



244701

Operation Manual

Contents subject to change without notice

Version 1.0
Issue AA

CONTENTS


1. INTRODUCTION	1
General Information	1
Specifications	1
2. Unpacking and Setup	2
Contents	2
Unpacking and Installation Procedures	2
3. OVERVIEW OF CONTROLS AND FUNCTIONS	7
3.1 Display Descriptions	7
3.2 Key Description	8
3.3 Indicator Display Character Definitions	9
4. OPERATIONS	10
4.1 Correct Weighing	10
4.2 How to change the unit	10
4.3 Tare function.....	10
4.4 Weighing with preset tare values	11
4.5 HOLD function.....	11
4.6 BMI function	11
4.7 Connecting additional devices	12
4.8 Print out a record.....	12
5. Troubleshooting	13

1. INTRODUCTION

General Information

- The 244701 scale is a Digital Wheelchair Scale with Body Mass Index (BMI) readout.
- It is designed two handles and two wheels, offering the flexibility to move around.
- It is an accurate electronic device with advanced design and stable performance. Do not operate near cell phones, radios, computers or other electronic devices that emit radio frequencies that may cause unstable readings.
- It is designed to measure the weight of a person and compute the BMI index once the known height of a person is entered via the Indicator

Specifications

Model	244701
Maximum capacity	1000 lb / 500kg
Minimum weight	10 lb / 4 kg
Scale division	0.5 lb /0.2 kg
Weighing units	kg, lb
Display	6 digits 1" (25mm) high, 7 segments LCD display with backlight
Interface	RS232, USB
Platform size	800mm x 800mm 31.50" x 31.50"
Overall dimension (when adjustable feet is adjusted to the lowest range)	1050mm x 1065mm x 100 mm 41.34" x 41.93" x 3.9"
Environment for Use	Temperature: 5°C-40°C; Humidity: <85% RH
Power	Batteries: 4 x "AA" size cells (not included) AC Adapter: 9Vdc/600mA, with central positive (included) 
Feet	4 x fixed bolt design, adjustable height

2. Unpacking and Setup

2.1 Contents

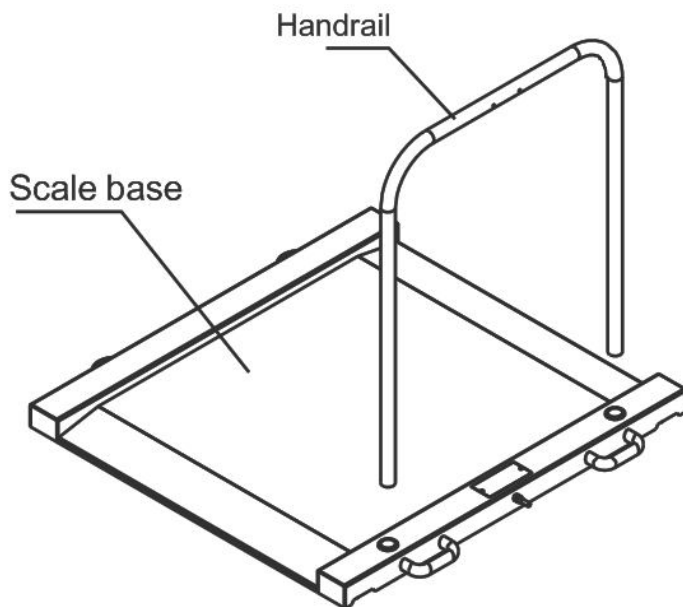
- 1x Scale
- 1x Indicator
- 1x Floor stand assembly
- 1x RS232 cable
- 1x Operation manual
- 1x U-handrail
- 1x Adapter
- 1x USB cable

