surroundings.
- Do not immerse the device in water or other liquids.
- All in this operating manual descript operations may perform only through trained and authorised qualified personnel.
- The use of accessories, which are not equivalent to the safety requirements of the device, may cause a reduced security level of the complete system.
- Positioning of the device preferable away from equipment whose generate electromagnetic or other interferences.
- Before wall mounting, make sure that there are no pipes or lines at the drilling location.
- Before wall mounting, find out which mounting material is suitable for your wall. The supplied mounting material is only suitable for mounting in masonry.
- Portable and moveable HF-communication appliances can affect electronic devices. Before use of high frequency surgical devices, defibrillator etc. pay attention to their operation manual.
- To avoid the risk of fire and electric shock it requests to use exclusively wall power supplies by the firm ADE.
- Clean with dry cloth; do not use acid cleaning agents.

A risk less operation is not assure anymore

- if the mains adaptor shows visible damages.
- if the mains adaptor is not working properly.
- after long storage in humid spaces.

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

Check carton contents

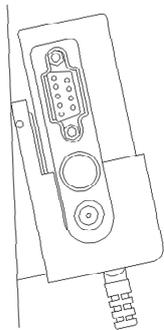
The scope of delivery includes:

- platform of the scale
- Indicator ADE EH
- Indicator Mounting
- Batteries
- Mains adapter
- Operating Manual
- Screw Set

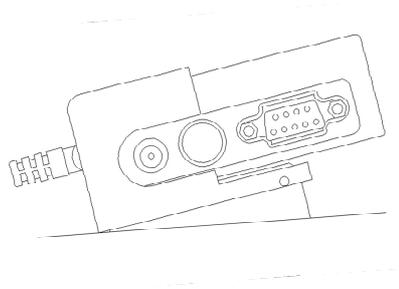
Installation and Commissioning of the scale

Fitting of the indicator with bracket

ADE-EH display is qualified for horizontally or vertically wall mounting.

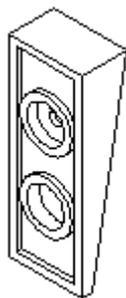


(Placed vertically)

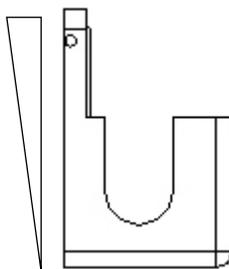


(Placed horizontally)

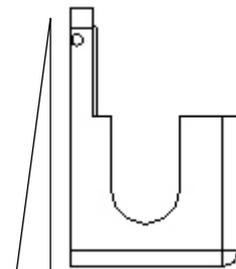
To change from the horizontal to the vertical bracket, loosen the screws of the spacer and indicator bracket and screw the spacers back on turned by 180°.



Spacer



Spacer + indicator
mounting placed
horizontally



Spacer + indicator
mounting placed
vertically



Risk of death from electric shock: Before wall mounting, make sure that there are no pipes or lines at the drilling location.



Caution: Damage to property: Before wall mounting, find out which mounting material is suitable for your wall. The supplied mounting material is only suitable for mounting in masonry.

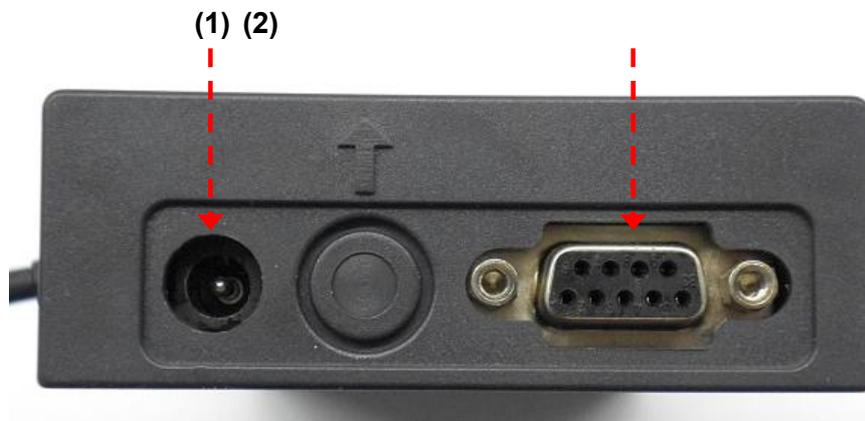


In any case, make sure that the display unit is installed vibration-free, dry and protected against falling down.

