MARSDEN

# Marsden M-999 User Manual


Please take time to read these instructions before starting to use the scale.

## Contents



## Introduction

Thank you for purchasing a Marsden professional medical scale. This is a precision Class III weighing instrument and considerate use will result in many years of accurate weighing. The scale has a maximum load capacity of 300kg which must not be exceeded.

## Product Specification

| | |
|---|---|
| Model | M-999 |
| Accuracy Class | Class III |
| Capacity/Division | 250kg x 0.5kg |
| Weight of Scale | 11.4kg |
| Units of Measure | kg |
| Function Keys | ON/OFF/ZERO, HOLD |
| Operating Temperature/Humidity | 5 to 35˚C / 15 - 85% RH |
| Power Supply | Rechargeable battery pack |
| Display | 27.7mm x 75mm LCD |
| Dimensions | 1805mm X 700mm X 30mm |
| Features | Auto-power off (set to 30 minutes as default) |
| Warranty Duration | 8 years |

## Safety Instructions

Before putting the device into use, please read with care the information given in this user manual, which contains important instructions for proper installation, use and maintenance of the device.

Marsden and/or the manufacturer shall not be liable for damages arising from failure to heed the following instructions:

- When using electrical components under increased safety requirements, always comply with appropriate regulations.
- Inappropriate installation/use will render the warranty null and void.
- Ensure the voltage marked on the power supply unit matches your mains supply.
- This device is designed for use indoors only.
- 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.
- Batteries should be kept away from small children. If swallowed, promptly seek urgent medical assistance.

If you have any problems with this scale, please contact Marsden/your local dealer/your service partner.

If a serious incident occurs in relation to this device, it should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.

## Cleaning

- We recommend using alcohol-based wipes or similar when cleaning the scale.
- Please do not use corrosive liquids, large amounts of water or high-pressure washers.
- Always disconnect the scale 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. If any inaccuracies occur, please contact your local dealer or service partner.
- If you are in the UK, service contracts are available from Marsden to keep your scale accurate and reliable for longer. Call 01709 364296 for more information.

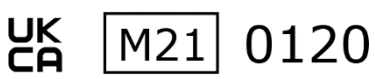
## Disposing of the Scale

- This product should not 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 from where you purchased the product.
- Alternatively, you can return this product to Marsden – we will recycle this free of charge,

## Intended Use

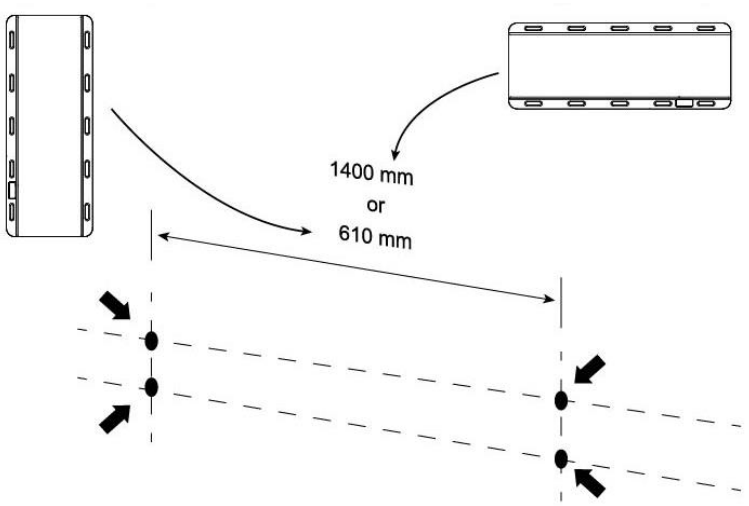
- This scale is intended for use to determine the weight of patients, supported by professional personnel and in rooms intended for carrying out healthcare. The weighing value can be read after a stable weighing value has been obtained. Before use, the scale must be checked by an authorised person to ensure it's in a suitable condition.
- Device is intended to measure one subject at a time.