2.2 Unpacking and Installation Procedures

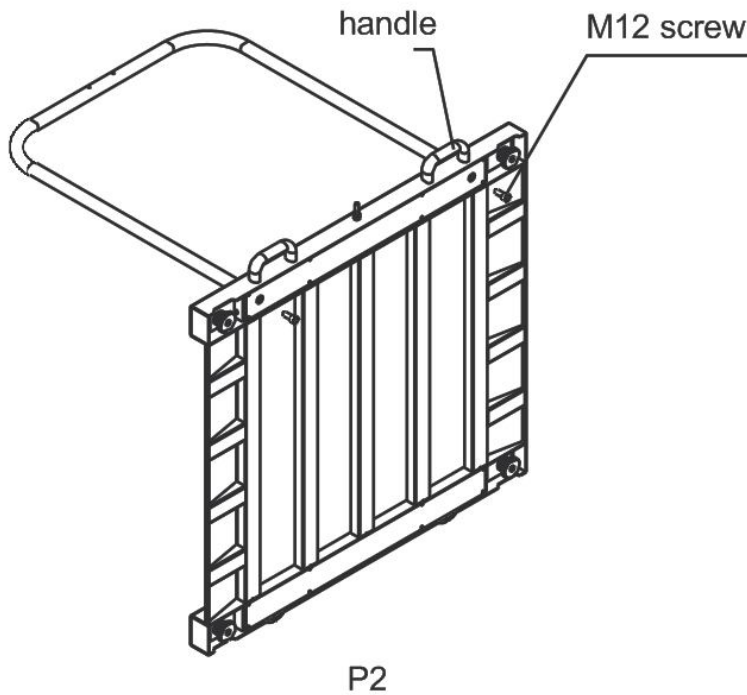
Take all scale parts out of the carton and put them on a flat and hard surface. Follow below procedures to fulfill the installation.

Install the scale

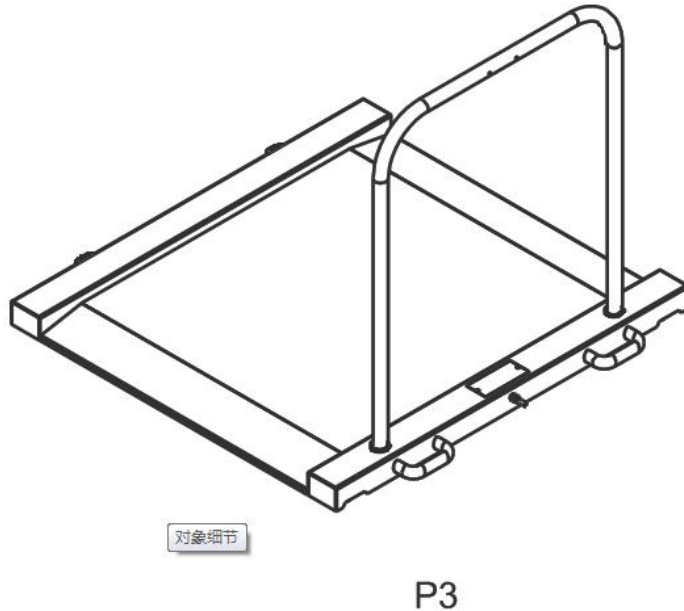
1. Remove the 2-M12 screws from the ends of the handrail before inserting both ends of the handrail into the scale base (P1). These screws will be used to attach the handrails to the scale base. See step 2.



2. Hold the handle and place the platform on edge as seen in the P2 drawing. Use the hex tool to screw the handrail and scale base together with 2-M12 screws from the bottom of the scale base. Be sure the scale base does not move during this process.

