

# MARSDEN



User Manual  
For all M-4xx models

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

## **INTRODUCTION**

Thank you for purchasing a Marsden Professional Medical Scale. This is a precision Class III Weighing Instrument and it will reward considerate use with many years of accurate weighing results

### **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:

- ♦ Don't leave the baby unattended on scale.
- ♦ When using electrical components under increased safety requirements, always comply with the appropriate regulations.
- ♦ Improper installation will render the warranty null and void.
- ♦ Ensure the voltage marked on the power supply unit matches your mains power supply.
- ♦ 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.
- ♦ These batteries should be kept away from small children. If swallowed, promptly seek medical assistance.
- ♦ Expected Service Life: 5 years

If you have any problem, contact your local service partner.

### **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 disconnect the scales from the mains power supply 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 service partner

### **DISPOSING OF THE SCALE**

- ♦ This product is not to be treated as regular household waste, but should be handed in to 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

## Explanation of the graphic symbols



This EEC verification mark indicates that these scales are in conformity with EEC Directive 2009/23/EC for Non-Automatic Weighing Instruments. Weighing instruments bearing this mark are approved for medical purposes within the European Union.

**SN-21300100**

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”



“Electro-medical appliance”  
with attachment for type B



Device protection category II



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 Marsden  
scales.

**These instructions apply to both the M-4XX series. The difference between the two models being only in the shape of the top cover and, an additional USER FRIENDLY <TAP ON> function is supplied on the M-420 and M-430.**

The M-400 and M-410 come complete with a plastic baby tray.



The M-420 and M-430 are intended for older children and adults only - no baby tray is supplied.

**User Keys** – The M-400 has 3 function keys consisting of ON/ZERO/OFF, HOLD and TARE

The M-410, M-420 and M-430 have 4 function keys consisting of 2 x ON/ZERO/OFF/-and HOLD/BMI and TARE/+

**You may choose the M-4xx with Bluetooth function. Please contacting with MARSDEN for more details, if interested.**

## **POWER SUPPLY & LOW BATTERY**

1. The M-400, M-410, M-420 and M-430 scales can be run from six 'AA' alkaline batteries or can be connected directly to the mains power supply using the included mains power adaptor.
2.  (Low battery indication) will display on the scales LCD display when the battery power is insufficient to power the scale.
3. When  is displayed, please replace the 6 alkaline batteries

# SPECIFICATIONS

All are Class III approved weighing devices

<b>MODEL No</b>	<b>M-400 (BT)</b>	<b>M-410 (BT)</b>	<b>M-420 (BT)</b>	<b>M-430 (BT)</b>
Capacity/ Division	0~10 kg x 5g 10~20kg x 10g	0~20kg x 10g 20~50kg x 20g	0~100kg x 50g 100~200kgx100g BMI	220kg x 200g
BMI	No	Yes	Yes	Yes
Baby Tray	Yes	Yes	No	No
Tap-on Function	No	No	Yes	Yes
Bluetooth	Optional	Optional	Optional	Optional
Units of Measure	kg			
Function keys	ON/ZERO/OFF, HOLD, TARE			
Stabilisation Time	1-2 seconds			
Operating Temp.	0°C - 40°C			
Transport and storage temperature	- 20°C ... + 60°C			
Power supply	Six AA size alkaline batteries or Mains Adaptor (Output: 12V 300mA or 12v 1A)			
Indicator display	1.0" LCD display with 5 active digits			
Remote Display	No	No	Yes	No

