MARSDEN

OPERATIONS MANUAL

M-620

Please take the time to read these
instructions before starting
to use the scales

Contents

Specifications

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.

Power Supply

- The INDICATOR uses a rechargeable pack, or an AC adaptor.

- When the indicator displays `. Lo` (low battery indication), please plug in the AC adaptor for operation and battery recharging (where rechargeable batteries are installed).

Product Specification

| Model	M-620
Accuracy Class	CLASS III
Capacity	300Kg
Increment	100g
Battery Type	7.2V 2000mah
Mains Adaptor	12V 2A
Unit Weight	38Kg

Maintenance and General Care

■ Repairs and Servicing should only be carried out by authorised service agents.

■ There are no user serviceable parts in the weighing scale itself.

■ The mains power adaptor fuses that are not accessible.

■ When the adaptor is plugged into the mains supply a Green LED should illuminate to indicate that the adaptor is functioning correctly. If the LED does not illuminate then the scale should be checked by competent personnel.

■ The weight indicator contains an internal rechargeable battery pack; this should only be replaced by authorized service agents. Under normal operating conditions the batteries should last for several years.

■ 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.

Key Functions

Key	Description
ON/OFF	Switching on/off the scale
PRINT	Data transmission via interface
BMI	Determination of Body Mass Index
HOLD	Hold function / determination of stable weighing value Long press 3sec, to enter into the "TIME" setting mode.
ZERO	The scale is reset to 0.0kg display. It is possible to set max. up to 2% of maximal load for verified scales, and 2% or 100% of maximal load for common scales (possibility of selection in the menu)
TARE	Taring the scale Long press 3sec, to enter the Pre-tare Setting mode.
UNIT	Press this key to select weight units (kg and lb). **NOTE: only "kg" unit can be used in approval mode.**
0-9	Entering digits

LCD Symbol Description
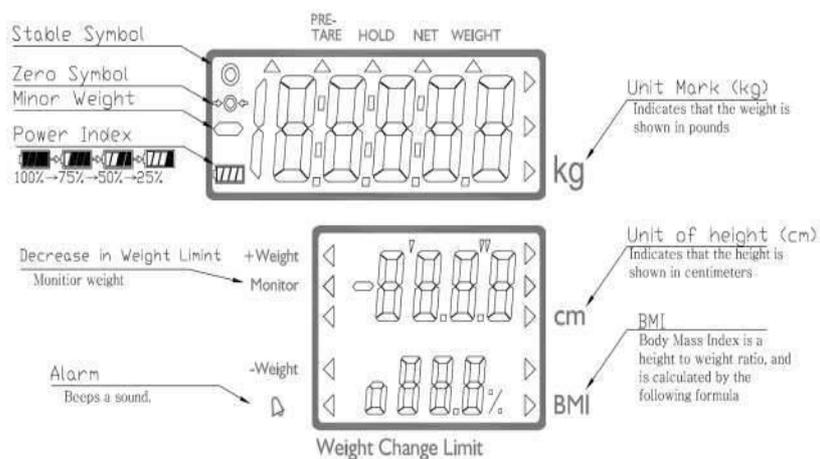
Definitions

Stable symbol: To indicate that the weight is stable.

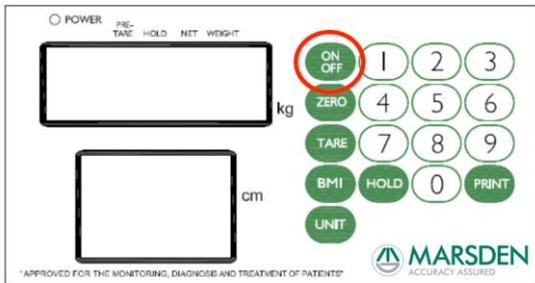**Minor weight:** Weight under zero.

Zero symbols: Weight is at zero point.

