Adam MDW-250L Digital Physician Scale User Manual

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Adam MDW-250L Digital Physician Scale

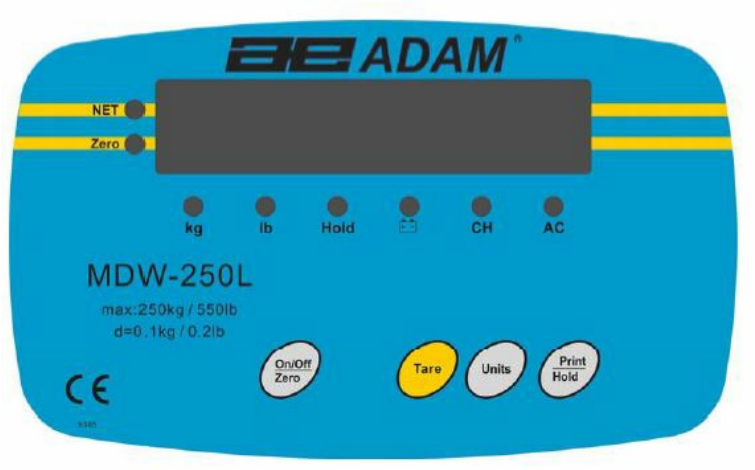
INTRODUCTION

- The MDW 250L scale is a Digital Health and Fitness Scale.
- It is an accurate electronic device with advanced design and stable performance.
- It is designed to measure both the weight and the height of a person.

TECHNICAL SPECIFICATIONS

Maximum capacity	250 kg / 550lb
Minimum capacity	2 kg / 4lb
Scale division	0.1Kg / 0.2lb
Height range	80 cm-210 cm
Division of measurement	0.5 cm
Display	LED display
Size of platform	375 X 275 mm
Overall dimension	535 X 275 X 1040 mm
Deadweight	13 kg
Environment for Use	Temperature: 5ºC-40ºC; Humidity: <85% RH
Power	12vAC 500mA adapter
Battery	Internal, re-chargeable 6V 4Ah, 5 hours approx.
Calibration	External calibration through the keypad.
Communications	Bi-directional RS232

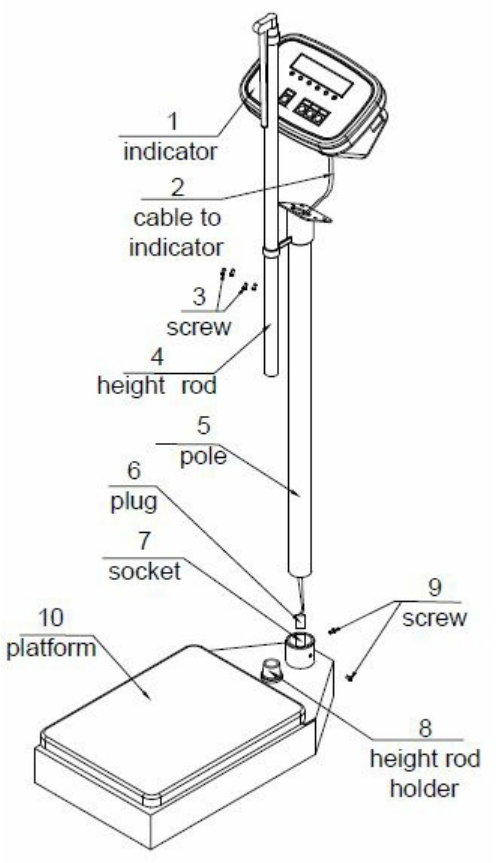
DISPLAY AND KEY DESCRIPTIONS



KEYS	FUNCTIONS
[On / Off /Zero]	To turn the scale on or off. To zero the scale if the display drifts from zero.
[Tare]	To tare the scale, if necessary.
[Units]	To toggle the weighing unit between Kg and Lb.
[Print / Hold]	To lock the reading even if the person to be weighed is moving and also to print the weight d etails out.

DISPLAY	DESCRIPTIONS
Kg	Indicates when the scale is weighing in Kilograms.
Lb	Indicates when the scale is weighing in Pounds.
Hold	Indicates when the scale has held the weight reading shown on the display. It will flash until i t locks into the stable reading which it will then remain on constantly when it has held the dis played reading.
	When the battery is low, this symbol will be light up. Connect the adapter to recharge the batt ery.
CH	The charge light will be on when the battery is recharging.
AC	This indicates when the scale is being used with the AC adapter.
ZERO	This indicator will be displayed in the left corner when the scale reaches zero.
NET	The Net weight is displayed, Tare weight is at zero.