Housing and ports

Connect the Platform to the Indicator.

Mains supply (1) as well as the serial port (2) is located at the right side of the ADE-EH housing. Load cell connection is located at the bottom side of the housing.



Connection of a PC or printer is possible via SUB-D plug-in port (2).

Mains or battery operation of the scale

The power supply is raised either by Standard Alkaline batteries, 4 x “AAA”, (not included in the scope of delivery) or through mains operation by the provided power supply unit. The imprinted voltage value must be in conformance with the local voltage.

Connect the main cable at the plug-in point and connect the main plug with an electrical outlet.

When using the device battery operated and all numerals of the LC-display are flashing that means the batteries voltage are under 4,9V. You should replace the batteries soon. If the display indicates “Lo.bAt” the batteries voltage are under 4,7V. You should replace the batteries immediately.

For energy saving the scale can be adjusted that in power supply by batteries the automatic switch-off function can be activated.



It is not allowed using other mains adaptor than the enclosed one from the manufacturer. Otherwise, there might cause the risk of interferences to other electrical devices!

Make sure that the connecting cable between scale and mains adaptor do not turn out to be a tripping hazard.

Battery case at the backside of the housing



To open the battery case shift the lever towards „OPEN“, to lock shift towards „Close“.
4 x AAA 1,5V Alkaline Batteries.

Connecting additional equipment

Connection of additional equipments such as PC, printer, etc. is possible via integrated serial RS232-port.



Mounting and configuration of additional equipment are subject to authorized service personnel only.

Unauthorized mounting of additional equipment face the loss of warranty.



Operational controls



Unit key

To switch between the units of weight (kg, lb, oz)



Tare key

To tare desired weight value



ON / OFF / 0 - key:

To power on/off as well as to set zero the scale

Display symbols

Zero ◀

Display of the scale is “0”, gross weight is 0.

Tare ◀

Display indicates net weight.

▶ Hold

hold function can be activated by an authorized service technician.

Summary key definition

KEY	MODE		DEFINITION
 (Unit)	Normal weighing mode		Choose weight unit
	Setup modus / Calibration mode		Change the digit if flashing and click this button to add 1 (1*)
	Displaying A/D code or input voltage mode		Choose to show either inner code or input working voltage of indicator mode
 (Tara)	Normal weighing mode	<3 sec.	Tare the weight
		>3 sec.	Display A/D code or input working voltage of indicator mode
	Setup mode/calibration mode		Confirm displayed parameters or input data and go to next step (1*)
	Display A/D code or input voltage mode		Choose filtered or un-filtered weight A/D converter data (1*)
 (ON/OFF/ 0)	Normal weighing mode	<3 sec.	Zero function →0←
		>3 sec.	Power off the scale
	Setup mode/calibration mode/display A/D code or working voltage mode		Exit and back to normal working mode (1*)
  (ON/OFF/ 0) + (Unit)	Normal weighing mode (more than 3 sec.)		Enter setup mode (1*)

1*)



These functions are subject to authorized service personnel only. Changes to the technical settings may cause the balance to malfunction and void the warranty.

Positioning of the scale

When using a mobile scale the following aspects are to mind:

- Place the scale on a solid and level surface.
- Adjust the scale in the way that all feet are contact plated.
- If there is a bubble level existing justify the scale according, apart from that please apply a water level.
- Connect the indicator with the scale platform by using the therefore intended socket plug.

Should the scale be transported or stored a re-positioning as just described is on demand.

Setting unit of weight

Choose the unit of weight (kg/oz/lb) by pressing the „**U-key**“ (Units). The corresponding LCD-status indication for the actual unit of weight is flashing.

Weight analysis

To switch on the scale press „**ON/OFF/→0←-key**“. After switch on, automatically a function test takes place. This process ends with zero indication. Now the scale is ready for operation. At zero indication, the scale can be loaded. After standstill the weight is direct readable.

