MARSDEN

OPERATIONS MANUAL
M-950

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

TABLE OF CONTENTS

SPECIFICATION

Model	M-950
Capacity	600kg x 200g / 1000kg x 500g
Accuracy	±300g
Weight Unit	0.2kg / 0.5kg
LCD Display	1.0 inch LCD display with 5 and 1/2 digits
Dimension	Weighing Area- 92 X 3.5 X12.5 cm
Key Functions	ON/OFF, ZERO, TARE, BMI, UNIT, HOLD, PRINT, 0-9
Power Supply	➤ Rechargeable battery pack(7.2V 2000mA) ➤ 12V 2A switching adaptor
Operation Temperature	5℃ ~ 35℃

PREPARATION FOR MEASUREMENT

1. Using the handle of weigh beam
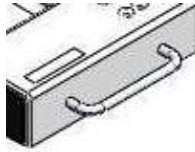
2. Place weigh beams under bed next to the bed casters.

3. Set the unit on a stable, level surface. When the bubble indicator is in the centre of the circle, M-950 is leveled correctly.
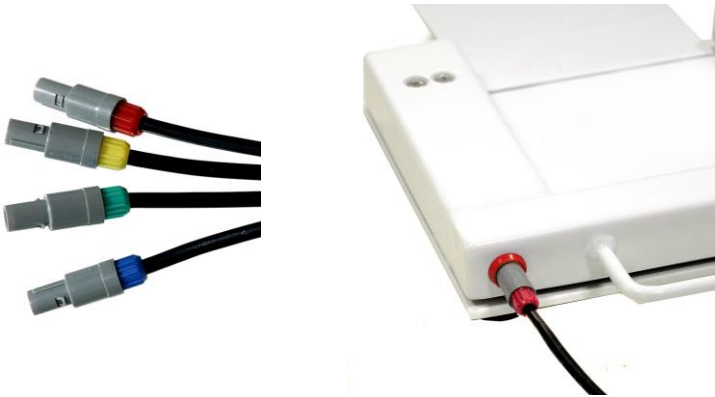
    Bubble indicator: Good

    Wrong

    All four feet must touch the surface to make sure that M-950 does not rock.

4. Connect the 4 weighing pads to the indicator via the colour coded cables.

5. Switch scale on, check at zero and push bed forward and onto the weigh beams.

➢ We strongly recommend two people to operate the procedure.

⚠️ *Before moving bed on the weigh beam, please turn on the scale!!*
You must make sure that the connecting cable is not caught under the measuring foot, otherwise faulty measurements may result.

6. Four bed casters are now placed well on weighing pads.

DP3810 Indicator

1. Make sure the battery pack is installed in the battery box of indicator, or, plug the connector of AC ADAPTER (12V 2A) in the indicator.

2. Plug the cable to the printer, and then connect its 9D connector to the indicator.

POWER SUPPLY

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

- When the indicator displays ⸱ Lo (low battery indication), please plug in the AC adaptor for operation and rechargeable batteries (where rechargeable batteries are installed) – for at least 4.5 hours if batteries are fully charged.

⚠ The battery should be recharged at least every 3 months regardless if it is used or not. After a long period in storage, e.g. over 3 months, the battery should run a full cycle (charge/discharge) to allow it to restore to full capacity.

PANEL

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
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
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
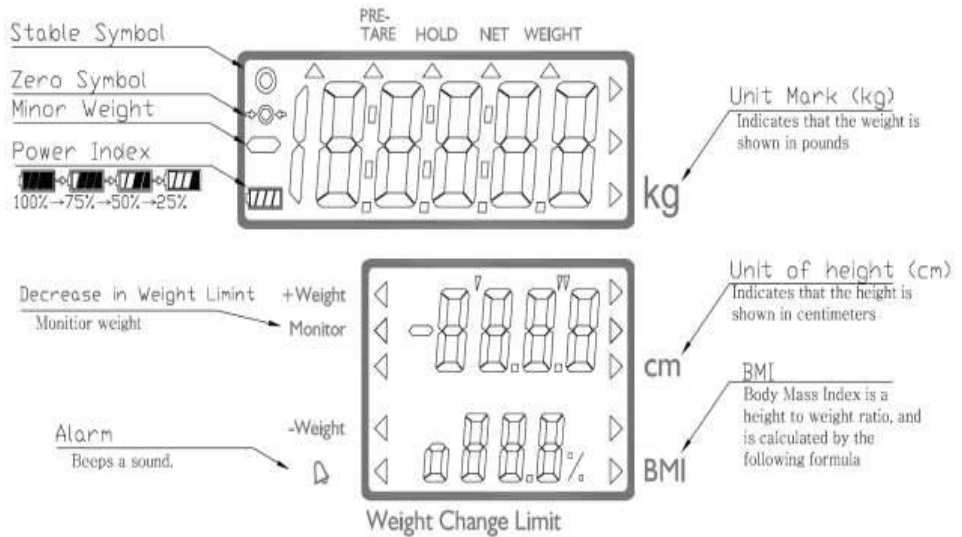
Definitions

