

# *Weigh South*



WSI-602




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# 1. PRECAUTIONS

	 <b>WARNING</b>
	<b>DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, CLEANING, OR SERVICING. FAILURE TO DO SO COULD RESULT IN BODILY HARM OR DAMAGE THE UNIT.</b>

 <b>CAUTION</b>
<ul style="list-style-type: none"><li>• Permit only qualified persons to service the instrument</li><li>• Before connecting or disconnecting any components, remove the power.</li><li>• Failure to observe these precautions may cause bodily harm or damage to or destruction of the equipment.</li></ul>

- Follow the instructions for use.
- Keep the operating instructions and the declaration of conformity in a safe place.
- Ensure that the scale is standing firmly on a smooth, level surface.
- Do not drop the scale or subject it to violent shocks.
- When using the scale with a main unit, ensure that the supply cable is routed in such a way as to exclude any type of tripping hazard.
- Use only the type of battery stated.
- Have scale serviced and re-calibrated on a regular basis.
- Have repairs carried out only by authorized persons

## 2. INTRODUCTION

- The WSI 602 series scales, amplifies signals from a load cell, converts it to digital data and displays it as a mass value.
- It is accurate, fast and versatile series of general purpose balances with % weighing functions and accumulation
- Mother and child weighing functions.
- BMI with bar graph.
- Wheels at bottom, easy to move.
- Rubber mat on the surface of the platform.
- 25 mm LCD with white LED back light display
- 7 functions are light touch switches
- Battery provides up to 40 hours of continues use (with out backlight)
- Capacity up to 250kg / 600lb
-

# 3. SPECIFICATION

## 3.1 Specifications

<b>Model</b>	<b>WSI-602</b>
Maximum Capacity	250kg/600 lb
Readability	100g/0.2lb
Resolution	1/2,500
Tare Range	Full
Minimum Capacity	200g
Linearity $\pm$	20g

<b>Common Specifications</b>	
Interface	RS-232 Output Optional
Stabilisation Time	2 Seconds typical
Operating Temperature	0°C - 40°C / 32°F - 104°F
Power supply (external)	12V/500mA AC power adapter or 2000mAh Ni-MH batteries (optional, size AA)
Calibration	External
Calibration as per Directive 90/384/EEC	Class III medical approval
Medical product as per Directive 93/42/EEC	Class I
ADC	$\Sigma$ - $\Delta$
Display	25 mm high 6 digits LCD with auto back-light and loading bar graph
Housing	Aluminium pan and pole, ABS plastic indicator
Platform Size	355x360mm

# 4. INSTALLATION

## Unpacking

Carefully take the Unit out of its package, make sure its not damaged and all accessories are included.

- Remove the weighing scale from the carton.
- Remove the protective covering. Store the packaging if you need to transport the scale later.
- Inspect the scale and terminal for damage. Make sure all components are included.

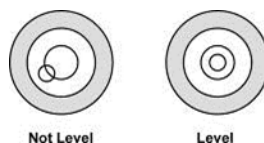
Accessories,

1. Scale
2. Adaptor
3. Product manual

## Level Adjusting

Place the scale on a firm surface.

Check the water mark. If bubble is not in center, adjust the leveling feet until the bubble is in the center circle. Check the level when you change the location.

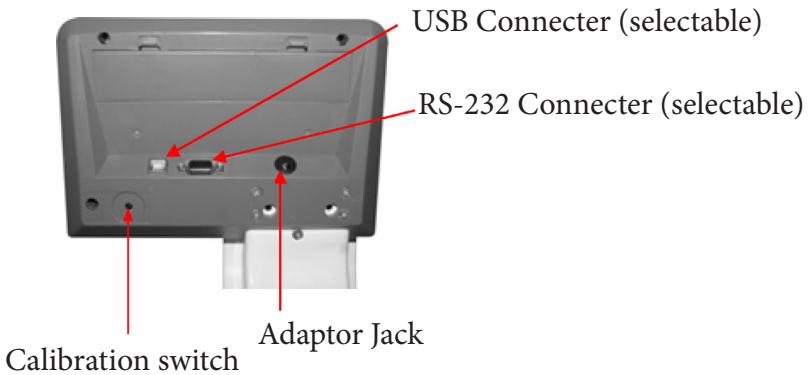


## Charging Battery

- To charge the battery insert the adaptor pin into the jack, the jack is located on the rear side of the scale. The adaptor simply plugs into a standard wall outlet. The scale doesn't need to be turned on.
- The battery should be charged for 12 hours for full capacity.
- The display has an indicator that shows the charging status of the battery. When the scale is plugged into the main power the internal battery will be recharged. If the indicator is off, the battery has a full charge. If it is on, the battery is nearly discharged and if blue, the battery is being charged.
- Do not use any other type of power adaptor than the one supplied with the scale.
- Verify that the AC power socket outlet is properly protected.