Zero setting of the scale

Wait until the scale found standstill. By the use of **ON/OFF/→0←** the accuracy of measurement will compensate and set on zero before the actual weighing procedure.

Tare the scale

With the assistance of this function, you are able to weigh the loading together with other objects (e.g. a bowl) without an adverse effect to the loading weight induced by the weight of an object.

- Set the scale to zero - if needed by pressing the „**ON/OFF/→0← key**“. The display indicates **Zero ◀**.
- Place the objects which are to tare on the weighing platform (e.g. bowl or the like).
- Press **Tare-key** to engender the zero status. Now on the display appears the indication `0.00` and the **Tare ◀** symbol is visible.
- Put the weighing load into the bowl.
- The readable weight on the display is the net weight of the weighing load.

If the tare value stored at the beginning remains the same, you are able to weigh now further loadings. However, the scale may not switched-off between the weighing procedures because in that case the tare-memory becomes resetting. The scale automatically subtracts the stored weight and the net weight of the loading where indicated. If you intend to revise or delete the stored value, take off all loadings from the scale and press again the **Tare-key**.

Counting function

There are two options to come into counting mode.

Counting mode can be enabled in order of step 1 – 3 – 4 – 5 (reference quantity will be load before activating counting function) or in order of step 2 – 3 – 4 – 5 (reference quantity will be load after activating counting function) as described in the following.

1. (1) Be sure that scale is in normal weighing mode, the scale is empty and scale shows 0 and the scale is stable. Place the sample at the weighing platform and press button „**U**“ (Units) for 3 seconds to come into counting mode.
(2) When „SPL.--“ appears, counting mode is active. Press button „**T**“ (Tare) to confirm.

To leave counting mode press button **ON/OFF/→0←**. The scale returns in weighing mode.

2. (1) Be sure that scale is in normal weighing mode, the scale is empty and scale shows 0 and the scale is stable. Press button „**U**“ (Units) for 3 seconds to come into counting mode.
(2) When „SPL.--“ appears, counting mode is active. Place the sample at the weighing platform and press button „**T**“ (Tare) to confirm.

To leave counting mode press button **ON/OFF/→0←**. The scale returns in weighing mode.

3. As long as in display „--“ flashes, scale is detecting the reference weight. When scale has found a stable net weight higher than 0, display shows „00000“ and the first digit is flashing.
4. Enter the number of parts of reference weight. For changing the flashing digit press button „**U**“ (Units). Confirm the value at each digit with „**T**“ (Tare).

If the unit weight, which is defined by reference weight and entered number of parts, is higher than 0.5d, the display shows the entered number and is now in counting mode. If more parts are put on the weighing platform, display now shows the total quantity of the parts.

If the unit weight, which is defined by reference weight and entered number of parts, is lower than 0.5d, display shows „SPL.Er“ and the scale returns to enter the number of parts. Increase the reference quantity.

5. To leave counting mode press button „**U**“ (Units) for 3 seconds. The scale returns in weighing mode.

Automatic Switch-off

For energy saving the scale can be set for automatic switch-off. Automatic switch-off can be preselected after 1 up to 15 minutes or disabled.

When scale is on, press both button **ON/OFF/→0←** and „U“ same time as long as SETUP appears in display.

Then display shows P1.xx and the first digit is flashing.

By pressing button „T“ you can change the digit. The value of the digit can be changed by pressing button „U“.

Both digits together means the remaining time until automatic switch-off.

By preselection of P1.00 automatic switch-off is disabled.

After setting the preselection press button „T“ and P2.xx appears in display for preselecting hold function.

To save the preselection and to leave SETUP-menu press button **ON/OFF/→0←**.

Setting of Hold Function

The scale has a hold function which can be preselected for automatic hold or which can be disabled.

When scale is on, press both button **ON/OFF/→0←** and „U“ same time as long as SETUP appears in display.

Then display shows P1.xx and the first digit is flashing.

Now press button „T“ again, until P2.xx appears in display and the first digit is flashing.

