



**KERN & Sohn GmbH**

Ziegelei 1  
D-72336 Balingen  
E-mail: [info@kern-sohn.com](mailto:info@kern-sohn.com)

Phone: +49-[0]7433-9933-0  
Fax: +49-[0]7433-9933-149  
Internet: [www.kern-sohn.com](http://www.kern-sohn.com)

# Operating Manual

## Baby scales

### **KERN MBD**

Version 1.0  
2017-08  
GB



**MBD-BA-e-1710**



**KERN MBD**  
Version 1.0 2017-08  
**Operating manual**  
**Baby scales**

|           |  |           |
|-----------|--|-----------|
| <b>1</b>  | <b>Technical data .....</b>  | <b>3</b>  |
| <b>2</b>  | <b>Declaration of conformity .....</b>                                 | <b>3</b>  |
| <b>3</b>  | <b>Basic guidelines (general information) .....</b>                    | <b>4</b>  |
| 3.1       | Proper use .....   | 4         |
| 3.2       | Improper use .....   | 4         |
| 3.3       | Warranty .....   | 5         |
| 3.4       | Monitoring of test resources .....                                     | 5         |
| <b>4</b>  | <b>Basic safety instructions .....</b>                                 | <b>5</b>  |
| 4.1       | Observance of the instructions contained in the Operating Manual ..... | 5         |
| <b>5</b>  | <b>Transport and storage .....</b>                                     | <b>5</b>  |
| 5.1       | Verification upon acceptance .....                                     | 5         |
| 5.2       | Packaging .....  | 5         |
| <b>6</b>  | <b>Unpacking, setup and start-up .....</b>                             | <b>6</b>  |
| 6.1       | Site of installation, location of use .....                            | 6         |
| 6.2       | Unpacking .....  | 6         |
| 6.2.1     | Scales setup .....   | 6         |
| 6.2.2     | Scope of delivery .....  | 6         |
| 6.3       | Battery operation (inserting and removing the batteries) .....         | 6         |
| 6.4       | Initial start-up .....   | 7         |
| <b>7</b>  | <b>Operation .....</b>   | <b>7</b>  |
| 7.1       | Display .....  | 7         |
| 7.2       | Keyboard overview .....  | 7         |
| <b>8</b>  | <b>Operation .....</b>   | <b>8</b>  |
| 8.1       | Weighing .....   | 8         |
| 8.2       | Taring .....   | 8         |
| 8.3       | Switching the weight units .....                                       | 9         |
| 8.4       | Memory function .....  | 9         |
| 8.5       | HOLD function .....  | 10        |
| 8.6       | Auto-Off .....   | 11        |
| <b>9</b>  | <b>Error messages .....</b>  | <b>11</b> |
| <b>10</b> | <b>Servicing, maintenance and disposal .....</b>                       | <b>11</b> |
| 10.1      | Cleaning .....   | 11        |
| 10.2      | Servicing and maintenance .....  | 11        |
| 10.3      | Disposal .....   | 11        |
| <b>11</b> | <b>Assistance in case of minor failures .....</b>                      | <b>12</b> |

## 1 Technical data

| KERN  | MBD 20K2   |
|---|--|
| Readability   | 0.01 kg  |
| Weighing range ( <i>Max</i> )                         | 15 kg  |
| Reproducibility                                       | 0.01 kg  |
| Linearity   | 0.01 kg  |
| Units   | kg/lb  |
| Stabilisation time                                    | 2–3 s  |
| Warm-up time  | 10 min   |
| Operating temperature                                 | +10°C .... +40°C   |
| Auto-Off  | 20 s   |
| Power supply  | battery operation: 2 x 1.5 V, type AAA<br>operation time: 20 h |
| Air humidity  | max. 80% (non-condensing)                                      |
| Dimensions,<br>completely assembled<br>(W x D x H) mm | 597 x 350 x 74 mm  |
| Weighing pan, mm                                      | 650 x 350 x 55 mm  |
| Weight kg (net)                                       | 2.0 kg   |

## 2 Declaration of conformity

Current EC/EU Declaration of Conformity is available online at:

[www.kern-sohn.com/ce](http://www.kern-sohn.com/ce)

### 3 Basic guidelines (general information)

#### 3.1 Proper use

The scales are used to determine the weight of babies in a lying position; they are intended for private use. Using the scales in medicine is not allowed.