**Note: Please charge the battery before using the scale for the first time**

# Installation



- Place the scale on a table.
- Connect the adaptor pin in to the scale adaptor jack. Adaptor jack is located on therear side of the scale.

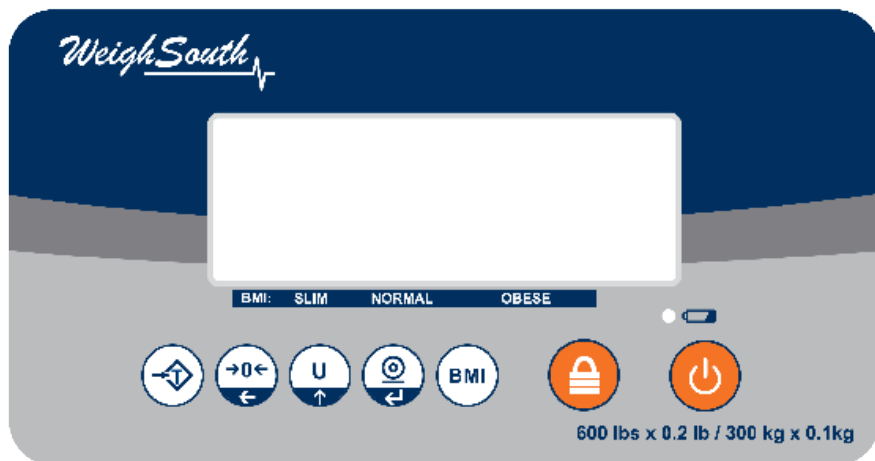









- Adaptor connects into your AC power socket.
- Turn on the On/Off key. If you want to turn off, press the key again.
- Display will be show the version number and will be starting self checking.
- After self checking, display will be come to normal weighing mode.
- Warm-up time of 15 minutes stabilizes the measured values after switching on.
- Calibrate with exact calibration weights, minimum 1/3 of the scale capacity needed for calibration. For calibration see details in parameter.

Scale is now ready for operation/ use.

# 5. DESCRIPTION

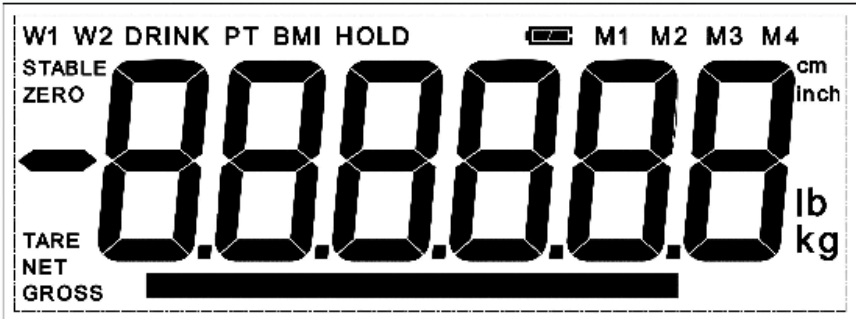
## Key Board







KEY	DESCRIPTION
	Turns the scale power On / Off
	Set to hold mode
	Set to BMI mode
	Set pre-tare
	Enter into the menu of parameter Change unit: kg / lb
	Sets display to Zero
	Subtracts weight of container



# Display



DISPLAY	FUNCTION
STABLE	Indicator for Display stability
ZERO	Indicator for Zero display
TARE	Indicator for Tare display
	Indicator for weighing capacity graph
NET	Indicator for Net weight
GROSS	Indicator for Gross weight
Lb/kg	Indicator for weight units
	Indicator for Charging status of battery Voltage has dropped
	Low Voltage
	Fully Charged

# 6. OPERATION

## Initial Start-up


Warm-up time of 15 minutes stabilizes the measured values after switching on.

### 6.1 Power ON/OFF


Switch on the scale by pressing . The display is switched on and the self test is started.



If you want to switch off press the key again.

### 6.2 Zero

Environmental conditions can lead to the balance exactly zero in spite of the platform not taking any strain. However, you can set the display of your balance to zero any time by pressing  key and therefore ensure that the weighing starts at zero.

### 6.3 Tare


The weight of any container can be tared by pressing  key so that with subsequent weighing the net weight of the object being weighed is always displayed

- Load weight on the pan.
- Press  key. Zero is displayed, and tare is subtracted.
- Remove weight from the platform. Tared weight is displayed. It can set only one tare value. It can display with a minus value.
- Press  key. Zero is displayed, tare weight is cleared.