Power Index: When the indicator show "LO", means Battery need to recharge.
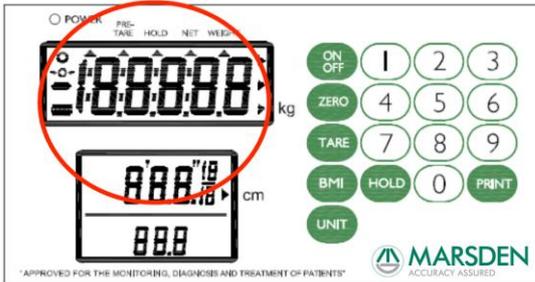
Operator Instructions

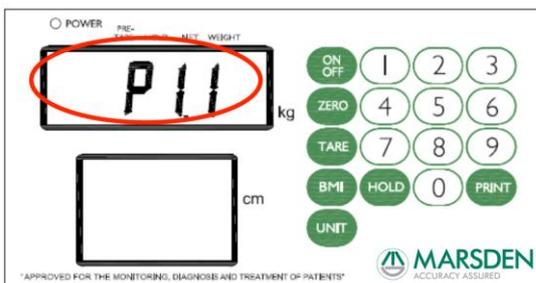## Section 1 – Basic Functions
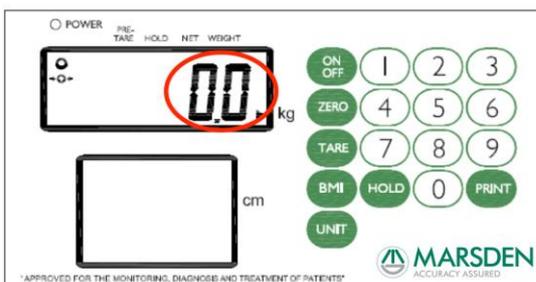## 1.1 Switching on the scale

Press the ON button firmly.

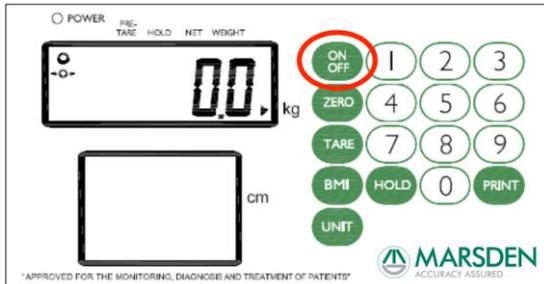The scale will first test all of the display segments.

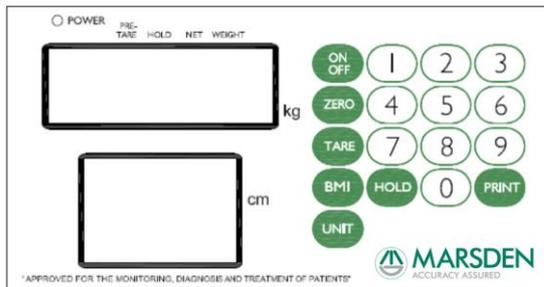The scale will now show its current software version number.

The scale will now go into weighing mode and should show 0.0kg on the display.
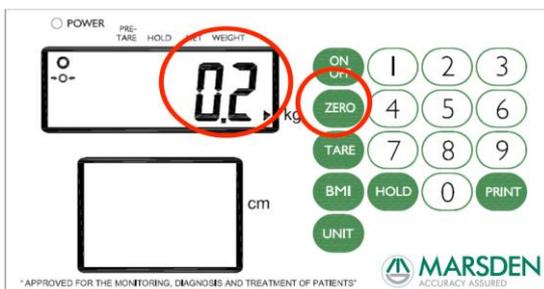
1.2 Switching off the scale
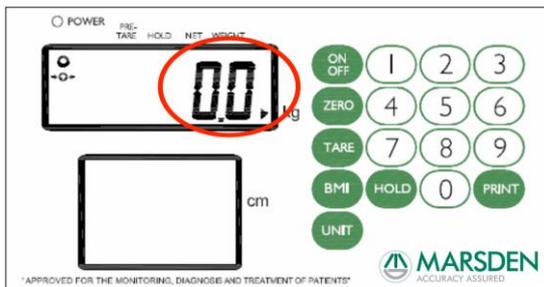

Press the OFF button.

The scale will power down.
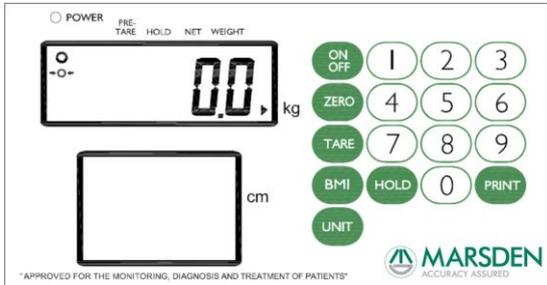
1.3 Setting the scale to Zero

If for some reason the scale shows a reading other than 0.0kg then it can be reset to zero (2% of capacity).