SETTING UP THE SCALE



- Take the scale out of the box.
- Unwind the load cell cable (number 2 on the diagram).
- Run the cable up through the pillar from the base of the scale.
- Use the 4 screws (number 3 on the diagram) to mount the pillar to the indicator.
- Connect the plug and socket (numbers 6 and 7 on the diagram) and insert the pole into the pole holder.
- Secure the pole to the pole holder by inserting the 2 screws (number 9 on the diagram).
- Secure the height rod into the height rod holder (numbers 4 and 8 on the diagram).

FUNCTION

WEIGHING

- Place the Scale on an even floor and press the [On/Off] key.
- The instrument performs a self-test after which it is ready for operation.
- Press the [On/Off] key and the machine switches off.
- The person to be weighed can step on to the platform once the scale shows 0.0 on the display. The weight will be display in Kg. or lb. depending on the units chosen by the user.
- If the weighing value is to be tared press the tare key to remove the weight value from the display.
- Press the [Units] key for changing the weighing unit to kg or lb. The LED will indicate the chosen weighing unit.
- **Overload display:** When “FULL” appears on the display, it shows that the load on the platform is over the maximum capacity. Under these circumstances, it is necessary to reduce the load otherwise the sensor or the platform will be damaged.
- **Hold Function:** To lock the weighing result, press the [Print/Hold] key. The LED will flash until a stable reading has been obtained and then it will light up constantly. To release the function, press the [Print/Hold] key again.
- **Print Function:** To send the weighing result to a printer or computer press the [Print/Hold] key when the [Print/Hold] key has been set up in the parameter section to work as print function. (Print function is only applied for scale with RS232 interface)

MEASURING HEIGHT

- While measuring the height, it is necessary to pull up the measuring board at a right angle with the inside tube.
- When the tube is pulled out straight, it is sufficient to measure the height form 80-136cm. The number can be obtained upon the conjoint place where the upper part of middle tube screw meets with the inside tube scale.
- Further, if the middle tube is pulled out straight, it is possible to measure the height from 136-210cm. The reading can be obtained at the conjoint place where the upper part of outside tube screw meets with the middle tube scale.

MOTHER AND BABY WEIGHING FUNCTION

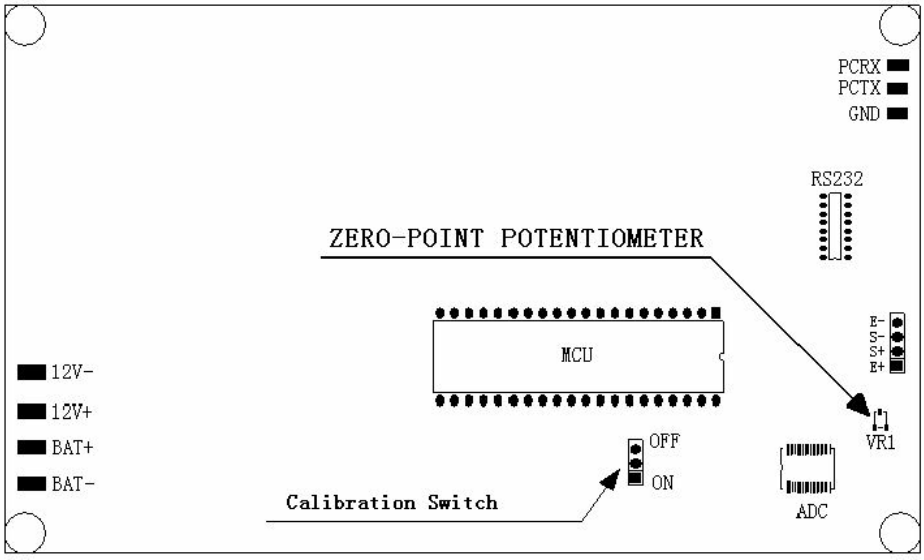
- The MDW scale allows users to weigh the mother and then weigh the baby being held in the mother’s arms. To operate the function, have the mother step on the weighing pan and wait for the weight to be stable.
- Then press the Tare button. The display should read Zero.
- Have the mother hold the baby in her arms whilst she stands on the scale. The weight displayed then is the weight of the baby.
- The mother can now get off the scale. Press the Tare button to clear the mother’s weight from the memory.

CALIBRATION

Before calibrating the scale, you should ensure that you have a known weight for calibration.