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" is means Battery need to charge.
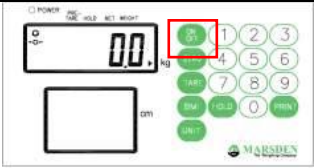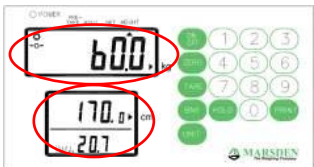
DATE & TIME SETTING PROCEDURE

Press HOLD key 3 sec into the TIME SETTING mode, beginning with the top row, in the flashing space. Press HOLD to change flashing space.

 EX: To input Dec 25, 2008, 8:00am
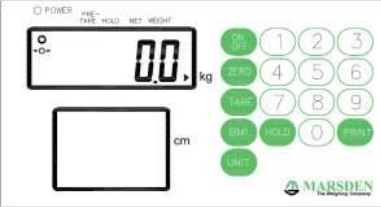
2008	Enter year. Press HOLD to change flashing space.
12.25	Enter date. Ex: 12/25 enter "12.25" Press HOLD to change flashing space.
08:00	Enter time.
2008 ⇨ 12.25 ⇨ 08:00	Display show YYYY→MM.DD→TT:SS

# NORMAL WEIGHING PROCEDURE (patient on the bed)

Turn On the scale using ON/OFF key. **(before moving bed on the weigh bridge)**	
Setting the PRE-TARE value (bed weight), scale will automatically perform Tare function and the minus (-) sign will appear in front of Pre-Tare value. *Setting Pre-Tare Function please refer* "**HOW TO USE PRE-TARE FUNCTION**" *(page.14)*	
Place both the weigh bridges under the bed and push the bed on the scale.	
The upper display will show the net weight of the patient.	
Now if you want BMI also, simply long press BMI key, the middle display will show the last height of the patient and extreme digit will blink. Key in the height measurement of patient using 0~9 key and press ENTER key. The third display will show the BMI of the patient	
To print out the weighing result, press PRINT key.	GROSS WEIGHT 60.2kg PRE-TARE WEIGHT 0.2kg NET WEIGHT 60.0kg PATIENT HEIGHT 170.0cm PATIENT B.M.I 20.7 07/10/11 14:46

HOW TO USE BMI FEATURE

Use the instrument to calculate your BMI and understand your body condition. Please follow below procedure:

	In normal mode, press BMI key to enter into BMI mode.
	The display will show last height and the extreme left of figure will flicker. Enter the height by number key. (ex:170cm)
	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 automatically calculated according to the changed weight and height.
Presses HOLD key to lock the weight, height, and BMI value. **Press HOLD key again to disable the lock function.**	
	Press BMI button to return normal mode and the person can now take off the scale.

HOW TO USE TARE FUNCTION
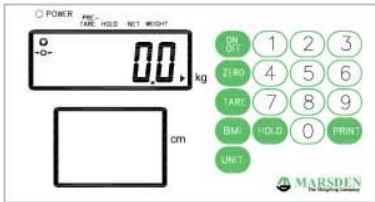
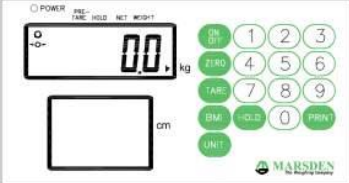|	
	In normal mode, place a target which you want to tare its weight (like clothes) on the scale platform.
	Press TARE to tare the weight of target. LCD will return to zero.
	Then client stand on the scale and weigh. The result shown is the net weight of client. The weight of his clothes has been tared at step 3.