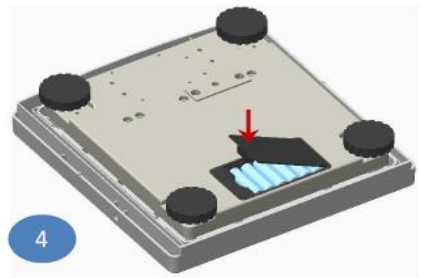
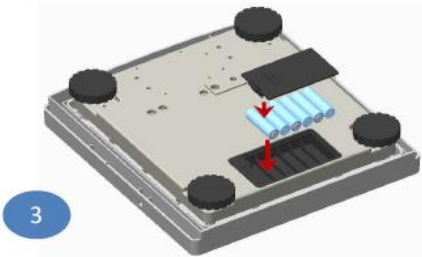
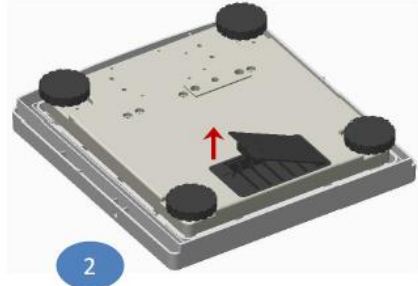
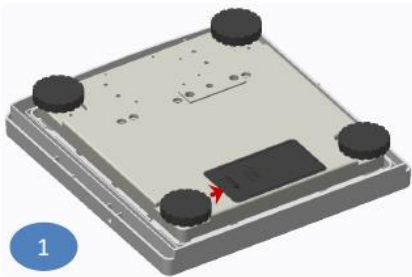
Dimensions  
(w x d x h)

Base: 340 x 330 x 50 mm  
Baby Tray: 585 x 280 x 120mm

## POWER SUPPLY

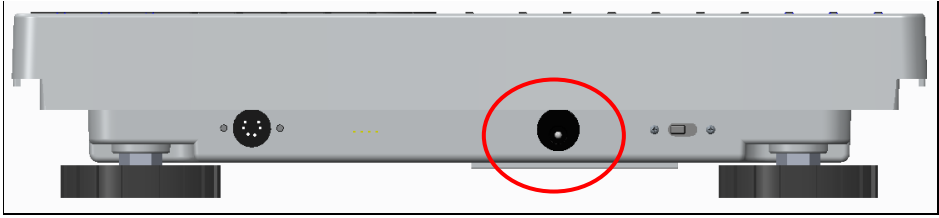
The scales use six "AA" size alkaline batteries for operating. The battery is contained in a cavity inside the scale. Access is via a removable cover on the rear of the scale, as shown below.

### INSTALLING THE BATTERY



**Remove the batteries if no use for a longer time.**

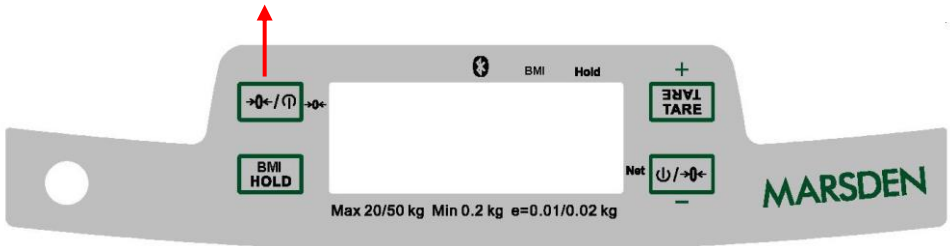
### CONNECTING THE MAINS POWER SUPPLY



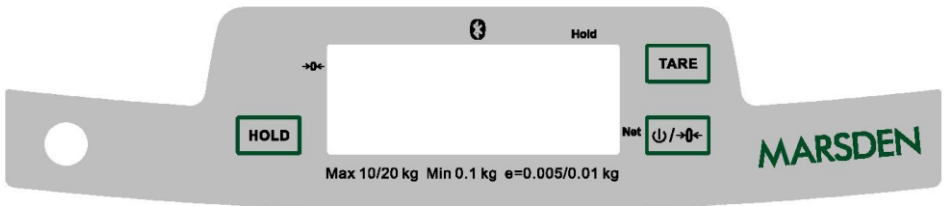
**Only use the AC Adapter supplied by Marsden for this unit.**