1. When in normal weighing mode with the scale at zero press and hold down [TARE] and [ON / OFF] keys to enter the calibration mode.

2. If the calibration switch is in the off position on the main PCB inside the scale, the indicator will show ‘CAL.OFF” and then exit this mode. If the indicator shows” CAL-?”, the scale is ready for calibration, showing the calibration switch is in the on position. If the calibration switch is in the Off position open up the indicator and move the switch to the On position. See diagram on page 8.
3. When the indicator shows ” CAL-?”, press the [TARE] key to confirm and go to next step, or press the [ON / OFF] key to exit the calibration mode.
4. When ‘0.0’ is displayed the scale will begin to calibrate the scale’s zero-point. Ensure that there is no load or weight on the scale’s platform . Press the [TARE] key to confirm, or press the [ON / OFF] key to exit this mode.
5. A few seconds after the [TARE] key has been pressed in step 4 the scale will show ‘250.0kg’ or ’500.0lb’ depending on which unit you chosen, this is the default calibration weight from the factory. Press the [UNIT] key to select the calibration weight unit that you want to calibrate in. Press the [ON / OFF] key to exit the calibration mode at this point or press the [Print/Hold] key to choose a different calibration weight value (50kg, 100kg, 150kg, 200kg, 250kg or 100lb, 200lb, 300lb, 400lb, 500lb); Then put on the weight that you selected and press the [TARE] key to confirm the chosen standard weight that was selected earlier. The displayed data will flash on the display and if the scale accepts the calibration data it will calculate and store the information into the EEPROM. If an error has occurred, the scale will display “CAL. Er” and return back to step 4 for re-calibration. If the loaded weight is not within the range of 95% to 105% of the weight value you selected, the scale will not calibrate but display “CAL. Er” and return back to step 4 for re-calibration.)
6. Check the calibration by putting the weight that you calibrated at back on the scale, if it is off repeat the calibration process again.



User Parameters

This indicator has 4 parameter settings that can be selected.

1. When the scale is in normal weighing mode, press and hold down the [ON / OFF] key and the [UNIT] key for 3 seconds until ‘SEtUP’ is shown on the display.
2. When in the SETUP mode, press the [Print/Hold] key to change the flashing digits, and [TARE] key to confirm the flashing digits and move to the next parameter setting. Press the [ON / OFF] key to exit the set up mode.
3. Parameters setting summary:

Parameter	x/xy	Factory Set	Setting
A.o.t.	00-15	05	Auto-off time: No auto-off = 00. 01-15 minutes auto-off time.
P.H.	0,1,2	1	0 = Only Print Function 1 = Only Hold Function 2 = both HOLD and PRINT function (pressed down less 3s,this key works as Print function; pressed down more than 3s,this k ey works as HOLD function)
H.t	0-4	0	Hold work time: 0 = no time limit. 1 = 10 seconds 2 = 30 seconds 3 = 60 seconds 4 = 120 seconds
S.F.	0-3	0	0 = No RS232 Function. 1 = Continuously outputs display data. 2 = Output display data when PRINT pressed 3 = Bi-directional communication (the scale receives and executes commands from the HOST device)

RS232 Communications

(Only applied for scale with RS232 interface)

The Interface parameters are:	**Connection details are:**
RS-232 output of weighing data ASCII code 9600 Baud rate (fixed) 1 start bit, 8 data bits,1 stop bit No Parity	Connector: 9 pin d-subminiature socket Pin 3 Output Pin 2 Input Pin 5 Signal Ground

RS-232 connection between the Scale and the Host:

- Scale ——————Cable——————Host
- (DB9 female)———(DB9 male)—-(DB9 female)———(DB9 male)

TXD 2	2	2	2 RXD
RXD 3	3	3	3 TXD
GND 5	5	5	5 GND
NC 1	1	1	1
NC 4	4	4	4
NC 6	6	6	6
NC 7	7	7	7
NC 8	8	8	8
NC 9	9	9	9

Note: The indicator pin1,4,6,7,8 and 9 are not connected.

The RS232 function will only operate if PH has been set to 0 or 2.