## Explanation of Graphic Symbols

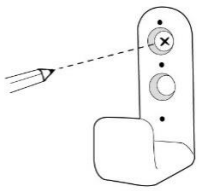
| | | | |
|---|---|---|---|
|  | Caution, consult accompanying documents before use |  | Separate collection for waste of electrical and electronic equipment, in accordance with Directive 2002/96/EC |
|  | Manufacturer of medical device |  | Manufacturing year of medical device |
|  | Carefully read user manual before installation and usage, and follow instructions for use. |  | Medical electrical equipment with Type B applied part |
|  | Device catalogue number |  | Authorized representative in the European Community |
|  | Manufacturer's batch or lot number |  | Device is a medical device |
|  | Serial number |  | Unique Device Identifier |
|  | Device conforms to 93/42/EEC as amended by 2007/47/EC Medical Device Directive. Four digit number refers to Notified Body. | | |
|  | Device complies with International Organization of Legal Metrology (Class III) requirements (verified models only) | | |
|  | Device complies with EC directives (verified models only)<br><br>**M**: Conformity label in compliance with Directive 2014/31/EU for non-automatic weighing instruments<br><br>**19**: Year in which conformity verification was performed and the CE label was applied. (ex: 19=2019)<br><br>**0122**: Refers to Notified Body for metrology | | |
|  | Device complies with UK Regulation.<br><br>**M**: Non-Automatic Weighing Instruments Regulations 2016.<br><br>**21**: Year in which conformity verification was performed and the CE label was applied. (ex: 21=2021)<br><br>**0120**: Refers to the Approved Body for metrology | | |

## Wall Mounting the Scale

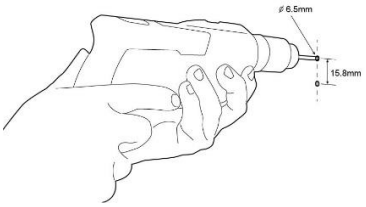
You can hang the Patient Transfer Scale on the wall either horizontally or vertically, using the hooks provided. Your hooks will need to be positioned exactly 1400mm or 610mm apart, centre to centre, depending on orientation.



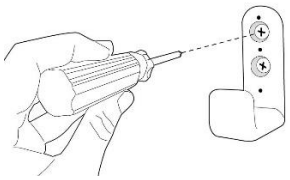

Use the Patient Transfer Scale and the hooks to determine the positioning of the hooks on the wall, and mark drill holes. Drill holes should be exactly 1400mm or 610mm apart, as per above.



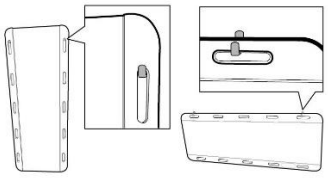
Drill two 6.5mm the holes for each hook.




Affix the hooks to the wall using the screws and wall plugs provided and use the plastic covers to hide the screwheads.



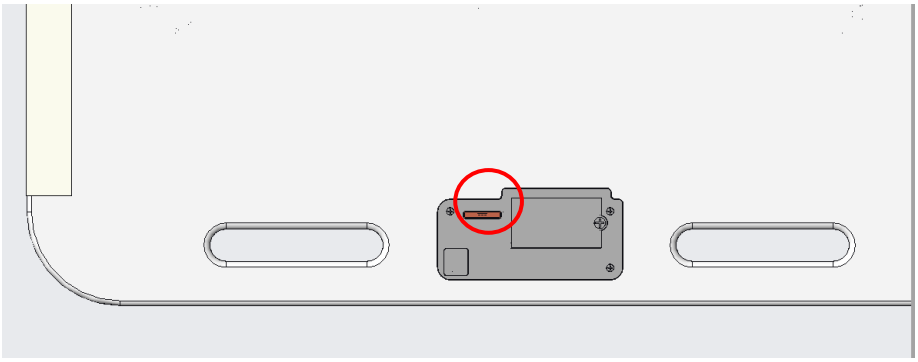
Your Patient Transfer Scale can now be hung on the wall.

