Infant Scale

# USER MANUAL
# **MS5900**
## Infant Scale



Please keep the instruction manual at hand and follow instruction for use.

# CONTENTS

**I. Explanation of Graphic Symbols on Label/Packaging 3**
**II. Copyright Notice..... 5**
**III. Safety Notes ..... 6**
A.General Information ..... 6
B. EMC Guidance and Manufacturer's Declaration..... 9
**IV. Installation ..... 13**
A.Height Measure Attachment ..... 13
B.Inserting Batteries ..... 15
C.Using AC Adapter..... 15
**V. Indicator and Key Functions..... 16**
**VI. Using Device ..... 17**
**VII.Wireless Connection..... 20**
**VIII. Device Setup..... 21**
**IX. Troubleshooting..... 23**
**X. Product Specifications..... 25**
**XI. Declaration of Conformity ..... 28**

# I. Explanation of Graphic Symbols on Label/Packaging

| Text/Symbol | Meaning |
|---|---|
|  | Caution. Failure to follow instructions may result in adverse events |
|  | Separate collection for waste of electrical and electronic equipment, in accordance with Directive 2012/19/EU. Do not dispose of device with everyday waste |
|  | Name and address of device manufacturer |
|  | Carefully read user manual before installation and usage, and follow instructions for use. |
|  | Medical electrical device, Type B applied part |
| REF | Device catalogue number |
| EU REP | Name and address of authorized representative in the European Union (applicable for medical devices only) |
| MD | Device is a medical device. Text indicates device category type |
| LOT | Manufacturer's batch or lot number for device |
| SN | Device's serial number |
| # | Device’s model number |
| UDI | Device's Unique Device Identifier<br>(01) GTIN (11) Production date (21) Serial number |
| e | Value in mass units. This is the difference between two consecutive display values, used to classify and verify a scale |
| CE 2460 | Device conforms to (EU) 2017/745 Regulation on Medical Devices. Four digit number is identifier for medical device Notified Body |
| CE | Device claims conformity with essential regulations set by the relevant European Union legislation |

| | |
|---|---|
| CE M17 0122 | Device complies with EU directives<br>**M**: Conformity label in compliance with Directive 2014/31/EU for non-automatic weighing instruments<br>**17**: Year in which conformity verification was performed and the CE label was applied. (ex: 17=2017)<br>**0122**: Identifier for metrology Notified Body |
| III | Device is a Class III scale in compliance with Directive 2014/31/EU |
|  | Name and address of entity importing device |
|  | Name and address of entity responsible for translating Information For Use |
| CON. | Event counter recording how many times protected-mode parameter adjustments relating to metrology-related characteristics (ex: gravity value) have been conducted for device |
|  | Device has received Taiwan NCC approval |
|  | Device conforms to U.S. Federal Communications Commission regulations |
| UK CA | Device complies with all UK applicable product legislation |
|  | Device's polarity of power |

**In case of differences, icon on device itself takes precedence.**

## II. Copyright Notice

**Copyright Notice**
**Charder Electronic Co., Ltd.**
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All content is licensed, and usage is subject to written authorization from Charder Electronic Co., Ltd. (hereinafter Charder) Charder is not liable for any damage caused by a failure to adhere to requirements stated in this manual. Charder reserves the right to correct misprints in the manual without prior notice, and modify the exterior of the device for quality purposes without customer consent.



Charder Electronic Co., Ltd.
No. 103, Guozhong Rd., Dali Dist.,
Taichung City, 41262 Taiwan

## III. Safety Notes

## A. General Information

Thank you for choosing this Charder Medical device. It is designed to be easy and straightforward to operate, but if you encounter any problems not addressed in this manual, please contact your local Charder service partner.

Before beginning operation of the device, please read this user manual carefully, and keep it in a safe place for reference. It contains important instructions regarding installation, proper usage, and maintenance.

**Intended Purpose**
This medical device is designed to be used in accordance with national regulations, to measure weight within specifications, for weight-related usage by professionals.