By pressing button „T“ you can change the digit. The value of the digit can be changed by pressing button „U“.

By preselection of P2.00 Auto-Hold-Function is enabled.

Further preselections are P2.01 (automatic hold, until larger weight reading), P2.02 (automatic hold, when weight is below 10d and auto-hold new stable weight is more than 10d), P2.03...50 (automatic hold, when unchangeable reading when the variety is within +/-3d bis 50d).

After setting the preselection press button „T“ and P3.xx appears in display for preselecting RS232 interface settings.

To save the preselection and to leave SETUP-menu press button **ON/OFF/→0←**.

Presetting parameter

Parameter	Code	Presetting
P1.xx	00-15	00: no auto-off 01-15: minutes auto-off time
P2.xx	0/1/2/ 3-50	0: no hold function 1: hold larger weight reading 2: auto release hold function when weight is below 10d and auto-hold new stable weight (more than 10d) (nur EHR4) 3...50: unchangeable reading when the variety is within +/- 3d-50d
P3.xx	0/1...5	0: no RS232 function 1: continuously output display data 2: continuously output gross, net and tare weight 3: output display data one time when scale is stable 4: output gross, net and tare weight one time, when scale become stable 5: Bio-RS232
P4.xx	0/1/2/ 3/4	Baud-Rate for RS232 interface (Modifications in setting only by authorized persons!!) 0: 1200bps, 1: 2400bps, 2: 4800bps, 3: 9600bps , 4: 19200bps
P5.xx	0/1/2	RS232 interface (Modifications in setting only by authorized persons!!) 0: 8N1 , 1: 7O1, 2: 7E1
P6.xx	00-31	Resolution (Modifications in setting only by authorized persons!!) 500, 600, 750, 800, 1000, 1200, 1500, 2000, 2400, 2500, 3000, 3500, 4000, 5000 , 6000, 7000, 7500, 8000, 10000, 12000, 15000, 20000, 25000, 30000, 35000, 40000, 50000, 60000, 70000, 75000, 80000, 100000
P7.xx	0/1/2	Division select 0: 1 , 1: 2, 2: 5
P8.xx	0/1/2/ 3/4/5	Decimal point in calibration (Modifications in setting only by authorized persons!!) 0: x1 , 1: x0.1, 2: x0.01, 3: x0.001, 4: x0.0001, 5: x10
P9.xx	0/1	Calibration unit (Modifications in setting only by authorized persons!!) 0: kg , 1: lb
P10.x	0/1/2/3/ 4/5/6	Weighing units enabled 0: only kg , 1: only lb, 2: only lb:oz, 3: kg or lb, 4: kg or lb:oz, 5: lb or lb:oz, 6: kg, lb or lb:oz
P11.x	0/1/2/3/ 4/5/6/7	Power-on zero-point range (Modifications in setting only by authorized persons!!) Calibration zero-point 0: +/-1%FS, 1: +/-2%FS, 2: +/-5%FS, 3: +/-10%FS , 4: +/-20%FS, 5: +/-50%FS, 6: +/-100%FS, 7: no limitation

P12.x	0/1/2/3/ 4/5/6/7/ 8/9	Zero range for ZERO button (Modifications in setting only by authorized persons!!) Power-on zero-point 0: +/-1%FS, 1: +/-2%FS, 2: +/-3%FS, 3: +/-4%FS, 4: +/-5%FS , 5: +/-10%FS, 6: +/-20%FS, 7: +/-50%FS, 8: +/-100%FS, 9: no limitation
P13.x	0/1/2	Weight signal within power-on zero point range, change which data as current power-on zero point (Modifications in setting only by authorized persons!!) 0: current weight 1: calibration zero-point 2: switch-off zero-point
P14.x	0/1/2/3	Weight signal not within power-on zero point range, change which data as current power-on zero point (Modifications in setting only by authorized persons!!) 0: current weight 1: calibration zero-point 2: switch-off zero-point 3: continuously display „0 - - - -“
P15.x	0/1/2/3/ 4/5/6/7/ 8	Zero tracking range (Modifications in setting only by authorized persons!!) 0: 0d = no tracking, 1: +/-0,25d, 2: +/-0,5d, 3: +/-1d, 4: +/-1,5d, 5: +/-2d, 6: +/-3d, 7: +/-4d, 8: +/-5d
P16.x	0/1/2/3	Data filter intensity 0: very weak, 1: weak, 2: middle , 3: strong
P17.x	0/1/2/3/ 4/5/6/7/ 8/9	Check weight stability range 0: +/-0,5d, 1: +/-1d , 2: +/-1,5d, 3: +/-2d, 4: +/-3d, 5: +/-4d, 6: +/-5d, 7: +/-6d, 8: +/-7d, 9: +/-8d
P18.x	0/1/2/3/ 4/5/6/7/ 8/9	Overload limit range 0: FS+0d, 1: FS+9d , 2: 101%FS, 3: 102%FS, 4: 105%FS, 5: 110%FS, 6: 120%FS, 7: 150%FS, 8: 120%FS, 9: no limitation