Press the zero key once.
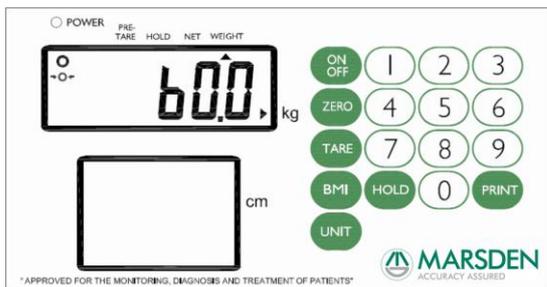

The scale will return to 0.0kg.

1.4 How to use the Tare Function

In normal mode, place a target that you want to tare off the weight (e.g. clothes) on the scale platform.
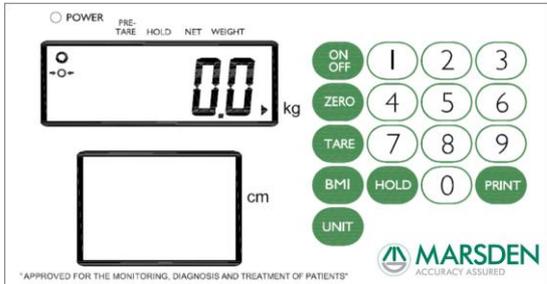

Press TARE to tare the weight of target. The indicator reading will return to zero.
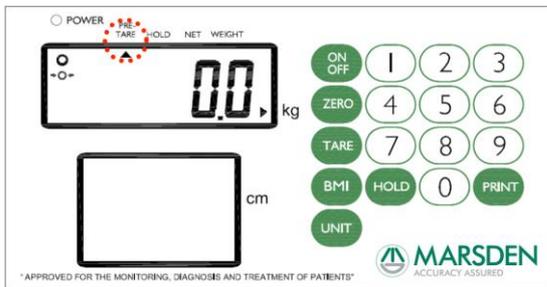

Then the subject stands on the scale and is weighed. The result shown is the net weight of the subject. The weight of the clothes has been torn off.

1.5 How to use the preset Tare Function

Press ON/OFF to switch on device. Press TARE key for 3 seconds to enable this function.

The LCD shows 000.0 Kg and the Pre-tare arrow is flashing for input target's weight.
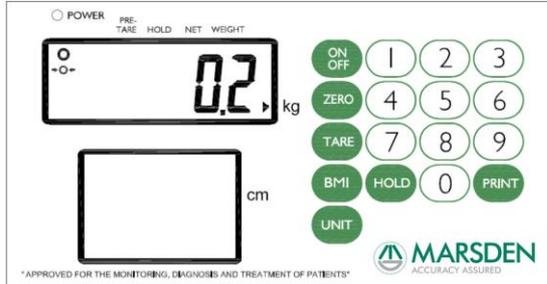
Input the weight that you wish to deduct. E.g.: 0.2 Kg.

Press [TARE] to finish input.

Now you have 0.2 Kg as your deduction.
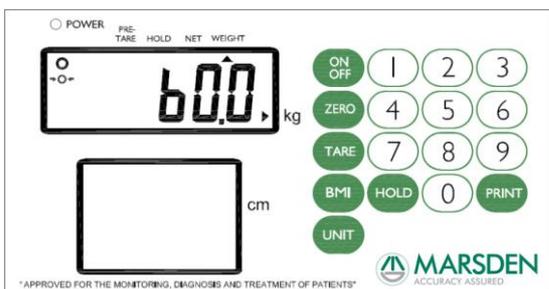
If you weigh 60.2 Kg the display will read 60.0 Kg as a net weight.

