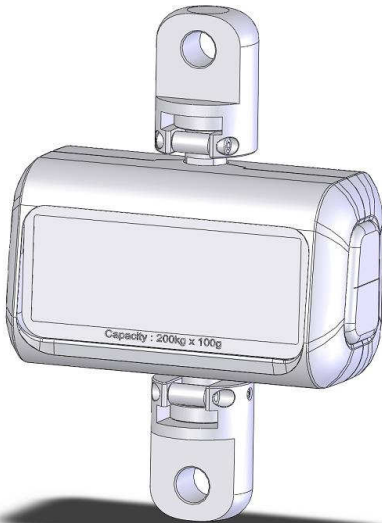

charder®



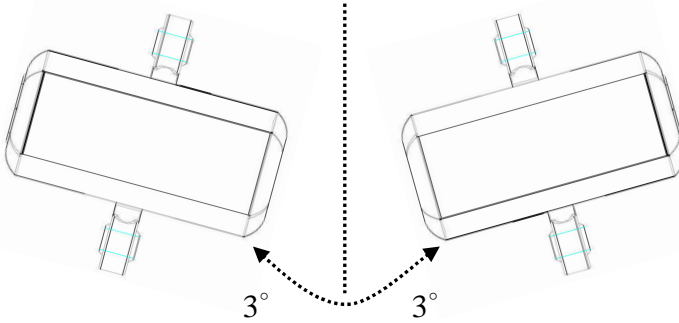
MHS 2510 I/MHS 2610 I
Medical Scale
USER MANUAL

Please keep the instruction manual at hand all the time for future reference.



CAUTION

TILT ANGLE OVER 3° WILL CAUSE FALSE READING.

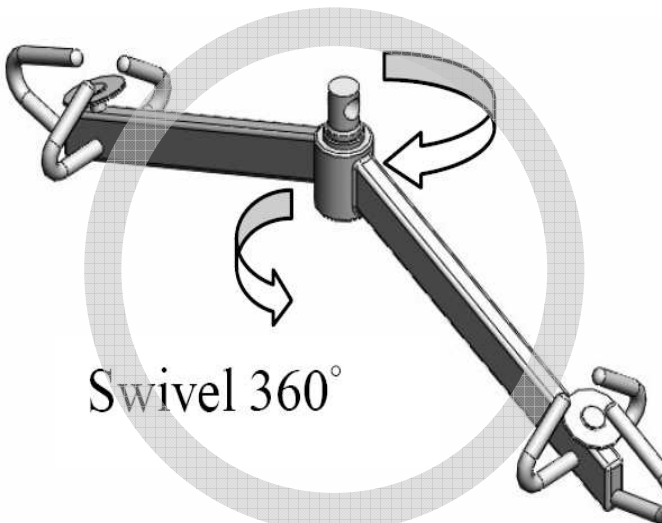


Limited Angle

Cardon joints are assembled with loadcell from ex-factory. It should not be twisted by user or in any other circumstance.

Misusage will cause unexpected danger.

We do not recommend to build in a scale into the construction of any lift or Hoist that hanger bar do not swivel 360 degrees.





WARNING

Please comply with the maximum capacity of the scale which is stated on the front panel and label on the back of the scale.

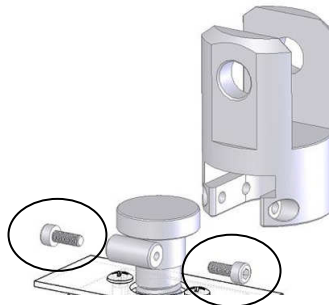
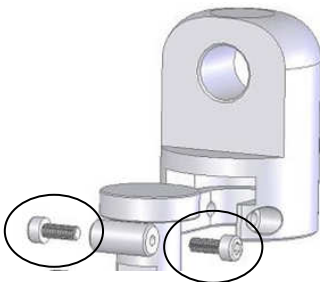
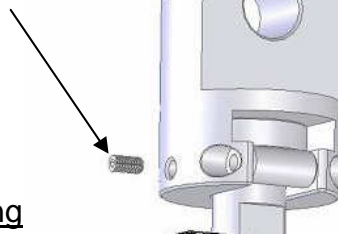
- The maximum scale loading must not be exceeded. The safety requirements and notes on appropriate use provided by lifter and system provider must be observed.
- After assembly at the lifter the scale must not be rotated horizontally. Rotation is only allowed in connection with 360 degree swivel bearings installed in the lift system.
- The device must not be modified from ex-factory. Any modification will cause all liability and warranty invalid and exclude any damage resulting afterward.
- **The maximum safe overload is 6 x maximum capacity of the medical device.**

WARNING BEEPS

The device beeps when loading exceeds its maximum capacity.