Defaults are marked in bold type. Changes to the technical settings may cause the balance to malfunction and void the warranty.

Cleaning and Maintenance

Cleaning

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



Pay attention that no fluid penetrates the scale!

Faults and Messages

	Message	Description
1.0	000000	Zero point is over adjusted range
2.0	000000	Zero is under adjusted range
3. Ad	AR0000	ADC is over max. range
4. Ad	AR0000	ADC is under min. range
5.0	000000	Weight indication is too high
6.0	000000	Weight indication is too low
7.0	EEEEEE	No access to EEPROM
8.0	EEEEEE	Parameters are not identical with backup data
9.0	EEEEEE	Parameter/s is/are not within the normal range
10.0	000000	Calibration point of scale (0 can accept different values)
11.0	000000	Calibration error
12.0	► Hold	Hold function is active
13.0	TARA ◀	Tare function is active
14.0	ZERO ◀	Scale is „Exact Zero“
15.0	0000.00	Setting of full capacity will be indicated
16.0	0000.00	Division will be displayed
17.0	0000.00	Parameter - =1-9 . -- = value of 01-99
18.0	0000.00	Battery voltage is less 4,7 Volt

Disposal



Old electronic devices and batteries are not domestic waste. Please dispose defective respectively old devices and batteries according to the legal and country-specific regulations!



Make sure that only discharged batteries respectively batteries with isolated poles will be disposed otherwise short-circuit may occur!

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 2 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 where bought.

Technical Data

Power

Wall Wart:

Line Voltage	100 to 240 VAC
Frequency	50 or 60 Hz
Main Circuit:	
Input Voltage	9.0 VDC
Max. Current (wall wart)	600 mA

Batteries:

Type:	Alkaline AAA / 1,5V
Quantity:	4



Serial Communication

PC / Printer port	full duplex RS-232 or only output mode 1200, 2400, 4800, 9600, or 19200 baud
Data formats	7 or 8 data bits; parity even, odd, or no parity
Printouts	7 preset printouts
Output data	gross-, net-, tare- or indicated weight

Display and keyboard

Display	0.65" (17mm) 7-digit LCD, 51/2 numeric
LCD status indication	Zero (zero), Tara (tare), Hold (standstill), unit of weight (kg/lb/oz),
Keyboard	membrane keyboard, 3 keys

Environmental

Operating temperature	+5 to +35°C
Storage temperature	-10 to +70°C
Relative humidity	0 - 95%

Indicator Housing

Dimensions	16.2 cm x 8.0 cm x 3.0 cm
Weight	0.38 kg (without batteries)
Material	synthetic material, stainless steel

Platform Scale – Series EH

	Weigh. platform [mm]	Capacity [kg]	Graduation [g]
EHR1	370 x 300	40 / 60 / 150	10 / 20 / 50
EHR7	500 x 400	40 / 60 / 150 / 300	10 / 20 / 50 / 100
EHR4	900 x 550	150	50
EHQ1	365 x 365	40 / 60 / 150	10 / 20 / 50
EHQ2	550 x 550	60 / 150	20 / 50



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/EU
 - Low Voltage Directive 2014/35/EU
 - 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, May 2021

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