For the sake of consistency, "patient" will be used to refer to infants or toddlers for the rest of this document.

Patient is placed on a tray or sling which is attached to a weighing platform for the device to measure patient weight.

**Clinical Benefit**
Measurement results can be used by professionals to diagnose (and monitor) weight-related issues.

**Intended medical indications/contraindications**
Measurement: patient's body weight. No known contraindications to measurement of body weight.

**Intended patient profile**
(a) Age: no restrictions (subject to size limitations of device and maximum capacity)
(b) Weight: no restrictions within device weight capacity
(c) Patient Conditions: require measurement of body weight. Can fit upon device.

**Intended user profile**

(a) At least 20 years old

(b) Minimum knowledge:

- To be able to read at a high-school level and understand Arabic numerals (e.g. 1, 2, 3, 4...)
- Basic hygiene knowledge
- Trained in device's operation
- Read the instruction manual

(c) Language

- Able to read the language of instruction manual and on-screen instructions

(d) Qualifications

- No special certifications or qualifications required

**Residual Risk Evaluation**

(a) All foreseeable risks have been evaluated and considered acceptable. Generally speaking, the most likely risk caused by incorrect usage of the device is less accurate measurement (or inability to use device to acquire measurement), which does not pose imminent physical risk to patient or user.

(b) Benefit-risk ratio is considered acceptable. Infant scales are an important option for measuring patients. Usage of device is unlikely to result in harm to user or patient.

**General Handling**

- Ensure all parts are properly locked and tightened before operating the device.
- Measurement accuracy requires the subject's feet, back, and head to be straightly aligned. Please note that height can vary throughout the day
- **CAUTION**: Do not use next to equipment that may cause electromagnetic or other types of interference.

**Safety Instructions**

Before putting device into use, please read this user manual carefully. It contains important instructions for installation, usage, and maintenance of device.

The manufacturer shall not be liable for damages caused by failure to heed the following instructions:

- The device has an expected service life of 5 years when correctly handled, serviced, and periodically inspected in accordance with manufacturer's instructions.
- Improper installation will render the warranty null and void.
- Observe permissible ambient temperatures for use

**Maintenance**

- Please contact your local Charder distributor for regular maintenance and calibration, regular checking of accuracy is recommended; frequency to be determined by level of use and state of device.

**Cleaning**

Device surface should be cleaned using alcohol-based wipes.

**Warranty/Liability**

- The period of warranty shall be eighteen(18) months, beginning on the date of purchase. Please retain your receipt as proof of purchase.
- No responsibility shall be accepted for damage caused through any of the following reasons: unsuitable or improper storage or use, incorrect installation or commissioning by the owner or third parties, natural wear and tear, changes or modifications, incorrect or negligent handling, chemical, electrochemical, or electrical interference, unless damage is attributable to negligence on the part of Charder.
- This device does not contain any user-maintained parts. All maintenance, technical inspections, and repairs should be conducted by an authorized Charder service partner, using original Charder accessories and spare parts. Charder is not liable for any damages arising from improper maintenance or usage. Dismantlement of the device will void the warranty.

**Incident Reporting**

Any serious incident that has occurred in relation to the device should be reported to the manufacturer, EU representative (if device is used in EU member state), and competent authority of user/subject's member state.

## B. EMC Guidance and Manufacturer's Declaration

| Guidance and manufacturer's declaration-electromagnetic emissions | | |
|---|---|---|
| The product is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure that it is used in such an environment. | | |
| **Emission test** | **Compliance** | **Electromagnetic environment-guidance** |
| RF emissions<br>CISPR 11 | Group 1 | The product uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment. |
| RF emissions<br>CISPR 11 | Class A | The product is suitable for use in all establishments other than domestic and those directly connected to a low voltage power supply network which supplies buildings used for domestic purposes. |
| Harmonic emissions<br>IEC 61000-3-2 | Class A | |
| Voltage fluctuations /flicker emissions<br>IEC 61000-3-3 | Compliance | |