Set screw is for use of fixing direction of lift scales from factory and may not be rotated.
There is a danger of a damage of internal fastening elements if making joint free swivel.

Set screw



For safety please assure screws are tight before use.

TABLE OF CONTENTS

PREFACE.....	4
GENERAL INFORMATION	4
SAFETY INSTRUCTION	4
ENVIROMENTAL.....	5
CLEANING.....	5
MAINTENANCE.....	5
WEIGHING OPERATION	6
WARRANTY-LIABILITY	6
RECYCLING	7
READING BEFORE USE	7
EXPLANATION OF THE GRAPHIC SYMBOLS	8
EMC GUIDANCE AND MANUFACTURER’S DECLARATION.....	10
SPECIFICATIONS.....	17
TECHNICAL DATA OF JOINT	18
PANEL INDICATION.....	19
KEY FUNCTIONS.....	20
FEATURE SETTINGS — For Two Key Model.....	21
OPERATION FLOW.....	21
SETTING UP YOUR SCALES —For Two Key Model.....	22
FEATURE SETTINGS—For Three Key Model.....	23
SETTING UP YOUR SCALES — 3 KEY	24
HOW TO USE THE BMI FUNCTION	25
INSTRUCTION FOR REPLACING BATTERY	26
ERROR MESSAGE	27
TROUBLESHOOTING	28

PREFACE

Thank you for choosing CHARDER MEDICAL product. All features of this product were designed to state of the art and are optimized for simple and straightforward use. If you have any queries or experience any problems not addressed in the operating instructions, please contact your CHARDER MEDICAL service partner, or visit us on the Internet at www.chardermedical.com

GENERAL INFORMATION

We strongly recommend you use the scales carefully and properly. Do operations after reading user manual to prevent any damages on personnel and equipment.

SAFETY INSTRUCTION



Before putting the device into use, please read with care the information given in the Operating Instructions. They contain important instructions for installation, proper use and maintenance of the device. The manufacturer shall not be liable for damages arising out of failure to heed the following instructions:

These batteries should be kept away from small children. If swallowed, promptly seek medical assistance.

Expected Service Life: 5 years

When using electrical components under increased safety requirements, always comply with the appropriate regulations.

Improper installation will render the warranty null and void.

This device is designed for use indoors.

Observe the permissible ambient temperatures for use

The device meets the requirements for electromagnetic compatibility. Do not exceed the maximum values specified in the applicable standards.

Ensure that the patient does not lean against the device risk of falling! If you have any problem, contact your local CHARDER MEDICAL service.

ENVIROMENTAL

All batteries contain toxic compounds; disposal of batteries should be delegated to a competent organization, complying with the deposit of Poisonous Waste Regulation 1972.

Please do not incinerate batteries.

The optimum operating temperature for the scale is 0°C to +40°C; although it will operate at higher and lower temperatures the scales battery life will be adversely effected.

You are legally obliged to hand in used batteries/rechargeable batteries to a local collection point so that they can be disposed of in an environmentally-friendly way. When buying new batteries, select batteries low in harmful substances and no mercury(Hg), cadmium(Cd) or lead(Pb).

CLEANING

We would recommend using alcohol based wipes or similar when cleaning the scales.

Please do not use large amounts of water when cleaning the scales as this will cause damage to the scales electronics, you should also refrain from using corrosive liquids or high pressure washers.

Always turn off the scale before cleaning.

MAINTENANCE

The scale does not require any routine maintenance. However, we recommend checking the scale's accuracy at regular intervals. The

regularity of these checks is dependent on the level of use and the state of the scale. If any inaccuracies occur, please contact your local dealer or CHARDER MEDICAL service partner.