In order to weigh the baby, put it on the weighing pan. The weight value can be read out once it is stabilised.

An authorised person must check for proper condition of the scales prior to each use.

#### Additional information on the baby scales:

Baby scales are intended for the weighing of children in a lying position. If the child is to be weighed in a sitting position, place it in the centre of the weighing pan.



You must continuously observe the baby placed on the weighing pan to avoid falling. Proceed according to the guideline placed on the weighing pan!



#### 3.2 Improper use

Do not expose the weighing pan to a prolonged load. It may cause damage to the measuring mechanism.

Always avoid impacts and overloads of the scales exceeding the specified maximum (*Max*) load by reducing the existing load with a tare. An impact or overload could result in damage to the scales.

Never use the scales in potentially explosive areas. The serial product version is not explosion-proof.

Do not introduce any structural modifications to the scales. It may cause incorrect weighing results, violation of technical safety conditions and may result in destruction of the scales.

The scales must only be operated in accordance with the guidelines specified above. Other scopes/fields of use must be approved by KERN in writing.

### 3.3 Warranty

The warranty expires in the following cases:

- the instructions contained herein are not observed;
- the scales are not used as intended;
- the scales are modified or opened;
- mechanical damage or damage caused by utilities or liquids;
- natural wear and tear;
- improper setting or incorrect electrical system;
- the measuring mechanism is overloaded;
- the scales fall.

### 3.4 Monitoring of test resources

As part of the quality assurance system, the technical measuring properties of the scales and (if applicable) the testing weight should be checked at regular intervals. To this end, the user responsible should determine an appropriate cycle, type and scope of such check. Information regarding the monitoring of test resources (scales and test weights) is available at KERN website ([www.kern-sohn.com](http://www.kern-sohn.com)). The test weights and scales can be calibrated quickly and cheaply at KERN calibration laboratory accredited by DKD (Deutsche Kalibrierdienst) (in reference to the national standard).

## 4 Basic safety instructions

### 4.1 Observance of the instructions contained in the Operating Manual

Carefully read this Operating Manual before setting and starting the appliance, even if you are already familiar with KERN balances.

## 5 Transport and storage

### 5.1 Verification upon acceptance

Immediately check the received package for visible external damage — the same applies to the device after unpacking.

### 5.2 Packaging

Keep all parts of the original packaging for any possible return transport.

Only use the original packaging for return transport.

Prior to dispatch, disconnect all cables and remove any loose/mobile parts.

Install the transport protecting devices, if any. Protect all parts (such as the weighing platform, power unit, stand, operating panel, etc.) against slipping and damage.

## 6 Unpacking, setup and start-up

### 6.1 Site of installation, location of use

The scales are designed in such a way that reliable weighing results are ensured in normal conditions of use.

The scales will operate accurately and fast if you choose the right location.

**Therefore, observe the following rules when choosing the installation site:**

- Place the scales on a stable and flat surface.
- Avoid extreme temperatures and temperature fluctuations that exist e.g. if the scales are located by a heater or in a place exposed to direct sunlight.
- Protect the scales against direct draughts due to open windows and doors.
- Avoid shocks during weighing.
- Protect the scales against high humidity, vapours and dust.
- Do not expose the device to long periods of extreme humidity. Undesired dew (condensation of air moisture on the appliance) may occur if the cold appliance is placed in a considerably warmer environment. In this case, acclimatize the device for approx. 2 h at the ambient temperature.
- Avoid static charge of the scales and persons to be weighed.
- Avoid contact with water.

Major indication deviations (incorrect weighing results) may occur in case of electromagnetic fields, static charges or unstable power supply. In such a case, change the location.

### 6.2 Unpacking

Carefully remove the complete scales or individual parts thereof from the packaging and place it in the intended location. If the power unit is used, the power cable may not pose a tripping hazard.

#### 6.2.1 Scales setup

The weighing pan must be in a perfectly horizontal position.

#### 6.2.2 Scope of delivery

**Serial accessories:**

- Operating Manual
- Batteries (2 x 1.5V AAA batteries)

### 6.3 Battery operation (inserting and removing the batteries)

The battery compartment is located at the bottom.