**Guidance and manufacturer's declaration-electromagnetic immunity**

The product is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure that it is used in such an environment.

| **Immunity test** | **IEC 60601 test level** | **Compliance level** | **Electromagnetic environment-guidance** |
|---|---|---|---|
| Electrostatic discharge(ESD) IEC 61000-4-2 | ±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air | ±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air | Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30% |
| Electrical fast transient/burst IEC 61000-4-4 | ± 2kV for power supply lines | ± 2kV for power supply lines | Mains power quality should be that of a typical commercial or hospital environment. |
| Surge IEC 61000-4-5 | ± 1kV line(s) to line(s) ± 2kV line(s) to earth | ± 1kV line(s) to line(s) ± 2kV line(s) to earth | Mains power quality should be that of a typical commercial or hospital environment. |
| Voltage Dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11 | 0% UT for 0,5 cycle 0% UT for 1 cycle 70% UT(30% dip in UT) for 25cycles 0% UT for 5 s | 0% UT for 0,5 cycle 0% UT for 1 cycle 70% UT(30% dip in UT) for 25cycles 0% UT for 5 s | Mains power quality should be that of a typical commercial or hospital environment. If the user of the product requires continued operation during power mains interruptions, it is recommended that the product be powered from an uninterruptible power supply or a battery. |
| Power frequency(50, 60 Hz) magnetic field IEC 61000-4-8 | 30 A/m | 30 A/m | The product power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment. |
| NOTE UT is the a.c. mains voltage prior to application of the test level. | | | |

## Guidance and manufacturer's declaration-electromagnetic immunity

The product is intended for use in the electromagnetic environment specified below.

The customer or the user of the product should assure that is used in such and environment.

| **Immunity test** | **IEC 60601 test level** | **Compliance level** | **Electromagnetic environment-guidance** |
|---|---|---|---|
| Conducted<br>RF<br>IEC 61000-4-6 | 3 Vrms<br>150 KHz to<br>80 MHz<br><br>6 V in ISM bands between 0,15 MHz and 80 MHz<br>80 % AM at<br>1 kHz | 3 Vrms<br>150 KHz to<br>80 MHz<br><br>6 V in ISM bands Between 0,15 MHz and 80 MHz<br>80 % AM at<br>1 kHz | Portable and mobile RF communications equipment should be used no closer to any part of the product including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. |
| Radiated RF<br>IEC 61000-4-3 | 3 V/m<br>80MHz to<br>2,7 GHz | 3 V/m<br>80MHz to<br>2,7 GHz | **Recommended separation distance:**<br>$d = 1,2\sqrt{P}$<br>$d = 1,2\sqrt{P}$ 80MHz to 800 MHz $d = 2,3\sqrt{P}$ 800MHz to 2,7GHz<br>Where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). |
| | | | Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] |
| | | | Interference may occur in the vicinity of equipment marked with the following symbol: |
| | | |  |

NOTE1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the product is used exceeds the applicable RF compliance level above, the product should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the product.

.

b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3V/m.

**Recommended separation distance between portable and mobile RF communications equipment and the product**

The product is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the product can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the product as recommended below, according to the maximum output power of the communications equipment.

| **Rated maximum output power of transmitter** W | **Separation distance according to frequency of transmitter m** | | |
|---|---|---|---|
| | **150 kHz to 80 MHz** $d = 1{,}2\sqrt{P}$ | **80 MHz to 800 MHz** $d = 1{,}2\sqrt{P}$ | **800 MHz to 2,7 GHz** $d = 2{,}3\sqrt{P}$ |
| 0,01 | 0,12 | 0,12 | 0,23 |
| 0,1 | 0,38 | 0,38 | 0,73 |
| 1 | 1,2 | 1,2 | 2,3 |
| 10 | 3,8 | 3,8 | 7,3 |
| 100 | 12 | 12 | 23 |