WEIGHING OPERATION

Before reading detailed instructions on how to use all the weighing functions that are built into your scale, please read the following important guidelines:

Always be sure that the display shows `Zero` before use, if it does not then please press the ZERO key.

The Professional Medical Hoist scale is designed to detect when a stable weight is achieved, your reading should be taken at this point.

WARRANTY-LIABILITY

If a fault or defect is present on receipt of the unit which is within CHARDER MEDICAL's scope of responsibility, CHARDER shall have the right to either repair the fault or supply a replacement unit. Replaced parts shall be the property of CHARDER. Should the fault repairs or replacement delivery not be successful, the statutory provisions shall be valid. The period of warranty shall be two years, beginning on the date of purchase. Please retain your receipt as proof of purchase. Should your scale require servicing, please contact your dealer or CHARDER MEDICAL Customer Service.

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, changes or modifications, incorrect or negligent handling , overuse, chemical, electrochemical or electrical interference or humidity, unless this is attributable to negligence on the part of CHARDER MEDICAL.

If operating, climatic or any other influences lead to a major change in conditions or material quality, the treaty for perfect unit functioning shall be rendered null and void. If CHARDER provides an individual warranty, this means that the unit supplied will be free of faults for the length of the warranty period.

RECYCLING

This product is not to be treated as regular household waste, but should be handed into an electrical/electronic equipment recycling centre.

You can obtain further details from your local council, your municipal waste disposal company or the firm which you purchased the product.

READING BEFORE USE

Before reading detailed instructions on how to use all the weighing functions that are built into your scale, please read the following important guidelines:

*Always be sure that the display shows `Zero` before use, if it does not then please press ZERO key to reset.

*MHS scale is ideal for Patient Lifter / Mobility / Hi-Trac Lifter.

Note: Do not measure weight during movement, tilt will cause inaccuracy.

EXPLANATION OF THE GRAPHIC SYMBOLS

SN-T13000001

Designation of the serial number of every device, applied at the device.

(Number as an example)



“Please note the accompanying documents“

or “Observe operating instructions“



Identification of manufacturer of medical product including address

Charder Electronic Co., Ltd.

No.103, Guozhong Rd., Dali Dist.,

Taichung City 412, Taiwan (R.O.C.)



Type B applied part.

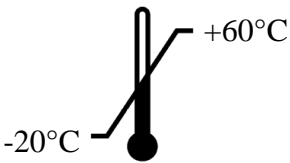


Dispose of old appliances separately from your household waste!!!

Instead, take them to communal collection points.



Carefully read this operation manual before setup and commissioning, even if you are already familiar with Charder scales.



Transport and storage temperature limit indicating the upper and the lower limit

(Transport and storage temperature on packaging)

EMC GUIDANCE AND MANUFACTURER'S DECLARATION

Guidance and manufacturer's declaration-electromagnetic emissions

The MHS2510 I/2610 I is intended for use in the electromagnetic environment specified below.

The customer or the user of the MHS2510 I /2610 I should assure that it is used in such an environment.

Emission test	Compliance	Electromagnetic environment-guidance
RF emissions CISPR 11	Group 1	The MHS2510 I /2610 I 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 CISPR 11	Class B	The MHS2510 I /2610 I is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations /flicker emissions IEC 61000-3-3	Not applicable	

Guidance and manufacturer's declaration-electromagnetic immunity

The MHS2510 I /2610 I is intended for use in the electromagnetic environment specified below.

The customer or the user of the MHS2510 I /2610 I 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	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 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 + 1kV for input/output lines	± 2kV for power supply lines Not applicable	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 differential mode Not applicable	Mains power quality should be that of a typical commercial or hospital environment.