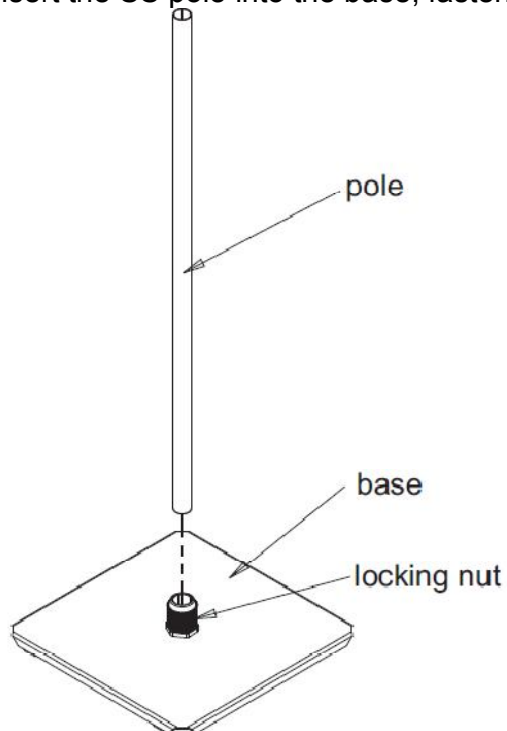


3. After assembly of the handrail is complete, place the scale flat on the floor. (P3).

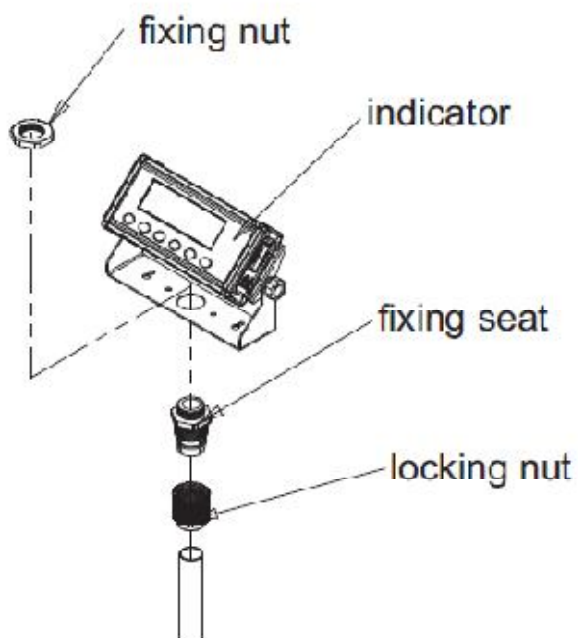


Install the indicator on the floor stand

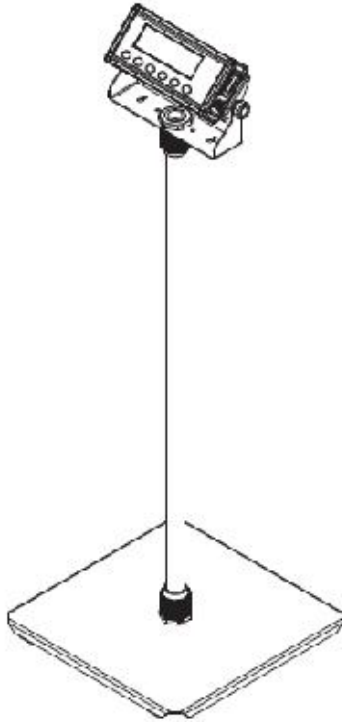
1. Insert the SS pole into the base, fasten the locking nut.



2. Insert the locking nut and fixing seat into another end of the stainless steel pole, then put the indicator on the seat through the hole in middle of the indicator bracket, fasten with the fixing nut.