### 6.4 Change unit

In weighing condition, you can press  to change the unit: kg / lb.

## 6.5 Hold function

Press  before placing load on the platform, so HOLD is active "Hold " and "-----" appear on the display.






After putting load on the platform no reading will be available until a stable non-zero weight is detected. During this period "----" is indicated. You will hear an acoustic beep, when stable weight is detected.

Indication of calculated HOLD-value with small "HOLD" in display the unit "kg" is displayed.


After unloading the platform the value is indicated for 10 Seconds. After that normal weight display is resumed.

Pressing , while the HOLD-function is active, will cancel it.

## 6.6 BMI function

Press  key on the weighing mode, display will show the last height "xxxxxx", use  key to change digit, and press  key to increase the value, press  confirm it, display will enter into the BMI mode, "BMI" indicator will be shown, stand on the platform, display will show the BMI value and the BMI bar, Press  key will turn back to weighing mode

## 6.7 Precision\*10

If you want to see more accurate weight value, press and hold  for 2 seconds, display will show one more decimal place, the last digit will blink for 5 seconds, then it will go back to normal weighing mode.

# 7. PARAMETERS

## Enter the Menu

- Press  during self checking(9--0), display will show

F1 off

## Choose the Menu

- Press , it can choose menu block or options one by one.

## Enter the Selected Menu

- Press , it can confirm which will be displayed.













## Escape from the Menu

- Press  key, it can escape from the menu to weighing mode.

Menu	Sub Menu	Description
F1 off	Off 0/3/5/15/30	To set the auto close the scale time.
F4 bk	Bl on	Set the backlight always on.
	Bl off	Set the backlight always off.
	Bl au	Set the backlight automatic on.
F5 stu	cm	Select unit cm
	inch	Select unit inch
F6 unit	Kg on/off	Enable/ disable unit kg
	Lb on/off	Enable/ disable unit lb
tch	pin	Enter the password
P 1 spd	Set A/D convert speed(7.5/15/30/60)	
P 2 Cal	desc	To set Decimal Points. Options: 0 , 0.0 , 0.00 , 0.000 , 0.0000
	inc	To set Increments. Options: 1 , 2 , 5 , 10 , 20 , 50
	cap	Set capacity
	cal	Enter into calibration
P 3 pro	tri	To modify the calibration.
	count	To show the scale internal count
	reset	Reset the scale
	setgra	Set the gravity value

# 8. CALIBRATION

## Calibration Settings in the Parameter;

- Turn on the scale
- Press  key during self checking, display will show F1 off
- Press  key until it displays tch
- Press  key to confirm display will show pin
- Press   and  keys, display will show P1 spd
- Press  key to show display P2 cal
- Press  key to enter calibration,
- Display will show desc
- Press  key until display show Cal
- Press  key into calibration, display will show unload
- When scale get stable, Press  key,
- Display will be show load
- Place the test weight on the platform.
- After stable, press  key confirm
- Display will be show pass
- Then will start self-test and will come to normal display

Note: the unit (kg / lb) is the same as the last displayed one.

That is: before you restart the scale to do calibration, if you see the unit is kg, then in calibration, the unit is kg; if you want to change to lb, you need to press U key to change the unit before you restart it.

# 9. BATTERY OPERATION

The Medical Scale can be operated from the battery if desired. The battery life is 12 hours (backlight) and 22 hours (without backlight).

When the battery needs charging a symbol on the weight display will turn on. The battery should be charged when the symbol is on. The scale will still operate for about several minutes after which it will automatically switch off to protect the battery.

To charge the battery simply plug into the main power. The scale does not need to be turned on.



The battery should be charged for 12 hours for full capacity.


Just under the quantity display is an LED to indicate the status of battery charging. When the scale is plugged into the main power the internal battery will charge. If the LED is green the battery has a full charge. If it is Red the battery is nearly discharged and blue indicates the battery is being charged.

As the battery is used it may fail to hold a full charge. If the battery life becomes unacceptable then contact your distributor.

**Note:** useless battery should be recycled, not thrown away in every day trash or go to landfills.

# 10. MAINTENANCE

	 <b>WARNING</b>
	<b>DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, CLEANING, OR SERVICING. FAILURE TO DO SO COULD RESULT IN BODILY HARM OR DAMAGE THE UNIT.</b>

 <b>CAUTION</b>
<ul style="list-style-type: none"><li>• Permit only qualified persons to service the instrument</li><li>• Before connecting or disconnecting any components, remove the power.</li><li>• Failure to observe these precautions may cause bodily harm or damage to or destruction of the equipment.</li></ul>

## 10.1. General

If the scale does not operate properly, find out the problem if possible. Determine whether the problem is constant or alternating. Be aware that problems can be caused by mechanical or electrical influences.