- **When Parameter S.F. in section 7 is set to 0:** No RS232 function. The scale will not transmit or receive any data although the scale is equipped with RS232. The RS232 function can be only activated when the scale is in normal weighing mode.
- **When Parameter S.F. in section 7 is set to 1 :** Continuous output of the current displayed reading and unit, and no data is received. The output format is as below: <LF>< reading, minus, decimal point, weight unit>GR<CR><EXT> Or <LF>< reading, minus, decimal point, weight unit>NT<CR><EXT>
- **When Parameter S.F. in section 7 is set to 2 :** Manually outputs displayed data when PRINT is pressed. The output format is as below: <LF>< reading, minus, decimal point, weight unit>GR<CR><EXT> Or <LF>< reading, minus, decimal point, weight unit>NT<CR><EXT>
- **When Parameter S.F. in section 7 is set to 3 :** The baud rate and data format are fixed with responses to serial commands being within 300 milliseconds. One second should be adequate for use as a time-out value by a remote (controlling) device.
- **The length of the weight field will be a 7 digit weight data, one for minus sign, one for decimal point, two for measuring unit (e.g. “lb”, “kg”). Units of measure abbreviations are always lower case.**
    - If the weight is overcapacity, the scale will return nine ‘^’ characters (the field of minus sign, decimal point, weight data is filled by ‘^’).
    - If the weight is under capacity, it will return nine ‘-’ characters (the field of minus sign, decimal point, and weight data is filled by ‘_’).
    - If the zero point has an error, it will return nine ‘-’ characters.
    - The character will be ‘-’ for negative weight or a space character for positive weight.
    - A minus sign follows after the first digit.
    - Unused leading zero’s before digits are suppressed.
- **Key to symbols used**
    - <LF> Line Feed character (hex 0AH)
    - <CR> Carriage Return character (hex 0DH)
    - <ETX> End of Text character (hex 03)
    - <SP> Space (hex 20H)
    - H1H2H3 Three status bytes. Refer to Table1 for definition.
    - <p> Polarity character including minus sign for negative weight and a space character for positive weight

- W1-W7 weight data
- <dp> decimal point
- U1U2: measure units, kg, lb

Commands and response

1. **Command:** W<CR> (57h 0dh)
   Response:
   1. <LF>^^^^^^u1u2<CR><LF>H1H2H3<CR><ETX>—over capacity
   2. <LF>_____u1u2<CR><LF> H1H2H3 <CR><ETX>—under capacity
   3. <LF>———u1u2<CR><LF> H1H2H3<CR><ETX>—zero-point error
   4. < L F > < p > w 1 w 2 w3 w 4 w 5 w 6 < d p > w 7 u 1 u 2 < C R> < L F > H 1 H 2 H 3 < CR > <ETX> — Scale is stable, and the current weight unit is kg or lb. With or without decimal point and the position is as per the P9 setting and current unit.
2. **Command:** S<CR> (53h 0dh) **Response:** <LF> H1H2H3<CR><ETX>
3. **Command:** Z<CR> (5ah 0dh) **Response:** Zero function is activated and it returns to current scale status, the same as pressing the ZERO/ON/OFF button: <LF> H1H2H3<CR><ETX> If ZERO function cannot be activated, it will return to current scale status.
4. **Command:** T<CR> (54h 0dh) **Response:** TARE function is activated, and then returns scale status. the same as pressing the TARE button: <LF> H1H2H3<CR><ETX> If TARE function cannot be activated, it will return to current scale status.
5. **Command:** U<CR> (55h 0dh) **Response:** Changes units of measure and returns scale status with new units, the same as pressing the UNIT button. The new measuring unit should be allowed to be used as per P11 setting. <LF>u1u2<CR><LF> H1H2H3<CR><ETX>
6. **Command:** X<CR> (58h 0dh) **Response:** power off the scale the same as pressing the ON/OFF button to turn off the scale.
7. **Command:** all others **Response:** Unrecognized command <LF>?<CR><ETX>

Table1: The status bits definition:

Bit	Byte 1 (H1)	Byte 2 (H2)	Byte 3 (H3)
0	0=stable	0= not under capacity	01=normal work mode 10= hold work mode 00=not define 11= not define
	1= not stable	1= under capacity	
1	0= not at zero point	0= not over capacity	
	1= at zero point	1= over capacity	
2	always 0	always 0	0= gross weight
			1= net weight
3	0= eeprom OK	always 0	always 0
	1= eeprom error		
4	always 1	always 1	always 1
5	always 1	always 1	always 1
6	always 0	always 1	always 0
7	parity	Parity	parity

Error Messages

1. 0- - - - - Zero point is over the setting range
2. 0_ _ _ _ _ Zero is below the setting range
3. Ad- - -- ADC is over max. range;
4. Ad _ _ _ _ ADC is below min. range;
5. EEP.Er There is an error in the EEPROM
6. CAL.Er There is an error in calibration
7. CAP.– The capacity will be displayed
8. Lo.bAt The battery voltage or input power is below 5.6V.
9. FULL The capacity has been exceeded by the person on the scale.