## **FUNCTION KEYS**—note some are multi function dependent on the mode of the scale

M-410, M-420 and M-430 Only



**M-410**



**M-400**

### **ON/ZERO/OFF/-**

1. Press this key to power up the scale, the display will go to 0.00kg (The M-420 & M-430 also supports the **TAP ON** function, please refer to page 9)
2. M-410/M-420/M-430 Pressing the Single ON/OFF/ZERO key on the opposite side of the display will cause the scales



display to reverse, therefore the display can be set to be viewed by the patient or the operator

3. If the scale shows a figure other than 0.00kg with no weight applied then press the ON/ZERO/OFF key once to Zero the display.
4. Press and Hold the ON/ZERO/OFF key to switch off the scale.
5. This is also the – key to press to reduce the height reading in BMI mode

**Note: The scale has a built in Battery save function that will switch off the scale after a period of inactivity, usually around 60 seconds.**

### **HOLD/BMI**

1. When weighing a patient, press the Hold key once and the scale will 'lock' onto the patients weight once a stable reading as been taken.
2. Press the Hold key again to release the display.
3. This is also the key to use for BMI readings - See section on BMI readings.

### **TARE/+**

1. The Tare key can be used to Zero the weight of any unwanted item, example – When weighing a baby it is normal for some paper towels or similar to be placed onto the scale, press the Tare key once and the weight of the paper towels will be zeroed off.
2. After weighing the baby, remove the paper towels and press Tare again to cancel the tare value and return to Zero.
3. This is also the key to use to increase the height reading in BMI mode

## **BMI (if fitted)**

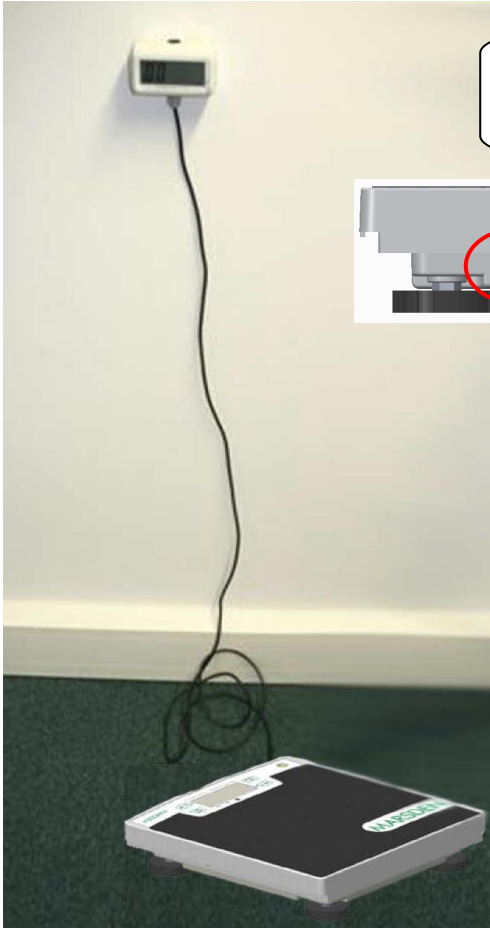
1. After the patient stands on the scale, press and hold the BMI key for 3 seconds.
2. The scale will enter Height entry mode.
3. Use the +/- keys to adjust the display to the patients height in centimeters.
4. Press the BMI key once and the patients BMI result will be shown on the display.
5. Press the BMI key once again to return to normal weighing mode.

## **Remote Display - M-420 Only**

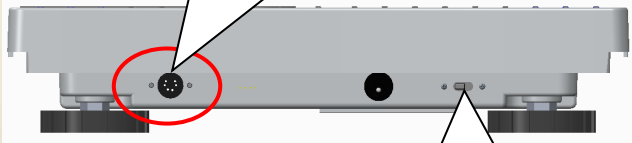
All of the M-420 has a socket on the base of the scale that allows a remote display unit to be fitted. (See picture) The remote display has its own on/off button.