Turn the scales and remove the cover from the battery compartment. Insert the batteries according to their polarity (observe the marking at the bottom of the battery compartment).

Close the battery compartment and turn the scales again.

When the batteries are discharged, the display will indicate “bAtt” – in this case replace the batteries.

If the scales are not used for a long time, remove the batteries and store them separately. Any electrolyte flowing out could damage the scales.

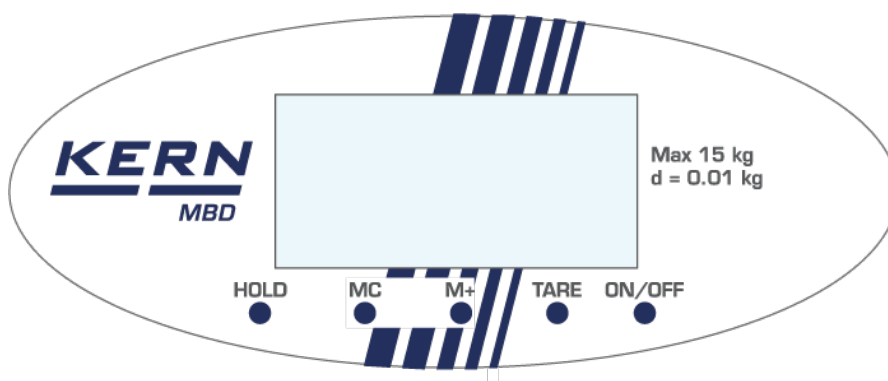
#### 6.4 Initial start-up

To obtain accurate weighting results using the electronic balances, the devices must reach an appropriate operating temperature (see Chapter 1: “Warm-up time”). The scales must be turned on during warming.

The scales accuracy depends on the local acceleration of gravity.

## 7 Operation

### 7.1 Display



### 7.2 Keyboard overview

|        |                                       |
|--------|---------------------------------------|
| ON/OFF | Switching on/off                      |
| TARE   | Taring the scales                     |
| M+     | Memorising the weight values          |
| MC     | Displaying the memorised weight value |
| HOLD   | HOLD function                         |

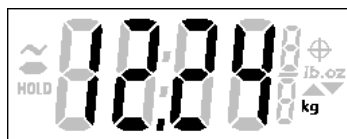
## 8 Operation

### 8.1 Weighing

- ⇒ Start the scales by pressing ON/OFF. After the self-test, the device shows the zero value – it is now in the weighing mode.



- ⇒ Carefully place the baby on the weighing pan and read the weighing value.

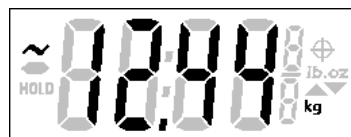


(Example)

### 8.2 Taring

The specific weight of any preload used for weighing can be tared by pressing the button – during the subsequent weighing processes the scales will display the actual weight of the baby.

- ⇒ Place an object (e.g. a towel or pad) on the weighing pan. Wait until the “unstable” (~) symbol disappears.



(Example)

- ⇒ Press TARE, the device will display the zero value.
- ⇒ Place the baby on the weighing pan. Wait until the “unstable” (~) symbol disappears and then read the weighing result.
- ⇒ Once the scales are unloaded, the tare value will be displayed with a negative value sign.



(Example)




### 8.3 Switching the weight units

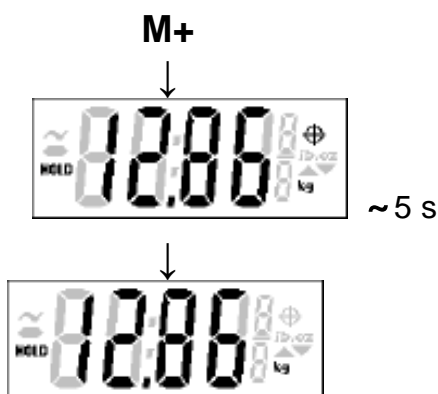
- ⇒ If zero is indicated, wait until the “unstable” ( ~ ) symbol disappears. Press TARE. The weight unit will be switched (kg ↔ lb), you may now start the next weighing process.

### 8.4 Memory function


The scales are provided with an integrated memory function that allows to memorise the weight values and display them when necessary.