Check the following.

- Water
- Corrosive materials
- Vibrations or temperature or wind
- Physical damage

Check the scale cables for damage, and check all connections and connectors for any loose contact or incorrect connection

## Cleaning

- Disconnect the power before cleaning.
- Use a cloth with mild suds and light cleaning agents.
- Make sure that fluid is not able to get into the scale.
- Use a clean and soft cloth for rub off.

## 10.2. Error Codes

Error Code	Description	POSSIBLE CAUSES
Err 4	Zero range exceeded.	<ul style="list-style-type: none"><li>• Goods on the platform</li><li>• Overload, when zeroing the scale.</li><li>• Improper calibration</li><li>• Load cell problem</li><li>• PCB problem</li></ul>
Err 6	A/D Count out of the range	<ul style="list-style-type: none"><li>• Platform not installed</li><li>• Load cell problem</li><li>• PCB problem</li></ul>

## 10.3. Determine the Problem

Determine whether the problem is in the PCB or the Load Cell

- Remove power from the system, and disconnect the load cell connection from the PCB
- Connect the PCB to a load cell simulator
- Reapply power and test the PCB
- If problem goes away, its source is probably in the Load cell. Check the wiring, connector, load cell and mechanical components of the load cell.

If problem persists, its source is probably in the PCB. Check the PCB voltages, connectors, cables and function programs



## 10.4 Trouble Shooting

Problem	Possible cause	Common Solutions
Display is blank. No self test	Main power is turned off. Power supply faulty or not plugged. Internal battery is not charged. On/Off switch problem	Check power is getting inside the scale and on/off switch is working. Verify voltages, which is on the power labels.
Blank display after self test	Platform not installed. Unstable weight, load cell damaged	Check that the platform is installed correctly. Try to turning on again.
OL or -----	Maximum capacity exceeded. Load cell or mechanics damaged. Power supply faulty	Check the platform is installed correctly. Try to turn on the scale again. Do the calibration again
----- or NULL displayed	Weight on the platform is below permissible limit. Platform not installed correctly. Power supply faulty. Load cell or mechanism faulty	Check the platform is installed correctly. Try to turn on the scale again. Do the calibration again.
Display is unstable	Debris is touching somewhere. Air variation or any vibrations. Temperature changed . Load cell or connections faulty. Power supply faulty	Check the scale is in acceptable location. Check the connectors and load cell
Weight value incorrect	Calibration error. Platform or load touching somewhere. Wrong weight unit.	Use accurate weight for the calibration. Check the platform and load cell is installed properly and not touching. Check the parameter settings. Check the load cell and connectors.

Can not use full capacity	Shipping screws are not removed. Parameters are set incorrectly. AD problem. Load cell or mechanism damaged.	Check the shipping screws under the platform. Check Weighing unit and parameter settings. Check the load cell
Platform Corner Weight different	Shipping screws are not removed. Load cell or mechanism damaged.	Check the shipping screws under the platform. Use accurate weight for calibration. Check the load cell
Battery not charging	Main voltage problem. Charging circuit problem. Battery problem.	Check the main power and adaptor. Check the battery. Check the charging circuit.

# WARRANTY

The Manufacturer warrants each product to be free from defects in materials and workmanship, and to conform to its published product specific cautions under normal use and service for the period of one year commencing from the date of purchase.

The foregoing warranty is extended only to the first purchaser and applies only to product failures due to defective materials and/or workmanship. Without limiting the generality of the foregoing, the foregoing warranty will not apply if, upon inspection, it is found that the product was: misused or abused; used for a purpose for which it was not designed; mishandled; placed in an improper environment; repaired by unauthorized personnel; or improperly installed or adjusted.

The sole and exclusive remedy in the event of any breach of the foregoing warranty shall be for the original purchaser to return the product to The Manufacturer, freight and insurance prepaid, for repair, replacement or credit, at The Manufacturer option. Any product repaired or replaced under the foregoing warranty shall be shipped back to customer freight and insurance prepaid.

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IN NO EVENT SHALL THE MANUFACTURER BE LIABLE FOR ANY LOSS, INCONVENIENCE, OR DAMAGE, INCLUDING WITHOUT LIMITATION DIRECT, OR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM OR RELATED TO THE USE OR INABILITY TO USE A PRODUCT, WHETHER RESULTING FROM BREACH OF WARRANTY OR ANY OTHER LEGAL THEORY, EVEN IF THE MANUFACTURER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH INCONVENIENCE, DAMAGE OR LOSS.