<p>Voltage Dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11</p>	<p><5% UT(>95% dip in UT) for 0.5 cycle</p> <p>40% UT(60% dip in UT) for 5 cycles</p> <p>70% UT(30% dip in UT) for 25 cycles</p> <p><5% UT(>95% dip in UT) for 5 s</p>	<p>Not applicable</p> <p>Not applicable</p> <p>Not applicable</p> <p>Not applicable</p>	<p>Mains power quality should be that of a typical commercial or hospital environment. If the user of the MHS2510 I /2610 I requires continued operation during power mains interruptions, it is recommended that the MHS2510 I /2610 I be powered from an uninterruptible power supply or a battery.</p>
<p>Power frequency(50/60 Hz) magnetic field IEC 61000-4-8</p>	<p>3 A/m</p>	<p>3 A/m</p>	<p>The MHS2510 I /2610 I power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.</p>
<p>NOTE UT is the a.c. mains voltage prior to application of the test level.</p>			

Guidance and manufacturer's declaration-electromagnetic immunity

The MHS2510 I /2610 I is intended for use in the electromagnetic environment specified below.

The customer or the user of the MHS2510 I /2610 I should assure that is used in such and environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 KHz to 80 MHz	Not applicable	Portable and mobile RF communications equipment should be used no closer to any part of the MHS2510 I /2610 I including cables, than the recommended separation distance
Radiated RF IEC 61000-4-3	3 V/m 80MHz to 2,5 GHz	3 V/m	calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance: $d = 1,2 \sqrt{P}$ $d = 1,2 \sqrt{P}$ 80MHz to 800 MHz $d = 2,3 \sqrt{P}$ 800MHz to 2,5 GHz

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 metres (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 **MHS2510 I /2610 I** should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the **MHS2510 I /2610 I**
- b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

**Recommended separation distance between
portable and mobile RF communications equipment and the MHS2510 I /2610 I**

The MHS2510 I /2610 I is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the MHS2510 I /2610 I can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the MHS2510 I /2610 I 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 2,5 GHz $d = 2,3\sqrt{P}$
0,01	N/A	0,12	0,23
0,1	N/A	0,38	0,73
1	N/A	1,2	2,3
10	N/A	3,8	7,3
100	N/A	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.

SPECIFICATIONS

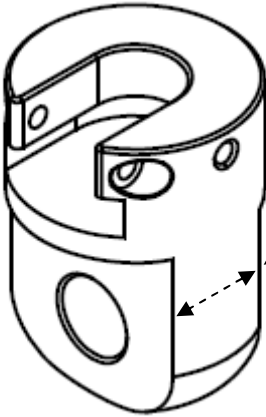
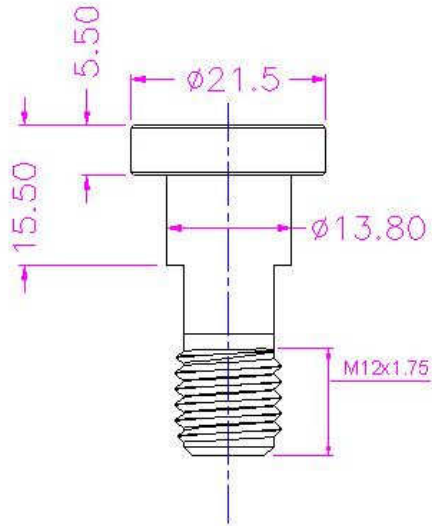
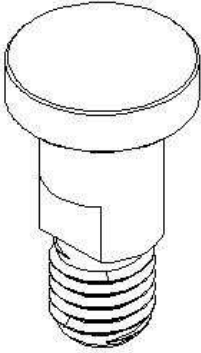
MODEL : MHS 2510 I / MHS 2610 I

Capacity	300kg / 400kg
Division	0.1kg / 0.2kg
Accuracy	$\pm 0.15\text{kg}$ / $\pm 0.30\text{kg}$
OIML CLASS	III
Display options	1.0 inch 5 and 1/2 digits
Weight Unit	kg
Operating Temp. and Humidity	+0°C ~ +40°C 15% - 85% RH
Transport and Storage Temperature and Humidity	- 20°C + 60°C 10% - 95% RH
Dimension	120 x 70 x 160 mm
Power	1.5V AAA * 6 batteries

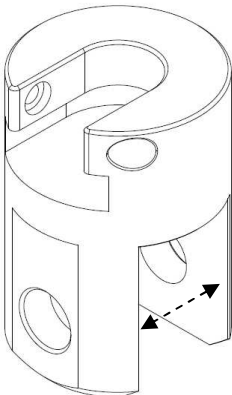
WARNING!