It takes its power from the scale so no additional batteries or power supplies are required.

This remote display can be wall mounted or more usually placed on a desk to provide a discreet display of weight for the person carrying out the weighing procedure.



Socket for the remote display connecting.

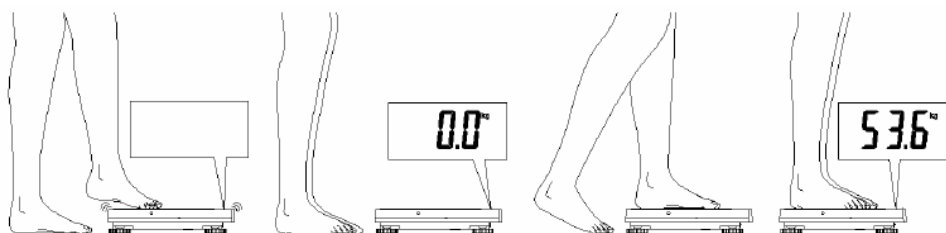


The ON/OFF button for remote display.

## TAP-ON FUNCTION -M-420 & M-430 only

The M-420 & M-430 also could be started by <**TAP ON**>.

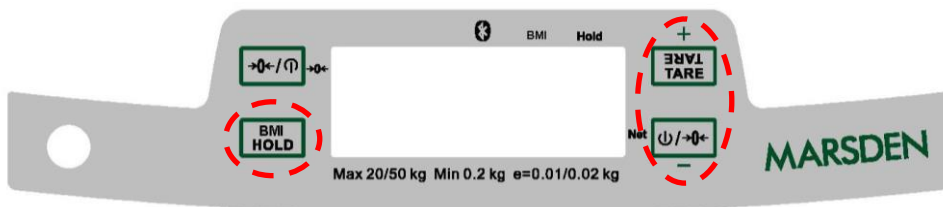
Slightly short press the platform till the scale display "0.00kg".  
The direction of display could be reversed by pressing the ON/ZERO/OFF button when the scale is under the "0.00kg" status.



## TIME SETTING - M-4xxBT series only

*Re-setting the time is highly recommended if the time zone is different from the originally supplied and this information to be used at your application.*

### Related Keys



### SETTING DIAGRAM

Press **TARE** 3sec

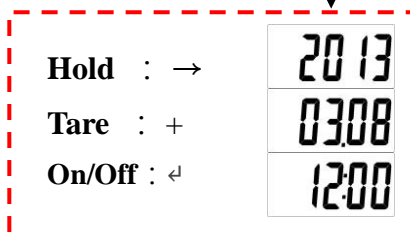
**SEt**

**R\_OFF**

**b l u E t**

**d A t E**

**E n d**

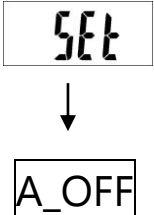





**0.0**

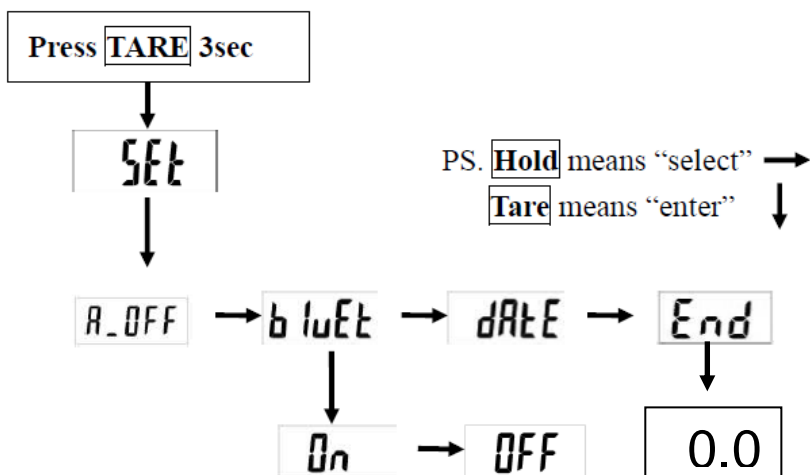
**HOLD** key means “select” ( → )