Disable the TARE function or setting tare range (50% or 100%)

HOW TO USE PRE-TARE FUNCTION

	Press ON/OFF to switch on device. Press TARE key 3sec to enable this function.
	The LCD shows 0.0kg and the Pre-tare arrow is flashing for input target's weight.
	Input the weight that you wish to deduct. Ex: 0.2kg. Press **TARE** to finish input.
	Now you have 0.2kg as your deduction.
	Weigh 60.2kg and get 60kg as a net weight.

For multi-interval model, the pre-tare range only possible to set to 50% of full capacity or equal to Max. 1.

SET UP YOUR DEVICE

When the scale is switched on, hold the **[ZERO]** key pressed for about 3 seconds until the display shows successively the „SETUP" and „A.OFF" symbols.

AUTO-OFF TIME SETUP

This enables operator to setup period to shut off device with no operation automatically.

BUZZER ON/OFF SETUP

This enables operator to setup ON/OFF to the buzzer.

```
Press ZERO key
3 seconds                    HOLD key means "enter" ⇨
        ⇩                    TARE key means "select" ⇳

   5EtUP

   ADFF ⇨  120 5 ⇨  180 5 ⇨  240 5 ⇨  300 5
    ⇳ TARE    HOLD      HOLD      HOLD      HOLD

   bUrr ⇨   On  ⇨   OFF
    ⇳ TARE   HOLD     HOLD

   End
```
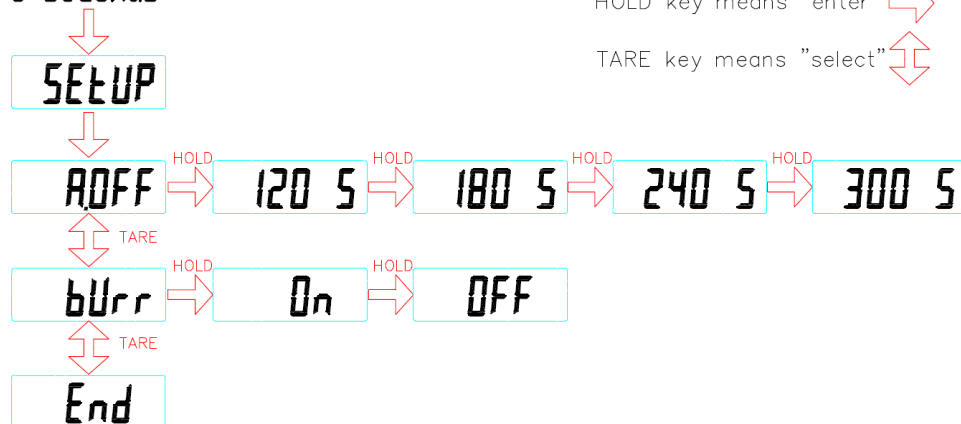
When the „End" is selected, the setting can be finished with the **[HOLD]** key.

PRINTING FUNCTION

Weight, BMI and Height results can be printed for records using RS232 interface cable (included in accessory kit).

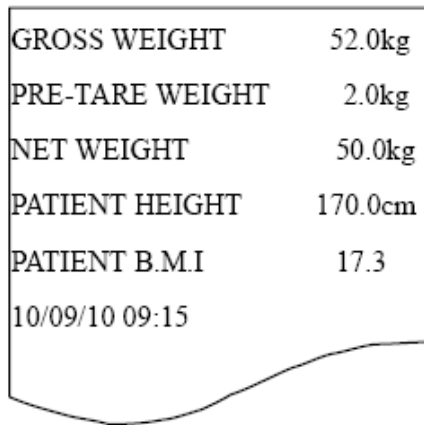After weighing and calculating BMI simply press **PRINT** key to print out the results.