*Only kg unit is approved by OIML(International Organization of Legal Metrology)

TECHNICAL DATA OF JOINT



SS-6381 16mm
SS-6384 13mm



SS-6662 14mm
SS-6663 24mm

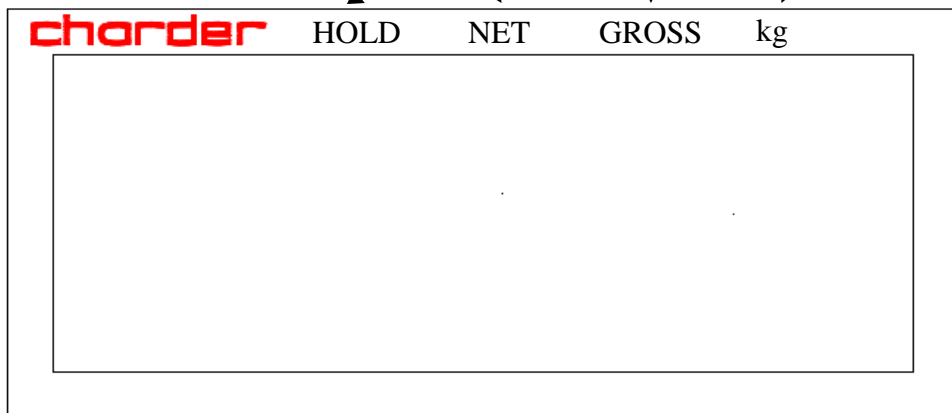
PANEL INDICATION

HOLD indicator

NET weight

gross weight

kg unit indicator



Different Types and Keys of MHS scales



MHS2500 I 2key



MHS2600 I 2key



MHS2500 I 3key



MHS2600 I 3key

KEY FUNCTIONS

ON/OFF/ZERO/TARE

Press to switch on and press 3 seconds to switch off.

Press to return to zero which is at condition of $\pm 2\%$ of full capacity.

Press to tare the weight.

HOLD— For Two Key Model

Press to lock weighing result while weighing.


To disable the hold function, press **HOLD** key again

HOLD/BMI—For Three Key Model

Press to lock weighing result while weighing.

To disable the hold function, press Hold key again

Press and hold for 3 seconds to enable B.M.I feature.

When you are in B.M.I mode, please enter you height by press **on/off/zero/tare** and  key to adjust the height of person. Press HOLD again to complete BMI setting.

LCD screen is now displaying your B.M.I

Note: Press ON/OFF/ZERO/TARE and for 3 seconds for continuous adjustment.

(SET UP) KEY

Press 3 seconds to set up -Auto Switch off time and beeper.

FEATURE SETTINGS — For Two Key Model

Auto-Off Time Adjustment

This feature affects the period of non-operation. Once exceed the setting time, the device will shut off automatically.