**TARE** key means “enter” ( ↓ )

**EXAMPLE:** Input Jan. 2, 2013, 10:00am.

<b>Workflow</b>	<b>Display</b>
<p>Long press TARE key for 3 seconds to enter the SETTING mode and then displaying the A_OFF menu.</p>	
<p>Press HOLD key twice. And then press TARE key once to enter the date setting menu.</p>	
<p>Enter year mode by pressing TARE key. Press <i>HOLD</i> key for move to next digit then <i>TARE</i> key to increase the value) Press ON/ZERO/OFF key after finishing the job and enter the date mode.</p>	<p>2013</p>
<p>Press <i>HOLD</i> key for move to next digit then <i>TARE</i> key to increase the value) Press ON/ZERO/OFF key after finishing the job and enter the time mode.</p>	<p>01.02 (Month. Date)</p>
<p>Press <i>HOLD</i> key for move to next digit then <i>TARE</i> key to increase the value) Press ON/ZERO/OFF key after finishing the job.</p>	<p>10:00</p>
<p>Press HOLD once, return to the upper flowchart.</p>	
<p>Press TARE key, return to normal mode.</p>	

## SETTING BLUETOOTH FUNCTION – only for the case of the scales with the Bluetooth module plugged in.



Workflow	Display
Long press TARE key for 3 seconds to enter the SETTING mode and then displaying the A_OFF menu.	<b>SEt</b> ↓ <b>A_OFF</b>
Press HOLD key. And then press TARE key once to enter the Bluetooth setting mode.	<b>bluEt</b>
Press HOLD key to select “ON” (enable) or “OFF” (disable). Press TARE key to confirm the setting. <b>Note: Disable the Bluetooth function will be helpful to save the power consumption when the Bluetooth is useless.</b>	<b>On</b> ← → <b>OFF</b>
Press HOLD twice.	<b>bluEt</b>
Press TARE key, return to normal mode..	<b>End</b>

## INSTALL THE TRAY

1. Install the tray to the proper location.

**Note: make sure that the weighing tray is installed properly and at the right position.**



2. Install the tray at the proper location and tighten the screws on both sides.





3. Assembly finished.



# ERROR MESSAGES

## 1. Low Battery

The scales alkaline AA type batteries are flat.  
Replace the batteries with new ones



## 2. Over Load

This indicates that the scales load sensor/s have been overloaded, re-calibration may fix this problem but it usually indicates a faulty load sensor



## 3. High/Low Zero Count

1) The scale is above its Zero Range, remove any weight on the scales and try to power on again. If the scale still shows the error message then it indicates a fault with the scales electronics.



2) The scale is below its Zero range, check there is nothing jammed underneath the scale and try to power on again, if the scale still shows the error then it indicates a fault with the scales electronics





## ROHS COMPLIANCE

EU Directive 2011/65/EU restrict the use of the 6 substances below in the manufacture of specified types of electrical equipment.

- The product does not contain any of the restricted substances in concentrations and applications banned by the directive;
- and for components, the product is capable of being worked on at higher temperatures required by lead-free soldering.

The restricted substances and maximum allowed concentrations in the homogenous material are, by weight:

<b>Substance</b>	<b>Concentration</b>
Lead	0.1%
Mercury	0.1%
PBB (Polybrominated Biphenyls)	0.1%
PBDE (Polybrominated Diphenyl Ethers)	0.1%
Hexavalant Chromium	0.1%
Cadmium	0.01%

## PRODUCT CONFORMITY

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

**2009/23/EC – Non Automatic Weighing Instrument Directive**

# MARSDEN

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