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where p is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

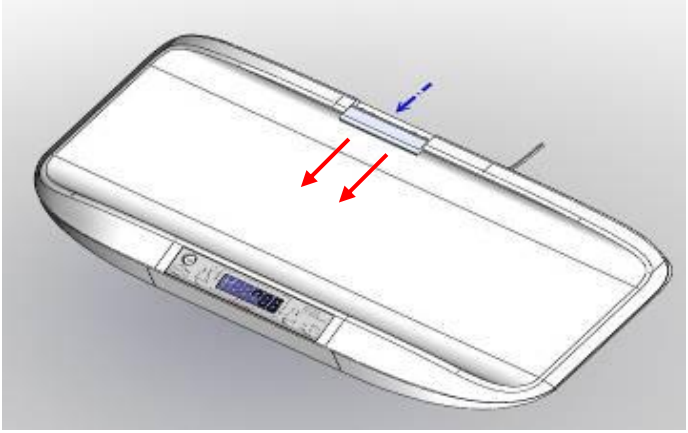
NOTE1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

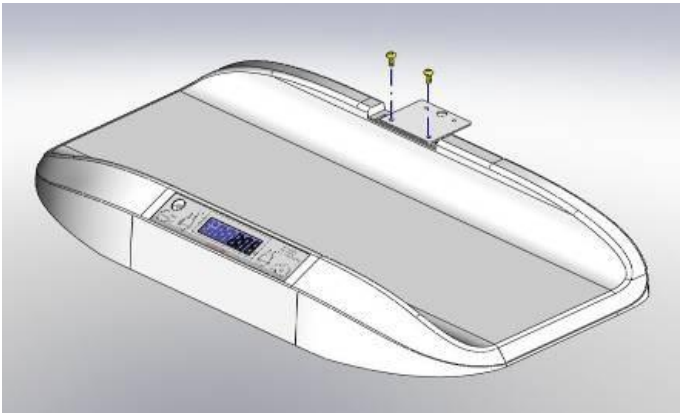
## IV. Installation

### A. Height Measure Attachment

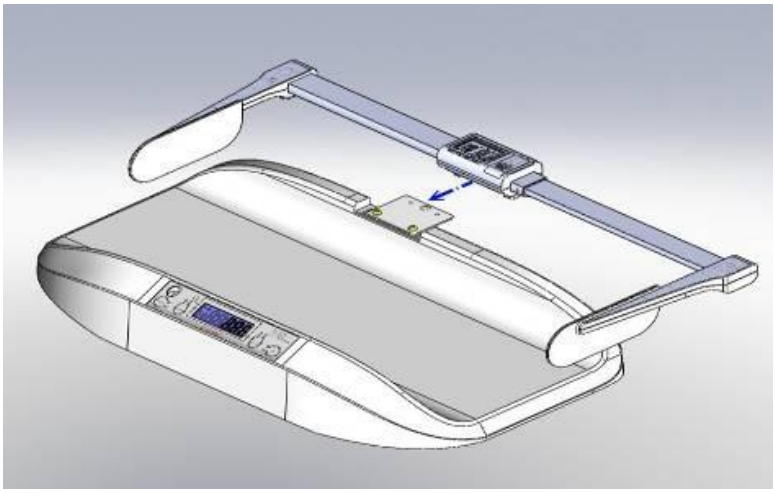
1. Remove bracket holder cover.