For the multi- interval model, it is only possible to set the pre-tare range up to or equal to MAX 1

Section 2 – Advanced Functions
2.1 Hold Function
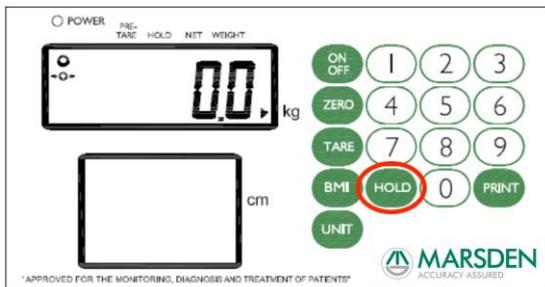
Press the HOLD button once.
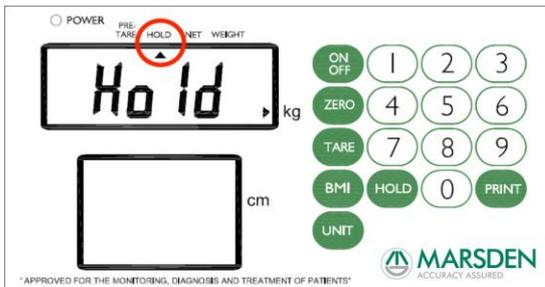
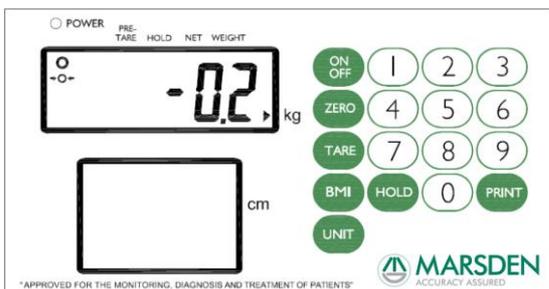The person should now get on to the scales.
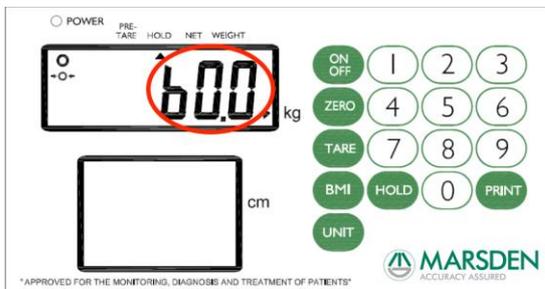
After a few seconds the scale will lock on the person's weight, the person can now stand off the scale and the weight will remain.

Press HOLD again to unlock the weight and return to 0.0kg

2.2 BMI (Body Mass Index) Function

For this example we will assume we have a person weighing 60kg who is 170.0cm tall.
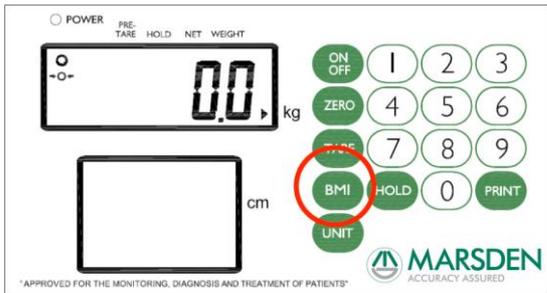
In normal mode, press BMI key to enter into BMI mode.
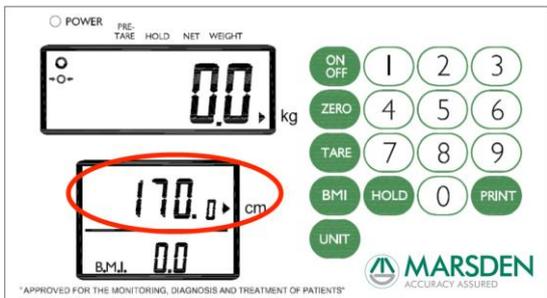
The display will show the last height entered and the extreme left digit will flash. Enter the height by using the numeric key pad (e.g. 170.0cm). There will always be an active flashing digit in the height display (unless the HOLD key is pressed).
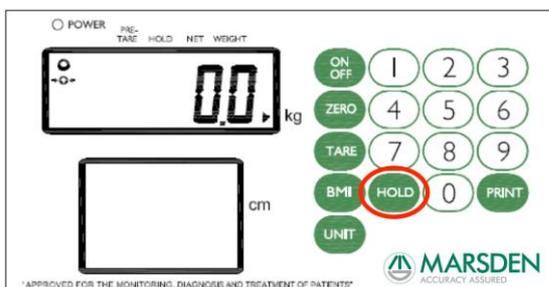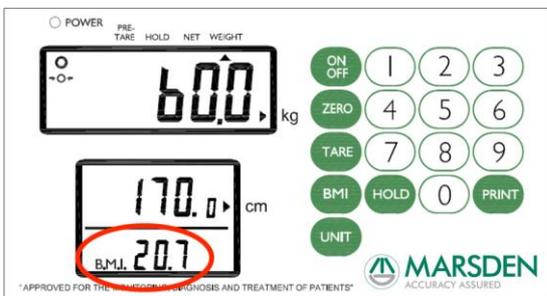