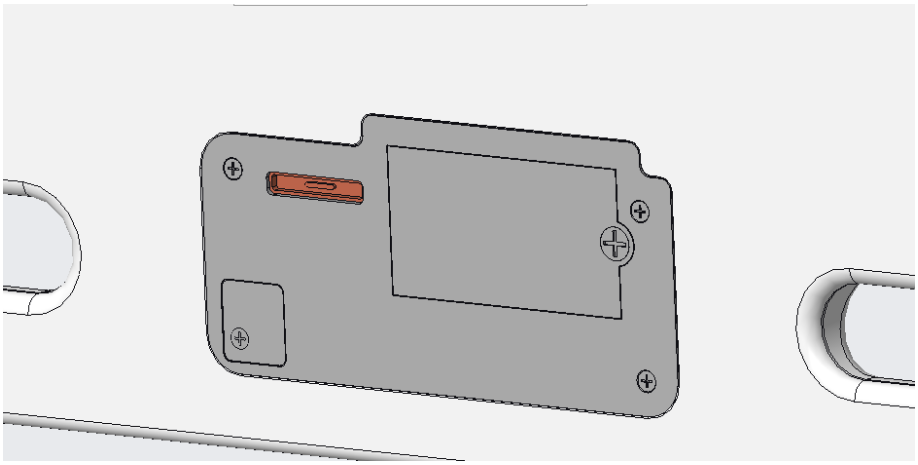


## Recharging the Scale

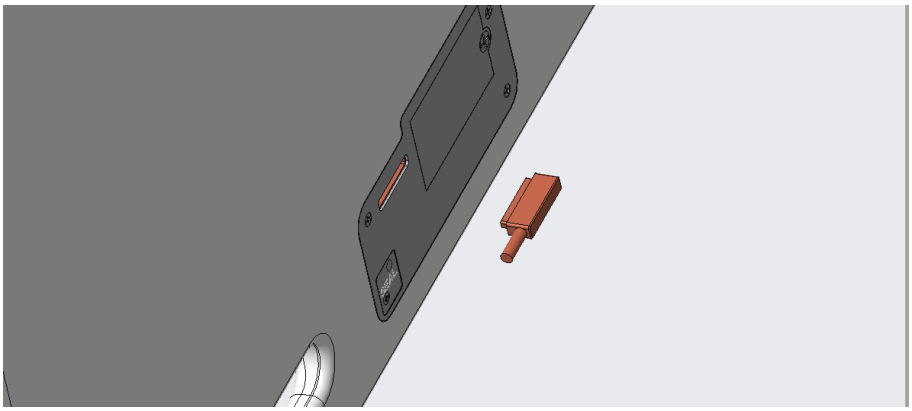
We recommend fully charging the scale before first use. To fully charge the scale please allow 8 hours.

When the low battery indicator on the LCD display indicates that the scale needs recharging, move the M-999 to a location where it can be charged. You will find the charging port on the underside of the scale.





The port for the charging cable is magnetic. Clip the end of the cable in place and plug the other end of the cable into a power socket. Please do not use any form of charging cable other than the one supplied with the scale. The scale cannot be used whilst recharging.



## Setting up the Scale

With the scale switched off, press and hold  until the display shows  , Then press  3 times. You will enter Setup for auto power-off, buzzer and backlight.

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Auto off time: 30m/60m/off
Buzzer: On/Off
Backlight: ON/OFF

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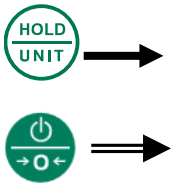
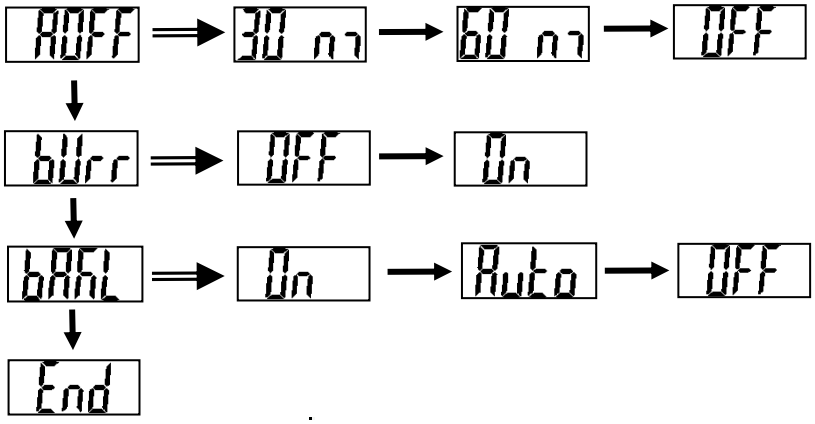


Auto power-off:

Buzzer on/off:

Backlight on/off:



To confirm the settings, please press HOLD/UNIT when  shows on the display.