2. Attach bracket to device with two screws.

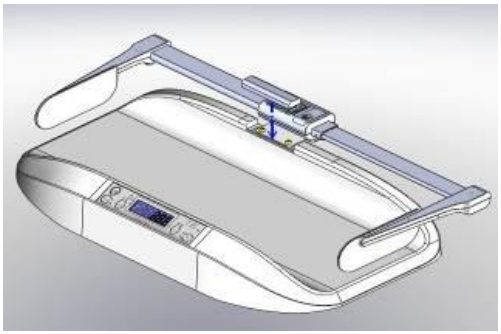


3. Attach height rod to bracket carefully until a click noise is heard. (HM80D used as example)

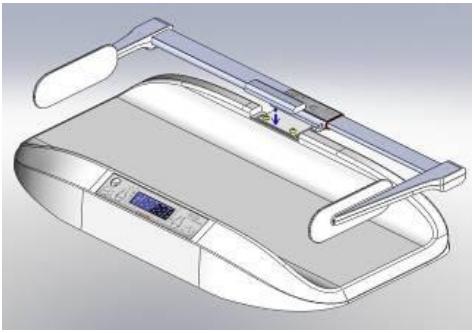


4. Install bracket holder cover.

(HM80D)

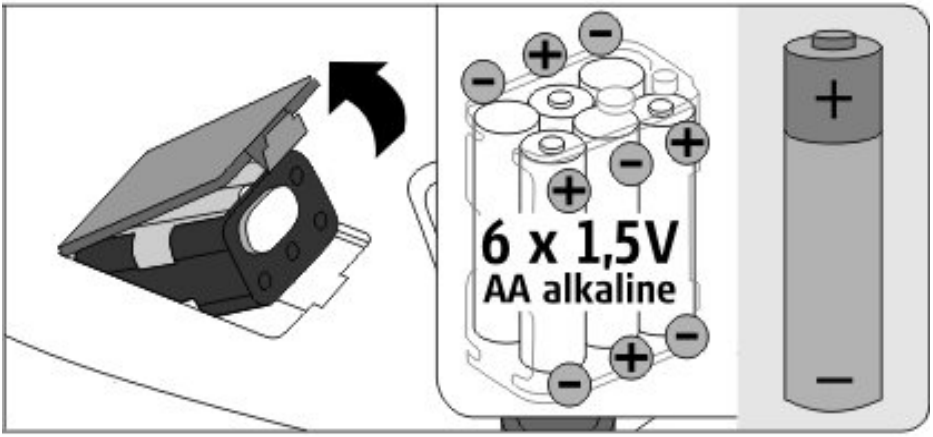


(HM80M)



## B. Inserting Batteries

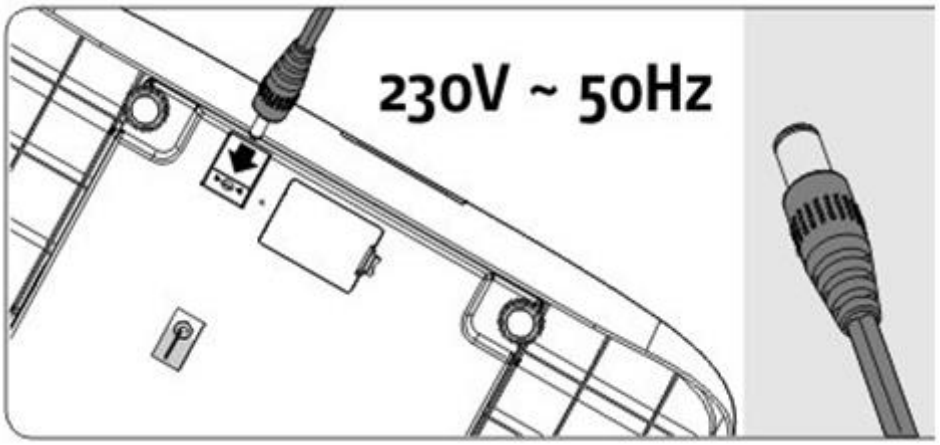
Step 1. Open battery cover and take out battery compartment, Insert batteries correcting according to polarity.