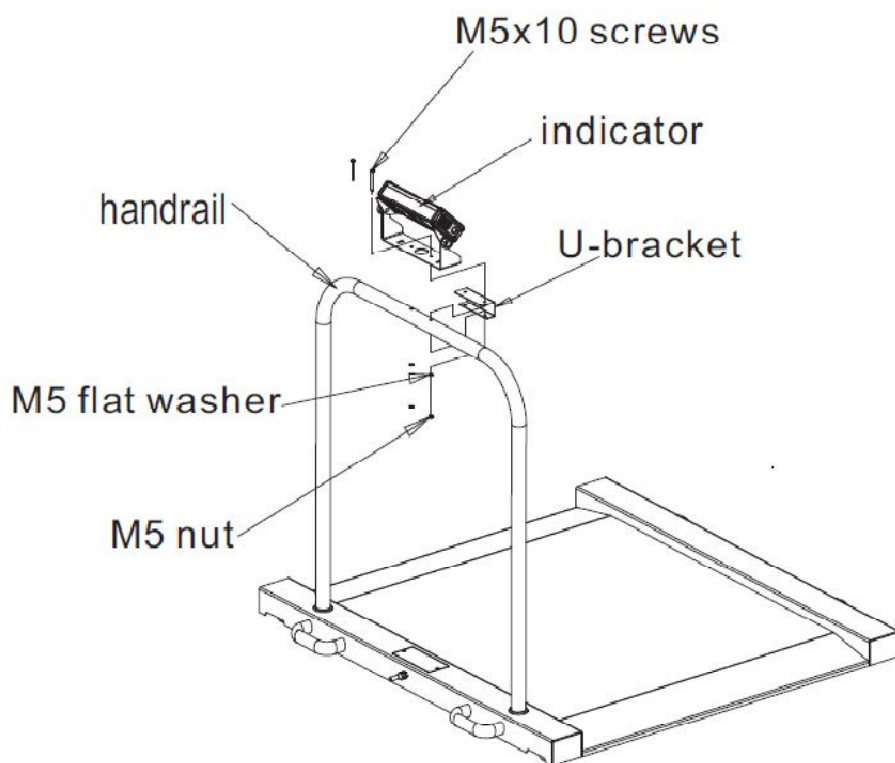


3. Insert the load cell cable into the pole, and connect it to the indicator. Installation is completed.

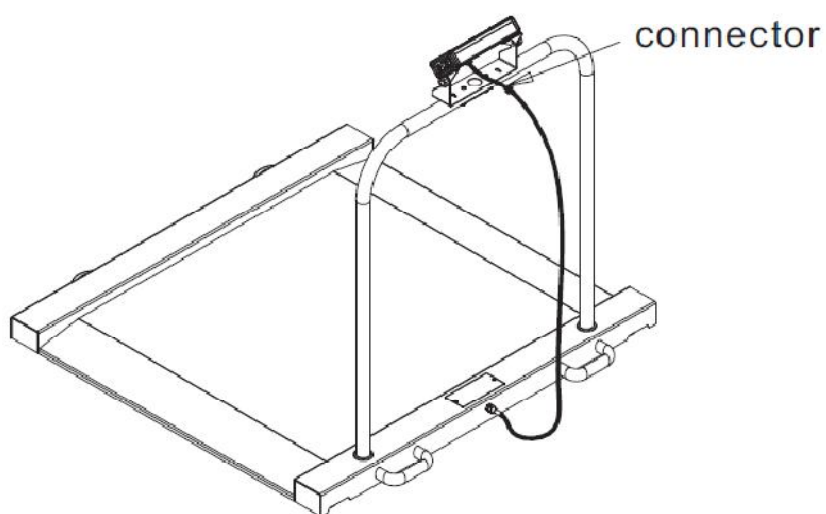


Install the indicator on the U-shape handrail

1. Put the U-bracket onto the stainless steel handrail, lay the indicator onto the bracket. Then attach with 2-M5x10 screws and fasten with the M5 flat washers and nuts.