Proceed to weigh as normal. The instrument will show the weight, height, and BMI value.
At this time, the weight and height can be freely changed, and the BMI value will be automatically calculated according to the changed weight and height.

Stand on the scale for 5 seconds. Press the HOLD key to lock the weight, height, and BMI value. Press the HOLD key again to disable the display locking function.
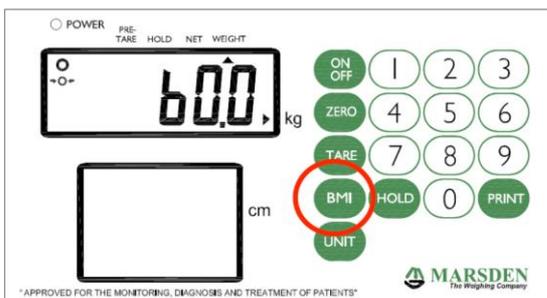
Press the BMI button to return normal mode and the person can now be taken off the scale.

2.3 Setting Date and Time

Press the HOLD key for 3 seconds to access the time setting mode. The time period digit that is flashing can be changed by entering the appropriate number from the numeric key pad. The time period to be edited is selected by pressing the HOLD key.

E.g. To input 25 December 2008, 8:00 a.m.:

2008	Enter the year. Press HOLD to confirm and access the date editing field.
12.25	Enter the date. E.g. "12.25" for December 25th. Press HOLD to confirm and access the time clock editing field.
08:00	Enter the time (24 hour clock only).
2008 ⇨ **12.25** ⇨ **08:00**	Press Hold and the display shows: YYYY→MM.DD→HH:SS

2.4 Printing Function

An optional Marsden external printer (Model TP-2100) is available for all models. When the printer is fitted the patient's weight, height, and BMI result can be printed on to a paper roll.

Once the person has been weighed and their BMI calculated, simply press the print key to produce the following ticket:

GROSS WEIGHT	60.00kg
TARE WEIGHT	30.00kg
NET WEIGHT	30.00kg
PATIENT HEIGHT	100.0cm
PATIENT B.M.I.	37.5
20/12/2010	

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:

Substance	Concentration
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

Harmonised Standards to Which Conformity is Declared –
EN60601-1-2 / EN60601-1
93/42/EEC – Medical Devices Directive
2009/23/EC – Non Automatic Weighing Instrument Directive

Error Messages

ERROR MESSAGE	REASON	ACTION
Lo	Low battery: This warning shows that the voltage of batteries is too low to use.	Please replace with new batteries or plug the AC adaptor for operation.
Err	Overload: The total load exceeds the maximum capacity of the scale.	Please reduce the loading and try again.
Err.H	Counting error (too high): Indicates that the signal from the load cells is too high.	This error is normally caused by a serious fault on the scales i.e. a faulty load cell or wiring. Please contact the local Service Representative.
Err.L	Counting error (too low): Indicates that the signal from the load cells is too low.	This error is normally caused by a serious fault on the scales such as a faulty load cell or wiring. Please contact the local Service Representative.
00000	Zero count over calibration: Zero range +10% while powered on.	Please re-calibrate the instrument. *1
00000	Zero count under calibration: Zero range -10% while powered on.	Please re-calibrate the instrument. *1
Err.P	EEPROM error: Indicates that there is a fault with the scales software.	This error is normally caused by a serious fault on the scales such as a faulty load cell or wiring. Please contact the local Service Representative.

*1 – These errors are usually less serious and can be rectified by re- calibration; however they can indicate an underlying problem with the scales. Zero Range is set to 10% of Scale Capacity E.g. Capacity 200.0kg = Zero Range +/-20.0kg

MARSDEN

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