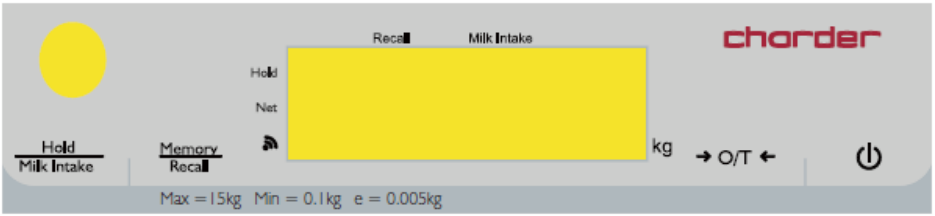

If LobAt prompt displays on the LCD, please replace batteries or plug in adapter.

## C. Using AC Adapter

Device can be powered using AC adapter. Plug adapter into device before plugging into mains.



## V. Indicator and Key Functions




**Display**

: Stable
: Negative weight
: Zero

**Key Function**

1. Hold/Milk Intake:
   - Press **[Hold/Milk Intake]** key once to hold weight. To return to normal weighing mode, press **[Hold/Milk Intake]** key again.
   - Press and hold **[Hold/Milk Intake]** key for 3 seconds to enable Milk Intake function.

2. Memory/Recall:
   - Press **[Memory/Recall]** key to recall stored weight.
   - Press and hold **[Memory/Recall]** key for 3 seconds to store current weight.

3. O/T (Zero/Tare):
   - Press **[O/T]** key to zero scale (±2% of full capacity).
   - Press **[O/T]** key to tare weight on device.

4. (On/Off):
   - Press to turn device on or off.

# VI. Using Device

## A. Basic Operation

Switch on the device using key. The device will automatically perform self-calibration, displaying software version.

Once "0.00 kg" appears on indicator, device is ready for measurement.

**Note**: If "0.00 kg" does not display on indicator, press **[ZERO]** key to zero the device. This function can be used for weight within ±2% of full capacity.

Gently place baby on tray. Press**[Hold/Milk Intake]** key. HOLD symbol will appear on indicator. After weight has stabilized, the HOLD symbol will disappear, displaying baby's weight on indicator.

**Note**: If baby's weight exceeds device capacity (including tare), indicator will display "Err" prompt due to overload.

Press **[Hold/Milk Intake]** to disable Hold function.

**Note**: Hold function can be activated before or after baby is placed on tray. However, if baby cannot hold still, we recommend activating Hold after placing baby on tray.

## B. Recall

1. After baby weight has been measured, press and hold **[Memory/Recall]** key for 3 seconds to store weight.
2. Press **[Memory/Recall]** key to recall stored weight.

## C. Milk Intake

The milk intake function makes it easy to record baby's milk intake. Begin by measuring baby weight before milk intake.

1. Weigh baby before feeding.

| | Display |
|---|---|
| Turn on device. |  |
| Place baby on tray (5kg used an example) |  |
| Press **Hold/Milk Intake** key |  Triangle will appear next to "HOLD" |
| Press and hold **Memory/Recall** key for 3seconds to store baby weight. |  Display flashes three times and stores baby weight |

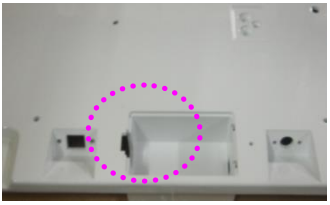
2. Feed baby.

3. Weigh baby after feeding.

| | Display |
|---|---|
| Turn on device. |  |
| Place baby on tray (5.2kg weight after feeding used as example) |  |
| Press and hold **Hold/Milk Intake** key for 3 seconds.<br><br>Milk Intake will be displayed on screen (0.2kg in example) |  |
| Press key to return to normal mode. |  |

## D. Printing

If thermal printer is connected to indicator via transfer cable, results can be printed.



## VII. Wireless Connection

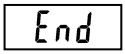
If the device has the wireless module installed, the indicator can transmit measurement results wirelessly.

