MARSDEN

Marsden M-550 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 160kg which must not be exceeded.

Product Specification

Model	M-550
Accuracy Class	Class III
Capacity/Division	160kg x 200g
Column	No
Units of Measure	Kg
Function Keys	ON/OFF, ZERO/TARE, HOLD/BMI
Stabilization Time	1-2 Seconds
Operating Temperature	5 ˚C to 35˚C
Power Supply	4 x 1.5v AA size alkaline batteries and mains adaptor 12v / 1A
Indicator Display	2.5cm LCD display with 5 active digits
Dimensions	347mm x 353mm x 60mm
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 Guidence

- 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.

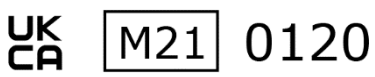
Disposing of the Scale

- 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) **M**: Conformity label in compliance with Directive 2014/31/EU for non-automatic weighing instruments **19**: Year in which conformity verification was performed and the CE label was applied. (ex: 19=2019) **0122**: Refers to Notified Body for metrology	
		Device complies with UK Regulation. **M**: Non-Automatic Weighing Instruments Regulations 2016. **21**: Year in which conformity verification was performed and the CE label was applied. (ex: 21=2021) **0120**: Refers to the Approved Body for metrology	

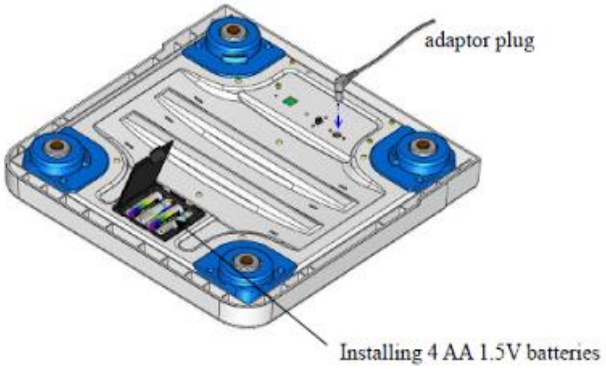
Power Supply & Low Battery

The M-550 runs on four ‘AA’ alkaline batteries. When 

is shown on the scale’s LCD display, battery power is not sufficient enough for the scale to be used and the batteries should be replaced.

The four ‘AA’ size alkaline batteries are contained in a compartment inside the scale. Access is via a removable cover on the underside of the scale, as shown below:

Installing The Battery & Connecting Your Adaptor



Function Keys: On/Off

1. Press this key to switch on the scale. The display will show 0.0kg.
2. Pressing the ON/OFF key on the opposite side of the display will reverse the scale’s display, therefore the display can be viewed by the patient.
3. If the scale shows a figure other than 0.0kg with no weight applied, press the ON/OFF key once to zero the display.
4. Press and hold the ON/OFF key to switch off the scale.
5. The ON/OFF key can also be used as the minus (-) key in BMI mode to reduce the height reading.

Function Keys: Hold

1. Press the HOLD/BMI key to enter into enable the Hold feature.
2. The arrow pointing at the hold symbol will start to flash and the LCD display will show 

.
3. The person being weighed can now stand on the scale. Their weight reading will hold and remain on the display.
4. To return the display back to zero, the HOLD/BMI button can either be pressed or the individual being weighed can step off the scale.

Function Keys: Tare

1. The ZERO/TARE key can be used to remove any unwanted weight from the scale's display. For example, you may want to remove the weight of someone's shoes from the reading, to leave only the person's weight showing. To do this, place the shoes on the scale and press the ZERO/TARE key once.
   The weight of the shoes will then be zeroed off.
2. Weigh the individual as normal.
3. Remove the shoes and press ZERO/TARE again to cancel the Tare value and return the scale to zero.