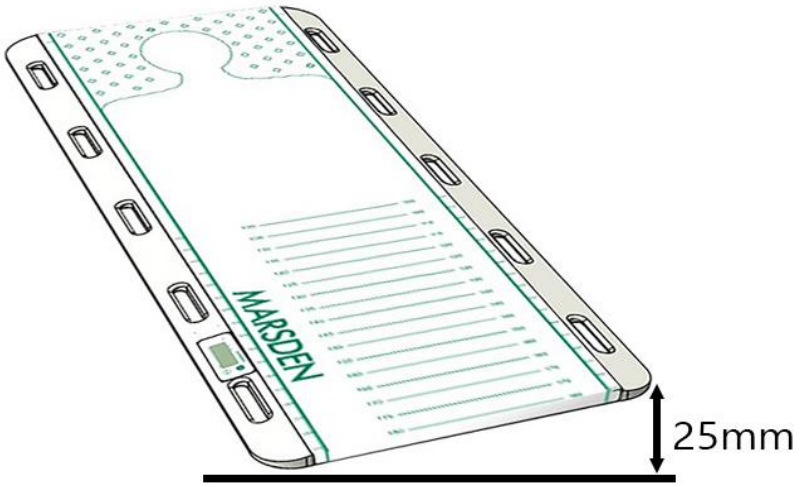
## Preparing to use the Scale

The Patient Transfer Scale should be used in line with current moving and handling policies. Essentially, it should be used in the same way you would use a transfer board, taking into account of course that you will need to pause for a few seconds during the transfer process, to allow the scale to capture the patient's weight.

- The Patient Transfer Weighing Scale should only be used by trained professionals.

Ensure brakes on castors are applied before you begin the transfer process.

- Ensure that trolley/bed frames are touching before you start the transfer process.
- There should be no more than 200mm between mattresses. There should also be 200mm or more of the Patient Transfer Scale on each bed or trolley before use.
- When transferring, the two surfaces must be of similar height. A tilt of less than 3% (one side raised by around 25mm) is ok; a tilt greater than this will affect the scale's accuracy. To avoid showing an inaccurate reading, the scale will display an error message if tilt exceeds 3% (see Error Messages).



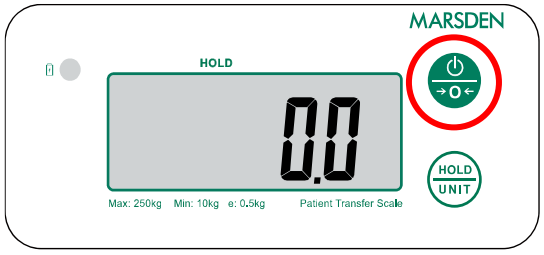

- Guidance for safe use can also be found on the scale itself (see next page).

**⚠ CAUTION**

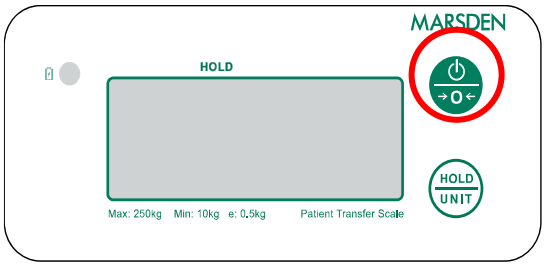
1. Transfer between surfaces of similar height
2. Check the scale for damage before use
3. Do not overload. Maximum capacity 250kg / 550lbs
4. The wheels of the trolley or bed must be locked before use
5. The distance from bed to bed, or trolley to bed, must be no more than 20cm / 8 inches
6. The Patient Transfer Scale must have a minimum of 20cm / 8 inches on each bed or trolley and bed

## Operation: Basic Functions

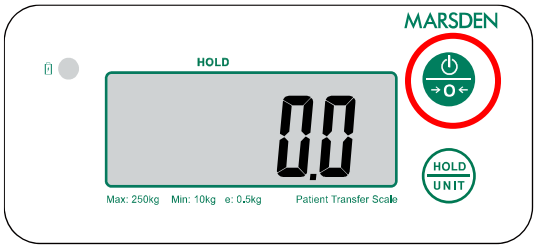
Switching the Scale on

| | |
|---|---|
|  | To switch the scale on, press the ON/OFF/ZERO button. When the display shows 0.0 the scale is ready to use. |