### A. Turning on WiFi

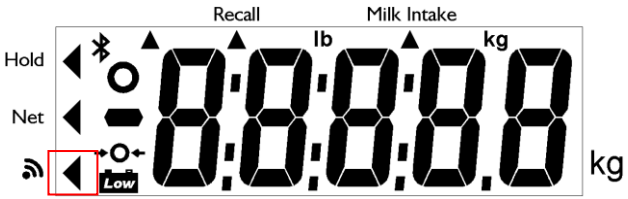
1. Turn on the scale. Press and hold **[O/T]** key for 3 seconds to enter settings.

2. Press **[Hold/Milk Intake]** key several times until 

appears to see status (ON/OFF). If status is OFF, press **[O/T]** key to enter, press **[Hold/Milk Intake]** key to switch to ON, and press **[O/T]** key to confirm settings.

3. Press **[Hold/Milk Intake]** key several times until 

appears, and press **[O/T]** key to save and return to normal mode.




*** No triangular sign: Wireless power from scale is off ***

*** Triangular sign shows up continuously: connecting…***

*** Triangular sign is blinking: connected ***

## VIII. Device Setup

When the device is switched on, press and hold the **[O/T]** key until the display shows the "SETUP", followed by"A_OFF" (first option in setting menu).

In device setup:
**[Hold/Milk Intake]** to toggle menu option
**[O/T]** to confirm selection / enter submenu




**Auto Power-Off**: Instruct device to shut off automatically after a certain period of time.

Auto off options: 60 sec / 120 sec / 240 sec / 300 sec / off

Press **[Hold/Milk Intake]** key to select target time. After selection, press **[O/T]**. Indicator will return to "A.OFF".

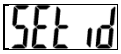



**Set device date**: Format/order is YYYY/MM/DD/HH:MM. (24-hour)




Year Month. Day Hour. Minute

**[Hold/Milk Intake]** : select next digit
**[O/T]**: increase
: Enter / confirm input



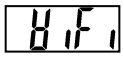

**Set scale ID**: this function is used by service technician, and user normally does not need to change setting.

Press **[Hold/Milk Intake]**to toggle between no/yes, and **[O/T]** to confirm selection.



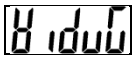
**Bluetooth (optional)**: If device has Bluetooth module installed, Bluetooth function can be turned on or off.

Press **[Hold/Milk Intake]**to toggle between on/off, and **[O/T]** to confirm selection.



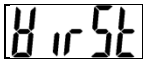
**Wi-Fi (optional)**: If device has Wi-Fi module installed, Wi-Fi function can be turned on or off.

Press **[Hold/Milk Intake]**to toggle between on/off, and **[O/T]** to confirm selection.



**Test Wi-Fi connection issue (optional)**: If device has Wi-Fi module installed, this function is to be used by service technician, and user normally does not need to change setting.

Press **[Hold/Milk Intake]**to toggle between no/yes, and **[O/T]** to confirm selection.



**Wi-Fi App Setting (optional)**: If device has Wi-Fi module installed, this function is to be used by service technician, and user normally does not need to change setting.

Press **[Hold/Milk Intake]**to toggle between no/yes, and **[O/T]** to confirm selection.

After completing settings, press **[Hold/Milk Intake]** key. "End" will display. Press **[O/T]** key to apply changes and end settings.

## IX. Troubleshooting

Before contacting your local Charder distributor for repair service, we recommend considering the following troubleshooting procedures:

**Self-inspection**

**1. Device will not power on**

- If battery power is depleted, replace with new batteries
- If batteries are not used, check if the power adapter is plugged into the device properly. Check if power adapter is plugged into mains properly

**2. Indicator showing "0000" ZERO SPAN out of range**

- Interference due to factors such as RF disturbance or ground vibration. Relocate device to location without interference and try again
- Unstable platform. Relocate device to stable location and try again
- External objects interfering with measurement platform. Clear platform of objects and try again
- Device may not function properly on soft surfaces such as carpets or lawns. Relocate device to location with solid, stable floor
- If the steps above cannot resolve the problem, re-calibration may be required to correct weighing accuracy