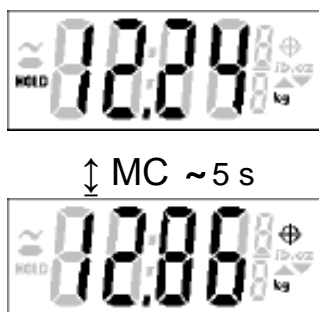
#### Memorising the weight values:

- ⇒ Start the scales by pressing ON/OFF and wait until the zero value appears.
- ⇒ Place the baby on the weighing pan.
- ⇒ Wait until the “unstable” ( ~ ) symbol disappears.
- ⇒ Press M+, the weight value will be memorised. The  symbol will be shown for 5 s, and then it will disappear.



### Displaying the memorised weight value:

- ⇒ Press MC, the display will show the memorised weight value along with the  symbol displayed for 5 s. Then the current weight value will be displayed.



The memorised weight value will be stored in the memory until a new value is memorised or the battery is discharged.

### 8.5 HOLD function

The scales are provided with an integrated HOLD (indication of average value) function. It allows for a precise weighing of a baby also when it does not lie calmly on the weighing pan.

- ⇒ Start the scales by pressing ON/OFF and wait until the zero value appears.
- ⇒ Wait until the “unstable” (~) symbol disappears.
- ⇒ Place the baby on the weighing pan.
- ⇒ Wait until the “unstable” (~) symbol disappears.
- ⇒ Press HOLD, the weight of the baby will be displayed and “frozen”.

For 5 s, the device will display the difference between the “frozen” and the memorised weight value.

The for 5 s the device will show the difference value and the current value.

If the value is negative, the indication will not be frozen.

The frozen weight value can be removed by pressing HOLD again – the scales will be switched back to the weighing mode.

The weight can be locked only, when the weight is over than 1 kg.

## 8.6 Auto-Off

The scales are provided with the Auto-Off function. If the device is not used for over 20 s, it will be automatically switched off.

If you press any button, the scales will be restarted and switched to the weighing mode.

## 9 Error messages

The scales are automatically turned off after approx. 2 s, and then the following error messages are displayed:

|             |                   |
|-------------|-------------------|
| <b>Err0</b> | Programme error   |
| <b>Err2</b> | Overload          |
| <b>bAtt</b> | Batteries are low |

## 10 Servicing, maintenance and disposal

### 10.1 Cleaning

Do not use any aggressive cleaning agents (solvents, etc.), but clean the device using only a cloth moistened with a mild soap lye or a household cleaning agent. Ensure that no liquid penetrates into the device. Wipe the device dry using a soft cloth. Loose contaminants can be carefully removed with a brush or manual vacuum cleaner.

The scales may not be tilted or turned, as it may cause damage.

**Immediately remove any contaminants.**

### 10.2 Servicing and maintenance

The device may only be operated and maintained by service technicians trained and authorised by KERN.

### 10.3 Disposal

The packaging and the device must be disposed of according to the national or regional law applicable in the location where the appliance is used.

## 11 Assistance in case of minor failures

In case of any disturbance in the programme, switch off the scales and disconnect them from power supply for a while. Then restart the weighing process.

Assistance:

| <b>Disturbance</b>                            | <b>Possible cause</b>  |
|---|--|
| The weight indication does not appear.        | <ul style="list-style-type: none"><li>• The scales are off.</li><li>• Improperly inserted or discharged batteries.</li><li>• No batteries.</li></ul>   |
| The weight indication is constantly changing. | <ul style="list-style-type: none"><li>• Draught/movements of air.</li><li>• Table/floor vibration.</li><li>• The weighing pan is in contact with solids or is incorrectly installed.</li><li>• Electromagnetic fields / static charges (choose another location — turn off the device causing the disturbance, if possible).</li></ul> |
| The weighing result is obviously incorrect.   | <ul style="list-style-type: none"><li>• The weight indication was not cleared.</li><li>• High temperature fluctuations.</li><li>• The warm-up time was not sufficient.</li><li>• Electromagnetic fields / static charges (choose another location — turn off the device that causes the disturbance, if possible).</li></ul>           |

In case of any other error messages, you must restart the scales. Contact the manufacturer if the error message persists.