Auto off time: 120 sec/180 sec/240 sec/300 sec/off

Buzzer Adjustment

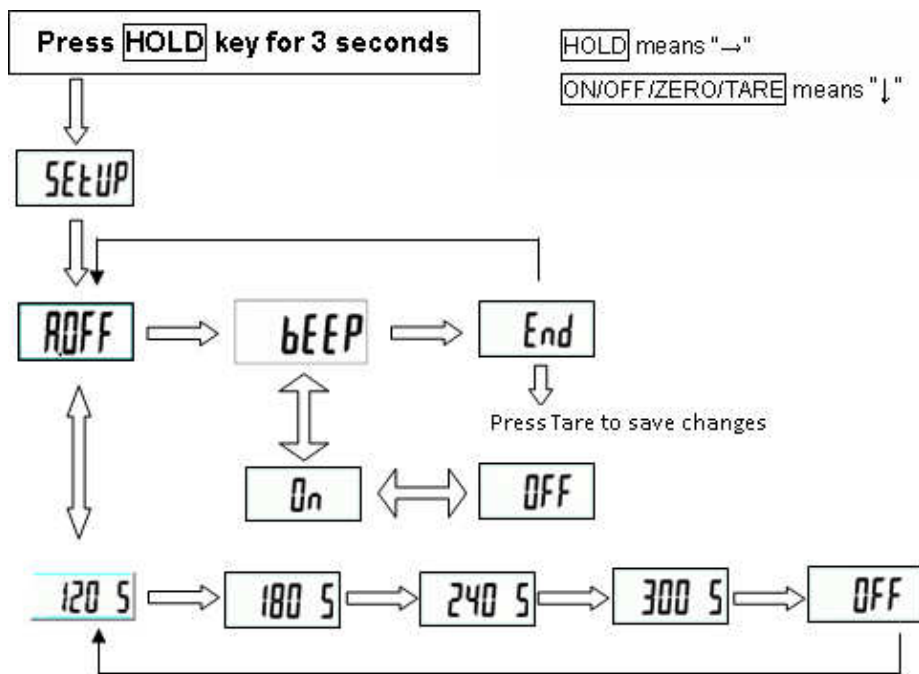
This function affects the buzzer sound ON and OFF by user's preference.

Buzzer: On/Off OPERATION FLOW.

Please follow the operation flow to set up your scale.

OPERATION FLOW

Please follow the operation flow to set up your scale.



Please press Tare button when "End" shows on LCD screen to save changes.

SETTING UP YOUR SCALES —For Two Key Model

For Example: Set up 180s AUTO-OFF time and Buzzer OFF

Step 1.

Press **HOLD** for 3 seconds to enter **SETUP** setup mode.

Step 2.

Press **ZERO** to enter **AOFF** mode when **AOFF** is displayed.

Step 3.

Press **HOLD** to select **180 5** which means AUTO-OFF TIME is 180 seconds.

Step 4.

Press **ZERO** to decide and return to **AOFF** mode and press **HOLD** to shift to **bEEP** setup mode.

Step 5.

Press **ZERO** to enter **bEEP** setup mode and press **HOLD** again to select between **On** and **OFF**.

Step 6.

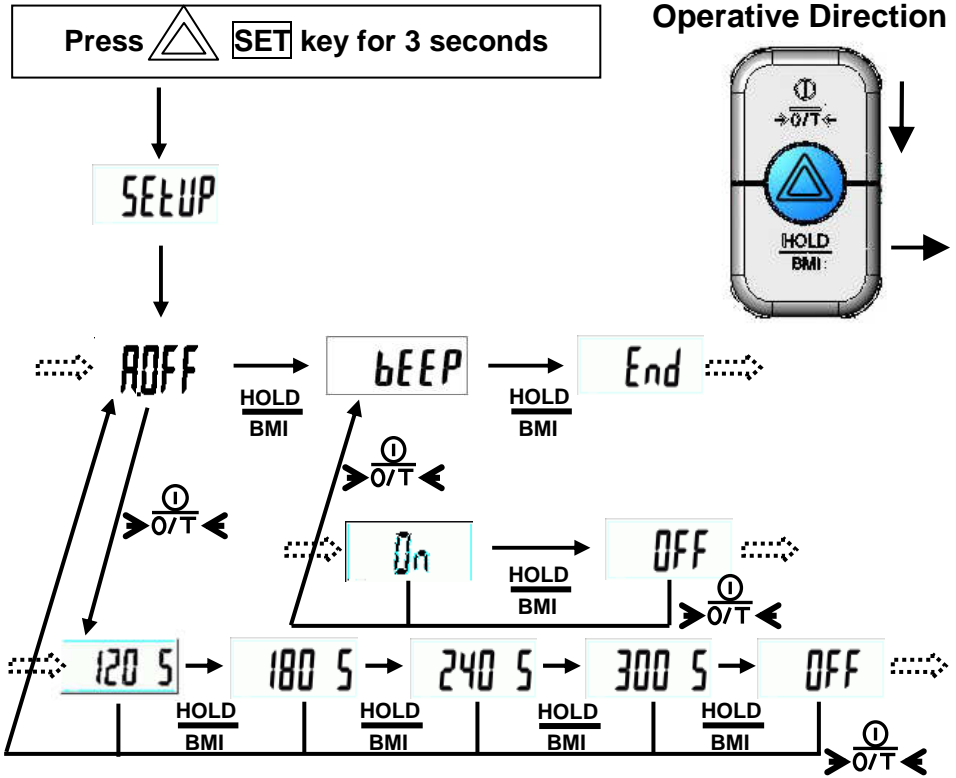
Press **ZERO** to decide and return to **bEEP** set up mode.