**Distributor support required**

If the following errors occur, we recommend contacting your local Charder distributor for repair or replacement services:

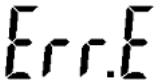
**1. Device will not power on**

- Faulty on/off key
- Broken or damaged wires causing short circuit or faulty connection
- Safety fuse burnout
- Faulty adapter

**2. Indicator damage**

- Possible hardware defects include: uneven brightness in LCD screen, blurred text, smeared rainbow screen, incorrect decimal display
- Unable to save or read data
- Indicator shows "ERRL" after device is switched on
- Keys not responding
- Buzzer malfunction

**Error Messages**

| Error Message | Reason | Action |
|---|---|---|
|  | **Low battery warning** Voltage of battery is too low to operate device | Replace batteries, or plug in adapter |
|  | **Overload** Total load exceeds device's maximum capacity | Reduce weight on measurement platform and try again |
|  | Zero count over calibration zero range +10% while power on | Re-calibration required. Please contact distributor |
|  | Zero count under calibration zero range -10% while power on | Re-calibration required. Please contact distributor |
|  | **Program Error** Fault with device software | Error normally caused by faulty loadcell or wiring. Please contact distributor |

## X. Product Specifications

| Model | | MS5900 | | |
|---|---|---|---|---|
| Weight Measurement | Capacity | (15 kg)<br>0-6 kg x 2g<br>6-15 kg x 5g | (15 kg)<br>0-15 kg x 5g | (20 kg)<br>0-10 kg x 5g<br>10-20 kg x 10g |
| | Accuracy | ±1.5e | | |
| | OIML | Class III | | |
| | LCD Screen | 1.0-inch LCD screen (5 digits) | | |
| Dimensions | Overall | 670(W) x 330(D) x 125(H) mm | | |
| | Tray | 630(W) x 250(D) x 70(H) mm | | |
| Device Weight | | 4.1 kg | | |
| Key Functions | | On/Off, Zero/Tare, Memory/Recall, Hold/Milk Intake | | |
| Data Transmission | | USB, Wireless Module (optional)<br>**NOTE**: Device should be connected to network by qualified distributors only | | |
| Power Supply | | 6 AA batteries / Power adapter | | |
| Operation Environment | | 0℃ ~ +40℃<br>15% ~ 85% RH<br>700 hPa ~ 1060 hPa | | |
| Standard Accessories | | User manual x1<br>Power Adapter x1 | | |
| Optional Accessories | | Height Rod, Thermal Printer<br>Carrying bag | | |

**Warning**

The device is only compatible with the power adapters specified below.

| AMP VOLTAGE | DRAWING NO. | CE APPROVED TYPE NO. / MODEL NO. | TYPE | Adapter plug |
|---|---|---|---|---|
| 12V 1A | CD-AD-00043 | UES12LCP-120100SPA | US |  |
| | CD-AD-00043 | UES12LCP-120100SPA | EU | |
| | CD-AD-00043 | UES12LCP-120100SPA | UK | |
| | CD-AD-00043 | UES12LCP-120100SPA | AU | |
| | CD-AD-00043 | UES12LCP-120100SPA | SA | |

# Notes

# Notes

## XI. Declaration of Conformity

Manufacturer hereby declares that this product is in conformity with the regulations and standards outlined in the following directives:

| | |
|---|---|
| CE 2460 | **(EU) 2017/745 Regulation on Medical Devices** |
| CE M20 0122 | **2014/31/EU Non-automatic Weighing Instruments Directive** |

**RoHS Directive 2011/65/EU and Delegated Directive (EU) 2015/863**

**Radio equipment and telecommunications terminal equipment Directive 2014/53/EU**
(applicable if device has wireless function)

**Part 15 of the Federal Communications Statement Rules**
This device may not cause harmful interference
This device must accept interference received without causing undesired operation

(Full Declaration of Conformity is available on manufacturer's website)

**Authorized EU Representative:**

EU REP **Obelis s.a.**
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Belgium

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