Switching the Scale off

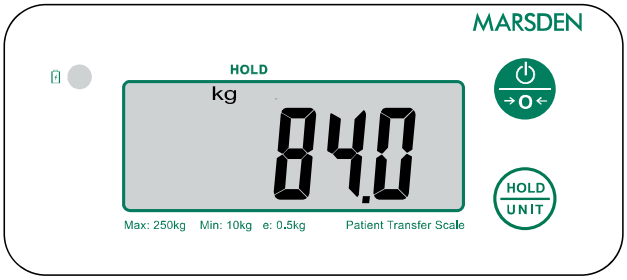
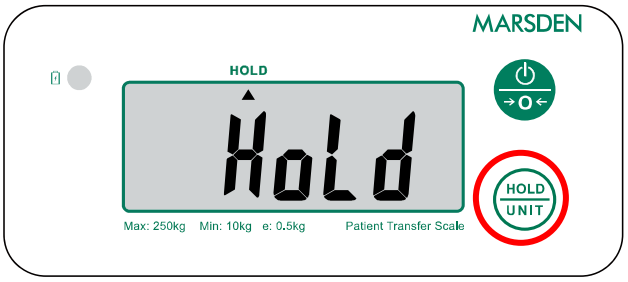
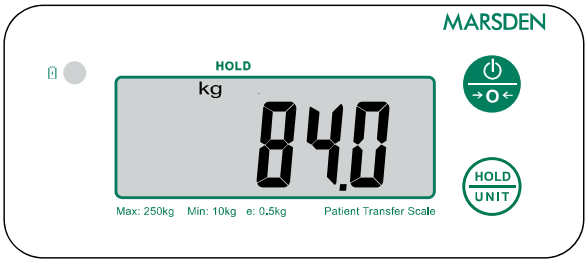
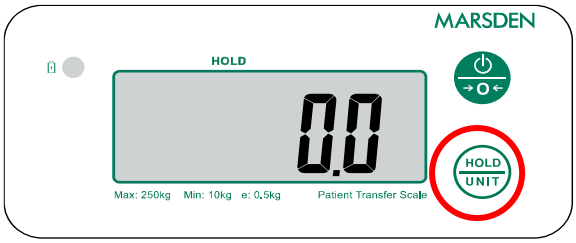
| | |
|---|---|
|  | Press and hold ON/OFF/ZERO button for three seconds to power the scale down |

Setting the Scale to Zero

| | |
|---|---|
|  | If for any reason the scale shows a reading other than 0.0 it can be reset to zero. Press the ON/OFF/ZERO button once and the scale will return to 0.0. |

## Operation: Advanced Functions

Using the Hold Function

| | |
|---|---|
|  | The scale's Hold function stabilises the weight reading on the display, allowing you to take an accurate reading without fluctuations. |
|  | With a patient on the scale, press HOLD/UNIT. The display will show 'HOLD'.<br>NB: Alternatively, you can activate the Hold function before the patient is on the scale. |
|  | When the scale has determined the weight of the patient, a stable weight reading will show. This will remain on the display after the patient has left the scale. |
|  | Press HOLD/UNIT to disable the Hold function. |

## EMC Guidance & Manufacturer's Declaration

| **Guidance and manufacturer's declaration-electromagnetic emissions** | | |
|---|---|---|
| The MEDICAL SCALE M-999 is intended for use in the electromagnetic environment specified below.<br>The customer or the user of the MEDICAL SCALE M-999 should assure that it is used in such an environment. | | |
| **Emission test** | **Compliance** | **Electromagnetic environment-guidance** |
| RF emissions CISPR 11 | Group 1 | The MEDICAL SCALE M-999 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 MEDICAL SCALE M-999 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 | Class A | |
| Voltage fluctuations /flicker emissions IEC 61000-3-3 | Compliance | |