Step 7.

Press **HOLD** to select **End** and press **ZERO** to finish setting.

FEATURE SETTINGS—For Three Key Model



Please follow the operation flow to set up your scale.



SETTING UP YOUR SCALES — 3 KEY

For Example: Set up 180s AUTO-OFF time and Buzzer OFF

Step 1.

Press  for 3 seconds to enter  setup mode.

Step 2.

Press  to enter  mode.

Step 3.

Press  to select  which means AUTO-OFF TIME is in 180 seconds.

Step 4.

Press  to confirm and back to  mode then



press  to move to  setup mode.

Step 5.


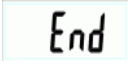

Press  to enter  setup mode and press

 again to select beeper  or .

Step 6.

Press  to back to  set up mode.


Step 7.

Press  to move to  and press  to finish your setting.

HOW TO USE THE BMI FUNCTION

Power on the scale.

*Press and hold the **HOLD/BMI** key for 3 seconds to enter the BMI function.*

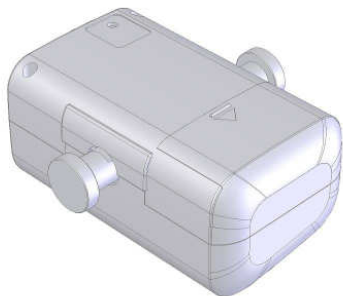
*In BMI mode, please enter your height by **ON/OFF/ZERO/TARE (+)** and  **(-)** to adjust your height. Press **HOLD/BMI** again to complete.*

LCD screen is now displaying your BMI value.

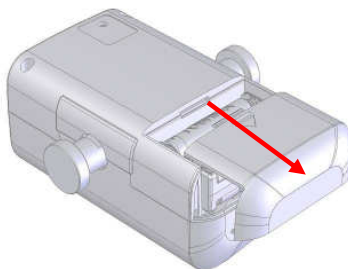
*Press **HOLD/BMI** to return to normal mode.*

INSTRUCTION FOR REPLACING BATTERY

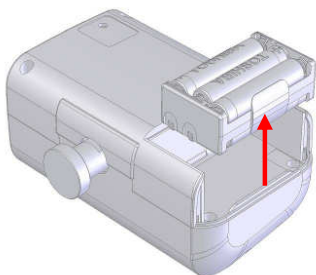
MHS Series uses six AAA size alkaline batteries. Please read the following instruction before using the scale.



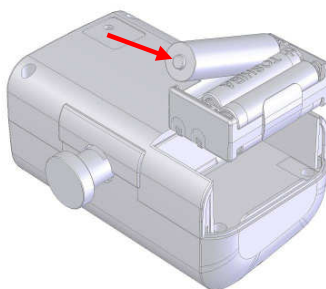
1. Find the battery cover at the rear of scale



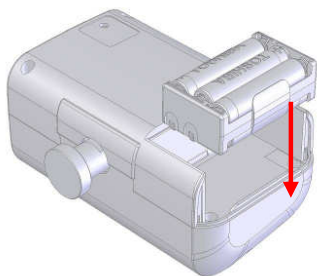
2. Remove the battery cover.



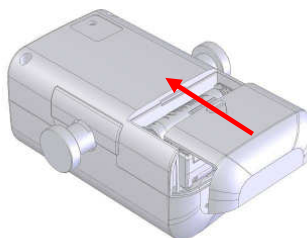
3. Take out the battery housing



4. Installing 6* AAA size batteries.



5. Reinstalling the battery case.



6. Installing the battery cover.

ERROR MESSAGE

■ LOW BATTERY INDICATION

This warning show that the voltage of battery is too low to operate. Please change a new one.