Function Keys: BMI

1. After the patient stands on the scale, press and hold the HOLD/BMI key for three seconds. The scale will enter BMI mode.
2. The display will show the last inputted height.
3. Press the HOLD/BMI button to decrease the height and ZERO/TARE to increase the height.
4. When the correct height is showing on the display, press the ON/OFF button.
5. BMI will automatically be calculated and the display will show weight and BMI in rotation.
6. Press ON/OFF to disable the BMI function.

Setting the Bluetooth Function

Please note: Marsden does not supply software for receiving data from the scale. These instructions should be followed when you are connecting to a system or device configured to work with Marsden Bluetooth scales.

1. Press and hold ZERO/TARE for three seconds. The display will show 'SETUP'.
2. Press and hold HOLD/BMIuntil the display shows 'BLUET'.
3. Press ZERO/TARE to enter Bluetooth setting mode.
4. Press HOLD/BMI to toggle between 'on' (enabled) and 'off' (disabled).
5. Press ZERO/TARE to confirm.
6. Press HOLD/BMI twice, and then ZERO/TARE once to return to normal weighing mode.

EMC Guidance and Manufacturer's Declaration

Guidance and manufacturer's declaration-electromagnetic emissions		
The MS6110 (M-550) is intended for use in the electromagnetic environment specified below. The customer or the user of the MS6110 (M-550) should assure that it is used in such an environment.		
Emission test	Compliance	Electromagnetic environment-guidance
RF emissions CISPR 11	Group 1	The MS6110 (M-550) 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 MS6110 (M-550) 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 The MS6110 (M-550) is intended for use in the electromagnetic environment specified below. The customer or the user of the MS6110 (M-550) 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	± 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.
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 25 cycles 0% UT for 5 s	<5% UT(>95% dip in UT) for 0,5 cycle 40% UT(60% dip in UT) for 5 cycles 70% UT(30% dip in UT) for 25 cycles <5% UT(>95% dip in UT) for 5 s	Mains power quality should be that of a typical commercial or hospital environment. If the user of the MS6110 (M-550) requires continued operation during power mains interruptions, it is recommended that the MS6110 (M-550) be powered from an uninterruptible power supply or a battery.
Power frequency(50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	3 A/m	The MS6110 (M-550) 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 MS6110 (M-550) is intended for use in the electromagnetic environment specified below. The customer or the user of the MS6110 (M-550) should assure that it 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 6 V in ISM bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the MS6110 (M-550) including cables, than the recommended separation distance 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 2,7 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: 
Radiated RF IEC 61000-4-3	3 V/m 80MHz to 2,7 GHz	3 V/m	
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 MS6110 (M-550) is used exceeds the applicable RF compliance level above, the MS6110 (M-550) should be observed to verify normal operation. If abnormal performance is observed, additional measures my be necessary, such as re-orienting or relocating the MS6110 (M-550). b Over the frequency range 150 kHz to 80 MHz, field strengths should be les than 3 V/m.			

Error Messages

Low Battery The scale's alkaline AA type batteries are flat; please replace the batteries.	
Overload This indicates that the scale's load sensor(s) have been overloaded. Reduce the loading and retry.	
Counting Error 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. 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.	 
High/Low Zero Count 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. 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.	 
EEPROM Error 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.	

Troubleshooting

The 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 Warranty and Return Policy.

If the scale fault is due to mechanical or electronic defect then the scale will be repaired or replaced under warranty. The purchaser will need to return the scale to the original place of purchase (Marsden/your Authorised Dealer).

Before you contact your Authorised Dealer, 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 Failure
    - Check if the mains power adaptor has been correctly plugged into the scale.
    - Check if the battery power is running low. Replace with new batteries if required.
2) Indicator showing “000” ZERO SPAN out of range
    - Incorrect weighing result. Has the scale been dropped, or suffered impact? Is the scale damaged?
    - Proper re-calibration procedure required to correct the weighing accuracy.
    - Interference due to RF disturbance, ground vibration, etc.
    - Unstable platform feet. These can be adjusted by turning; check the spirit level.

The weighing scale is not on solid, level ground.

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

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