The format presented below is the standard format of results print-out and cannot be changed.

```
GROSS WEIGHT          52.0kg
PRE-TARE WEIGHT        2.0kg
NET WEIGHT            50.0kg
PATIENT HEIGHT      170.0cm
PATIENT B.M.I          17.3
10/09/10 09:15
```
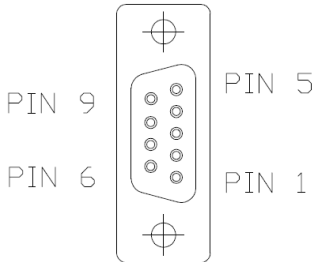
Parameters of RS232 interface

Set parameters of the scale interface on the connected device. It is not possible to change the scale parameters.

- Baud rate: 9600 bps
- Parity check: None
- Data length: 8 bits
- Stop bit: 1 bit
- Handshake: RTS/CTS
- Data code: ASCII

RS232 Pin out

PIN OUT FOR DB9P (F)

PIN 9   PIN 5
PIN 6   PIN 1

TXD	---------	2
RXD	---------	3
GND	---------	5

Connecting with PC

1. Start Hyper Terminal

Start Hyper Terminal program from clicking
Start Menu → Programs → Accessories → Communication → Hyper
Terminal.

2. New Connection Description

Give new connection a name then click OK.

3. Select Your COM Port

Click Connect to select your COM port. Usually there's only one option for
select. Then click OK.

4. Port Settings

Click Bits per second to set up rate at 9600, Data bits at 8, Parity at None,
Stop bits at 1 and Flow control at Hardware. Then click OK to complete
your setting.

5. Output Data

When the patient has been weighed and BMI calculated, simply press the
PRINT key to output data from scale to PC or an Optional Printer.

ERROR MESSAGE

| ERROR MESSAGE	REASON	ACTION
Lo	Low Battery: This warning shows that the voltage of battery is too low to use	Please replace a new battery or plug the AC adaptor for operation.
Err	Overload: The total load exceeds the maximum capacity of scale	Please reduce the loading and try again.
Err.H	Counting error (too high): Indicates that the signal from the load cell/s is too height	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.
Err.L	Counting error (too low): Indicates that the signal from the load cell/s 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 power on	Please re-calibrate the instrument.
00000	Zero count under calibration zero range −10% while power on	Please re-calibrate the instrument.
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.

INSTRUCTION OF REPLACING BATTERY PACK

1. Open the battery door.
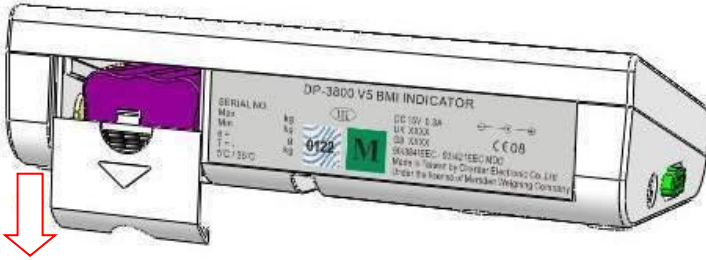
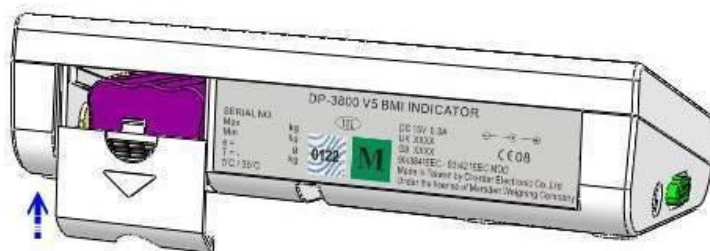2. Disconnect the rechargeable battery pack then replace it.
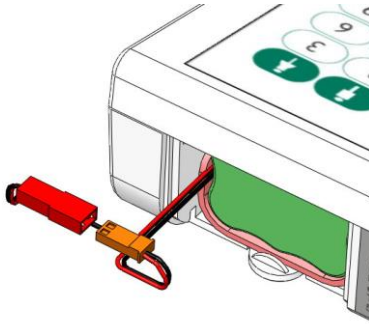
3. Push the female and male connectors together.

4. Push the battery pack into the battery holder then locate the cable connector above the battery pack.

5. Replace and close the battery door.

ROHS COMPLIANCE

EU Directive 2002/95/EC 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

2014/31/EU – Non Automatic Weighing Instrument Directive

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