The LCD display shows the text "LoBat" in a seven-segment font.

■ ZERO HIGH

The loading is over limited when power on, please reduce the loading.

The LCD display shows the number "00000" in a seven-segment font.

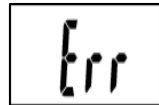
■ ZERO LOW

The loading is under limited when power on, please increase the loading.

The LCD display shows the number "00000" in a seven-segment font.

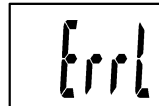
■ OVER LOAD or COUNTING ERROR

The loading is over limit, please reduce the loading and try again.
If the trouble still exists, please call the service.

The LCD display shows the text "Err" in a seven-segment font.

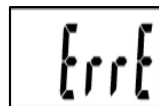
■ COUNTING ERROR (too low)

The loading is lower than limit when power on, please increase the loading and try again.
If the trouble still exists, please call the service.

The LCD display shows the text "ErrL" in a seven-segment font.

■ EEPROM ERROR

The programs of the scale is error, please call the service.

The LCD display shows the text "ErrE" in a seven-segment font.

TROUBLESHOOTING

Troubleshooting for defective modes:

Original purchaser can enjoy the benefits under the effective Warranty against functional defects in material and workmanship subject to the terms and conditions listed in the yearly Warranty Program & Return Policy.

Our warranty service program includes the following:

1. Technician repair service under warranty or at a service maintenance charge depending on the workmanship for the defective functionality or cause of damage covered by the warranty.
2. Parts replacement from the manufacturing factory under the warranty or at a certain cost for the replaced parts plus the workmanship charge if not covered under the warranty.

Before you contact our Authorized Dealer in your country for technician repair service, please read through the following section carefully:

Self-checking Tips:

Some functional defects can be identified and maintained by users as listed below:

1. Power-on failure

- Check if the main power adaptor has not plugged onto the scale properly
- Check if the battery power is running low - Replace with new batteries

2. Indicator showing “0000” ZERO SPAN out of range

- Incorrect weighing result - Avoid damages by external environment force such as free-drop to the ground, collision by external objects, etc.
- Proper re-calibration procedure required to correct the setting of weighing accuracy.
- Interference due to RF disturbance, ground vibration...etc.
- Unstable platform feet adjustments according to bubble level

indication

- Incorrect position or other external objects within weighing area
- The weighing-scale is not put in a solid & firm ground area, such as carpet floor or lawn.

3. Connection failure for data transmission to PC or printer

- Wrong connection wires or faulty wires for transmission between the digital indicator & load cells.
- Wrong indicator models
- Wrong internal wiring or wire broken

In case of the following defective mode occurs, it is suggested to contact your nearest Authorized Dealer for further technician service & repair:

1. POWER switch-on failure :

- Push-button faulty
- Short circuit wires - Wire broken
- Safety fuse burnt out
- Wire connection problem
- Main power adaptor faulty – Parts Replacement

2. LCD display faulty

- Possible hardware defects include: Uneven brightness in the LCD display screen & texts color blurred, smeared rainbow screen, incorrect decimal display
- LCD PIN broken or short circuit
- PCB cooper foil broken & loosed welding
- Unable to save or read data – IC or transistor faulty, internal parts broken.
- LCD showing “ERRL” after switch on - Load cell damaged
- Overload may cause the weigh to malfunction.
- Software system crash
- Resonator faulty
- Load cells with faulty grinding standard.
- Key buttons failure - Front key panel damaged or disconnected

3. Buzzer malfunction

- Wrong welding of PVC wire
- Key buttons & control panel damaged or disconnected



Manufacturer's Declaration of Conformity

This product has been manufactured in accordance with the harmonized European standards, following the provisions of the below stated directives:

	93/42/EEC as amended by 2007/47/EC Medical Device Directive
	2014/31/EU Non-automatic Weighing Instruments Directive

Please see separate document showing on sticker of device for above CE marking.

Authorized EU Representative:



Manufactured by:



Charder Electronic Co., Ltd.
No.103, Guozhong Rd., Dali Dist.,
Taichung City, 412 Taiwan (R.O.C.)