WARNING

- Do not dismantle the weighing machine without following the necessary instructions.
- Do not jump while standing on the platform. This may damage the sensor inside.
- Do not move the weighing machine violently and abruptly. It is recommended to move and put down the weighing machine gently.
- It is suggested to wipe the stains with soft cloth soaked with detergent and to wipe later with soft cloth too. Do not use organic solutions and boiled water to wipe the stains. Do not use water for cleaning.
- Keep the weighing machine in a dry and clean environment. Do not expose it outdoor or use it in locations near fire, under direct sunshine or with high temperature.
- When lifting the height meter, it is suggested to pull it straight along the pipe without using excessive force.

FCC COMPLIANCE

- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
- The equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
- Shielded interconnect cables must be employed with this equipment to insure compliance with the pertinent RF emission limits governing this device.
- Changes or modifications not expressly approved by Adam Equipment could void the user's authority to operate the equipment.

WEEE COMPLIANCE

Any Electrical or Electronic Equipment (EEE) component or assembly of parts intended to be incorporated into EEE devices as defined by European Directive 2002/95/EEC must be recycled or disposed using techniques that do not introduce hazardous substances harmful to our health or the environment as listed in Directive 2002/95/EC or amending legislation. Battery disposal in Landfill Sites is more regulated since July 2002 by regulation 9 of the Landfill (England and Wales) Regulations 2002 and Hazardous Waste Regulations 2005. Battery recycling has become topical and the Waste Electrical and Electronic Equipment (WEEE) Regulations are set to impose targets for recycling.

ADAM EQUIPMENT is an ISO 9001:2000 certified global company with more than 40 years experience in the production and sale of electronic weighing equipment.

Adam products are predominantly designed for the Laboratory, Educational, Health and Fitness, retail and Industrial Segments. The product range can be described as follows:

- Analytical and Precision Balances
- Compact and Portable Balances
- High Capacity Balances
- Moisture analysers / balances
- Mechanical Scales
- Counting Scales
- Digital Weighing/Check-weighing Scales
- High performance Platform Scales
- Crane scales
- Health and Fitness Scales
- Retail Scales for Price computing

For a complete listing of all Adam products visit our website at **www.adamequipment.com**

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FREQUENTLY ASKED QUESTIONS

What is the maximum weight capacity of the Adam MDW-250L Digital Physician Scale?

The maximum weight capacity is the highest weight the scale can accurately measure.

Is the MDW-250L suitable for medical use?

Confirm if the scale is designed and certified for medical or clinical use.

What is the resolution of the scale?

Resolution refers to the smallest change in weight that the scale can detect.

Does the MDW-250L have a Body Mass Index (BMI) calculation feature?

Some physician scales include a built-in BMI calculation feature. Check if the MDW-250L has this functionality.

Can the scale be connected to a computer or electronic health record (EHR) system?

Check for connectivity options if you need to transfer weight data to a computer or EHR system.

What units of measurement does the scale support?

The scale may support various units such as kilograms, pounds, ounces, etc.

Is the scale easy to clean and sanitize?

Given its use in healthcare settings, it's important to know if the MDW-250L is designed for easy cleaning and sanitation.

Does the scale have a tare function?

The tare function allows the removal of the weight of clothing or other items for more accurate measurements.

Is the scale equipped with a non-slip surface for patient safety?

Patient safety is crucial. Check if the scale has features to prevent slips.

Does it have a hold function to stabilize the displayed weight?

A hold function can be useful when it's challenging for the patient to stand on the scale for an extended period.

What is the power source for the scale?

Check whether the MDW-250L is powered by batteries, an AC adapter, or both.

Does the scale have an automatic shut-off feature to conserve power?

Automatic shut-off helps conserve battery power when the scale is not in use.

Is the scale portable or designed for stationary use?

Determine if the MDW-250L is suitable for portability or if it is intended for stationary use.

Does it come with a height measurement feature?

Some physician scales come with an integrated height measurement feature for calculating BMI accurately.

VIDEO – PRODUCT OVERVIEW

00:00 00:00

DOWNLOAD THE PDF LINK:

https://manuals.plus/wp-content/uploads/2023/11/Adam-Equipment-MDW-250L-Digital-Physician-Scale-User-Manual-Physician-Scale-User-Manual.mp4

References

- User Manual