| Guidance and manufacturer's declaration-electromagnetic immunity<br>The MEDICAL SCALE M-999 is intended for use in the electromagnetic environment specified below.<br>The customer or the user of the MEDICAL SCALE M-999 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<br>± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air | ± 8 kV contact<br>± 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 + 1kV for input/output lines | ± 2kV for power supply lines<br>+ 1kV for input/output 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)<br>+ 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<br>0% UT for 1 cycle<br><br>70% UT(30% dip in UT) for 25 cycles<br><br>0% UT for 5 s | 0% UT for 0,5 cycle<br>0% UT for 1 cycle<br><br>70% UT(30% dip in UT) for 25 cycles<br><br>0% UT for 5 s | Mains power quality should be that of a typical commercial or hospital environment. If the user of the MEDICAL SCALE M-999 requires continued operation during power mains interruptions, it is recommended that the MEDICAL SCALE M-999 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 MEDICAL SCALE M-999 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 MEDICAL SCALE M-999 is intended for use in the electromagnetic environment specified below.<br>The customer or the user of the MEDICAL SCALE M-999 should assure that it is used in such and environment. | | | |
| Immunity test | IEC 60601 test level | Compliance level | Electromagnetic environment-guidance |

| | | | |
|---|---|---|---|
| Conducted RF<br>IEC 61000-4-6 | 3 Vrms<br>150 KHz to 80 MHz<br><br>6 V in ISM bands<br>between 0,15 MHz and<br>80 MHz<br>80 % AM at 1 kHz | 3 Vrms<br>150 KHz to 80 MHz<br><br>6 V in ISM bands<br>between 0,15 MHz<br>and<br>80 MHz<br>80 % AM at 1 kHz | Portable and mobile RF communications equipment should be used no closer to any part of the MEDICAL SCALE M-999 including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.<br><br>Recommended separation distance:<br>$d = 1,2 \sqrt{P}$<br>$d = 1,2 \sqrt{P}$ 80MHz to 800 MHz<br>$d = 2,3 \sqrt{P}$ 800MHz to 2,7 GHz<br><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 metres (m).<br><br>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].<br><br>Interference may occur in the vicinity of equipment marked with the following symbol:<br><br>  |
| Radiated RF IEC 61000-4-3 | 3 V/m 80MHz to 2,7 GHz | 3 V/m 80MHz to 2,7 GHz | |

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 MEDICAL SCALE M-999 is used exceeds the applicable RF compliance level above, the MEDICAL SCALE M-999 should be observed to verify normal operation. If abnormal performance is observed, additional measures my be necessary, such as re-orienting or relocating the MEDICAL SCALE M-999.
b Over the frequency range 150 kHz to 80 MHz, field strengths should be les than 3 V/m.

## Error Messages

| | |
|---|---|
| Low Battery<br>The scale's alkaline AA type batteries are flat; please replace the batteries. |  |
| Overload<br>This indicates that the scale's load sensor(s) have been overloaded. Reduce the loading and retry. |  |
| Counting Error<br>1. The signal from the load cells is too high. Please remove any weight from the scale and try to power on again. If the scale continues to show the error message, it indicates a fault with the electronics or wiring.<br>2. The signal from the load cells is too low. Please remove any weight from the scale and try again. If the scale continues to show the error message, it indicates a fault with the electronics or wiring. |  <br>  |
| High/Low Zero Count<br>1. The scale is above its zero range. Please remove any weight from the scale and power on again. If the scale continues to show the error message, it indicates a fault with the electronics.<br>2. The scale is below its zero range. Check there is nothing jammed underneath the scale and power on again. If the scale continues to show the error message, it indicates a fault with the electronics. |  <br>  |
| EEPROM Error<br>This indicates there is a fault with the scale's software and is normally caused by a fault with the load cell or wiring. Contact your local service representative. |  |

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|---|---|
| **EU Authorized Representative:** | EC REP<br>**Obelis s.a.**<br>Bd Général Wahis, 53<br>B-1030 Brussels<br>Belgium |
| **Distributor:** | MARSDEN<br>Marsden Weighing Machine Group Ltd,<br>Unit 1, Genesis Business Park, Sheffield Road, Rotherham, UK, S60 1DX |
| **EU Importer:** | MARSDEN<br>Marsden Weighing Machine Group Europe Ltd,<br>The Black Church, St. Mary's Place, Dublin 7, Dublin, Ireland, D07 P4AX |
| **Manufactured by:** | Charder Electronic Co., Ltd.<br>No.103, Guozhong Rd., Dali Dist.,<br>Taichung City 41262 ,Taiwan (R.O.C.) |

MARSDEN

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