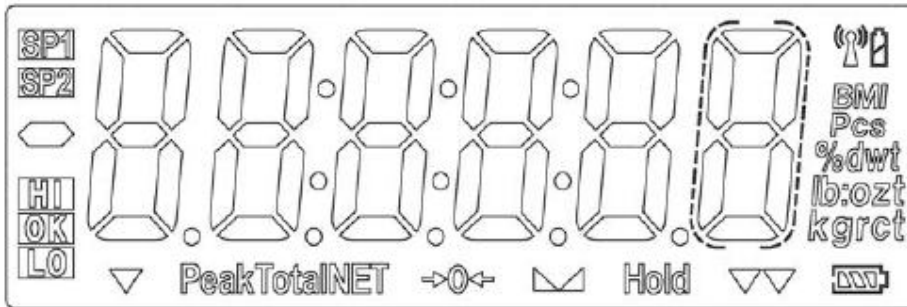




2. Connect the load cell cable to the indicator. Installation is completed.



3. OVERVIEW OF CONTROLS AND FUNCTIONS

3.1 Display Descriptions







































Name	Description
	Status indicator for the current battery charge level. When this symbol appears is the scale in battery operation mode or will be charged.
→0←	The scale is within the zero level.
	The scale is at a standstill, meaning the weight is stable and no movement is on the platform. This is a mandatory precondition for functions such as resetting, printing and taring). In case the LCD is not displayed is the scale not in the standstill mode.
"Hold"	Displayed when the hold function is activated
"lb"	Displayed when the weighing unit is displayed in pounds
"kg"	Displayed when the weight is displayed in kilograms

3.2 Key Description



Name	Description
HOLD	Activates the Hold-Function.
PRINT	Output data to serial communication port RS 232.
BMI	Enter, after the user steps on the scale, in order to proceed with the BMI mode.
UNIT	Switch button between primary kgs and secondary units Lbs.
<u>TARE</u> PRESET	Activates the tare function and the Preset Tare Function.
<u>ZERO</u> ON/OFF	Switch the scale on/off and zero function.
←	During key operation use this key to switch between the units.
→	During key operation use this key to switch between the units.
↓	During key operation use this key to switch between the numbers downwards.
↑	During key operation use this key to switch between the numbers upwards.
↵	Enter button to confirm the value.

3.3 Indicator Display Character Definitions

ASCII	LCD/LED Show	ASCII	LCD/LED Show	ASCII	LCD/LED Show
0		A		N	
1		B		O	
2		C		P	
3		D		Q	
4		E		R	
5		F		S	
6		G		T	
7		H		U	
8		I		V	
9		J		W	
		K		X	
		L		Y	
		M		Z	

4. OPERATIONS

4.1 Weighing

- Press the start key **ON/OFF/ZERO** to enter the normal operating mode of the scale without load on the platform. An automatic function test will be performed as well as the zero setting of the scale. When `0.0` appears, it means you are in the weighing mode. Additionally the display shows the symbol `→0←` to confirm stability of the zero setting.
- The scale is now ready to be used.
- Place the patient on the scale and ensure that he is not moving.
- After the weight is being displayed and the symbol `▲▲` appears the utmost accuracy has been achieved.
- To turn off the scale press **ON/OFF/ZERO** for a period of minimum 3 seconds.

4.2 How to change the unit

- The scale offers the possibility to select between the weighing mode kg and lb.
- To change into another mode, press the **UNIT** key. Please check weighing mode after switching on to get proper result.

4.3 Tare function

The tare function allows ignoring a fixed weight (e.g. wheelchair) that will be deducted after each weighing procedure.

Proceed as follows:

- Press the **ON/OFF/ZERO** without load on the scale.
- Place the additional weight of the object(s), which needs to be ignored, on the scale and store the result by pressing the **TARE/PRESET** key.
- The display is being reset to zero. The scale is now in NET weighing mode which is also indicated on the display.
- Remove the objects from the platform. The ignored weight is being displayed with a minus.
- Place the Patient and the additional weight (e.g. in the wheelchair) on the scale.
- The scale determines the weight of the patient without the additional weight. You may now use the scale for as many weighing procedures and the stored value will always be deducted as long as the scale is not turned off.
- When there is no any weight on the platform, enter the **TARE/PRESET** button again to exit tare mode.
- The tare value is likewise erased by the scale until pressing the **TARE/PRESET** button when there is no weight on the platform or being switched off.

4.4 Weighing with preset tare values

- Press the **ON/OFF/ZERO** without load on the scale.
- Press and hold the **TARE/PRESET** key until the NET indicator flashes and “Pr.Tare” shows in the display.
- Input the tare weight using the arrow keys (already known the weight of the wheelchair).
- After inputting the tare weight, press the **TARE/PRESET** key to confirm. The NET indicator will be lit on the display.

Note: Tare weight must be greater than zero and less than the scale’s maximum capacity.

- Put the patient and the additional weight (e.g. in the wheelchair) to be weighed onto the scale platform. The net weight will be displayed.
- To exit preset tare mode, remove all weight from the scale. The display will show a negative weight. Press the **TARE/PRESET** key to return the display to zero, eliminating the weight of the container.

Note: The indicator can only save one tare weight. Entering a new tare weight will automatically replace the old one.

4.5 HOLD function



The Hold function is being used if you like to hold the results at the display after the weight/load has been removed from

the scale. Use this button to take care of the patient first and then note the weight.

- Press **HOLD/SETUP** key while scale is under load.
- “**HOLD**” is being displayed at the screen.
- The weight remains saved in the display after unloading the scale.
- For deactivation of the Hold function press again the **HOLD/SETUP** key.

4.6 BMI function

The Body Mass Index is the ratio between height and weight squared. The BMI is accepted world wide – also by WHO (World Health Organization) - helping to evaluate the state of nutrition and with that value also the state of health of a person. The result is a tolerance value.


- Start the scale by entering the **ON/OFF/ZERO** Button. The scale is automatically being set to zero.
- Step on the scale or helping the patient to get into the wheelchair and on the platform.
- Wait until the weight is being displayed in a stable condition and  appears on the screen.
- Press the **BMI** key shortly.
- The scale starts automatically with the last input. Use the arrow buttons 

- to enter the height of the patient, and confirm the height with the enter button ↵
- The BMI is now being displayed at the indicator.
 - To correct the given height press the BMI button once again and the display returns to the height mode.
 - To get back into normal weighing mode and leave the BMI modus, press the **TARE** button.

4.7 Connecting additional devices

Connection of printer, PC or remote-display will be done with serial ports or USB port. For connection of additional devices kindly ask the manufacturer for further instructions.

4.8 Print out a record

The scales must be at standstill. The standstill status symbol  must appear at the screen.

Press the **PRINT** key to send the data to the serial interface.

Note: Printing is not possible if the net weight is 0. The print function only produces one print-out. A repeated weighing process is required to print out another copy.

5. Troubleshooting

SYMPTOM	PROBABLE CAUSE	REMEDY
Ad----- Ad-----	Load cell wires to indicator are incorrectly connected, or shorted, or opened; or ADC, load cell are damaged	Make sure wires are ok and correctly connected. Replace load cell or ADC chip, Service required.
0-----	Weight reading exceeds Power On Zero limit.	Make sure scale platform is empty. Perform zero calibration.
0-----	Weight reading below Power On Zero limit.	Install platform on scale. Perform zero calibration.
-----	Weight reading exceeds Overload limit, or The weight value cannot be displayed in the current unit of measure because it exceeds 6 digits.	Reduce load on scale until weight value can be displayed. Use a more appropriate unit of measure. Contact your local dealer or supplier for a new set up
-----	Weight reading below Under load limit.	Install platform on scale. Perform zero calibration
EEP.E1	CONFIG or CAL parameters are not correctly set	Contact your local dealer or supplier for a new set up
EEP.E2	USER parameter is not correctly set	Contact your local dealer or supplier for a new set up
CAP.ER	Capacity parameters are not correct	Contact your local dealer or supplier for a new set up
CAL.Er	Calibration error, maybe input data or loaded weight is too small, too big, unstable, un-linear	Input correct data, load correct weight onto platform, Service required
Not turn on.	Power cord not plugged in or properly connected. Power outlet not supplying electricity. Battery discharged. Other failure.	Check power cord connections. Make sure power cord is plugged into the power outlet. Check power source. Replace batteries. Service required.
Cannot zero display or will not zero when turned on.	Load on scale exceeds allowable limits. Load on scale is not stable. Load cell damage.	Remove load on scale. Wait for load to become stable. Service required.
Battery symbol is empty/ Lo.bAt is shown	Batteries have low power	Replace with new batteries



11 Harbor Park Drive Port Washington, NY 11050