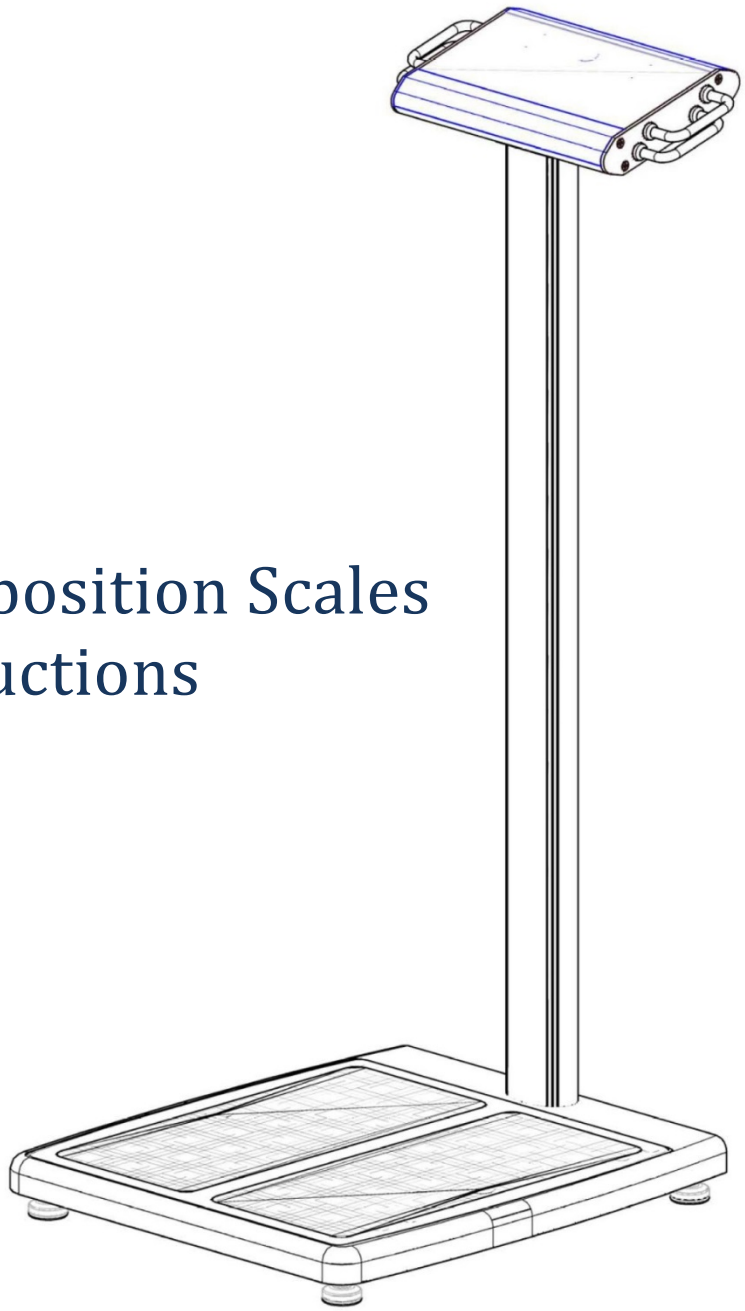
VALHALLA SCIENTIFIC



G6 Series
Body Composition Scales
User Instructions

Valhalla Scientific, Inc. **12127 Kirkham Rd. Poway, CA 92128 | www.bodycompscale.com**

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Rev 4.A (STD)

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Note: This scale has been factory calibrated, and does not require calibration prior to use.

Section I - Installation

Caution and Warnings

- Individuals who have internally implanted medical devices, such as Pacemakers, should not use this equipment due to the risk of malfunction to the device that may be caused by the weak electrical current.
- To prevent injury and damage to your scale, please follow these instructions very carefully.
- Assemble and operate the scale per the enclosed user instructions.
- For accurate weighing, this scale must be placed on a flat, stable surface.
- For accurate weighing, verify before each use the proper operation according to the procedure described in this manual.
- Operating this scale at voltages and frequencies other than specified can damage the equipment and will void the warranty.
- Do not transport the scale with any weight on the platform.
- Do not exceed recommended weight limit of 1000 lbs for this scale.
- Do not use in the presence of flammable or explosive materials.
- To prevent patient injury, the patient must be attended to throughout the entire weighing event.
- Operate this scale exclusively with the power adapter provided by Valhalla Scientific®. Use of an unspecified adapter will void the warranty, and can pose a serious safety hazard.
- Prior to using this scale, inspect the power adapter cord for cracking or fraying, or for broken / bent plug prongs.
- Prior to using this scale, ensure that the power adapter is plugged into an outlet with the rated voltage appropriate for operation.
- Ensure that the power adapter outlet is wired to a circuit breaker or other protected power source.
- Ensure that the power adapter and scale do not come in contact with liquids, excessive temperature, or excessive humidity.
- Unplug the power adapter, and carefully store both the power adapter and adapter cord before moving the scale.

Scale Specifications

Capacity and Resolution	1000 lb x 0.1 lb	
Power Requirements	110Vac/220Vac to 6VDC/2.5A	
Environmental	Operating temperatures: 0°C to 50°C Storage temperatures: -15°C to 65°C) Humidity: 70% or less up to 40°C non-condensing	
Physical Dimensions	**Platform** Length: 20” Width: 18” Height: 2.25”	**Scale** Length: 23.5” Width: 18” Height: 41.5” Weight: 27 lbs.

Receiving and Inspection

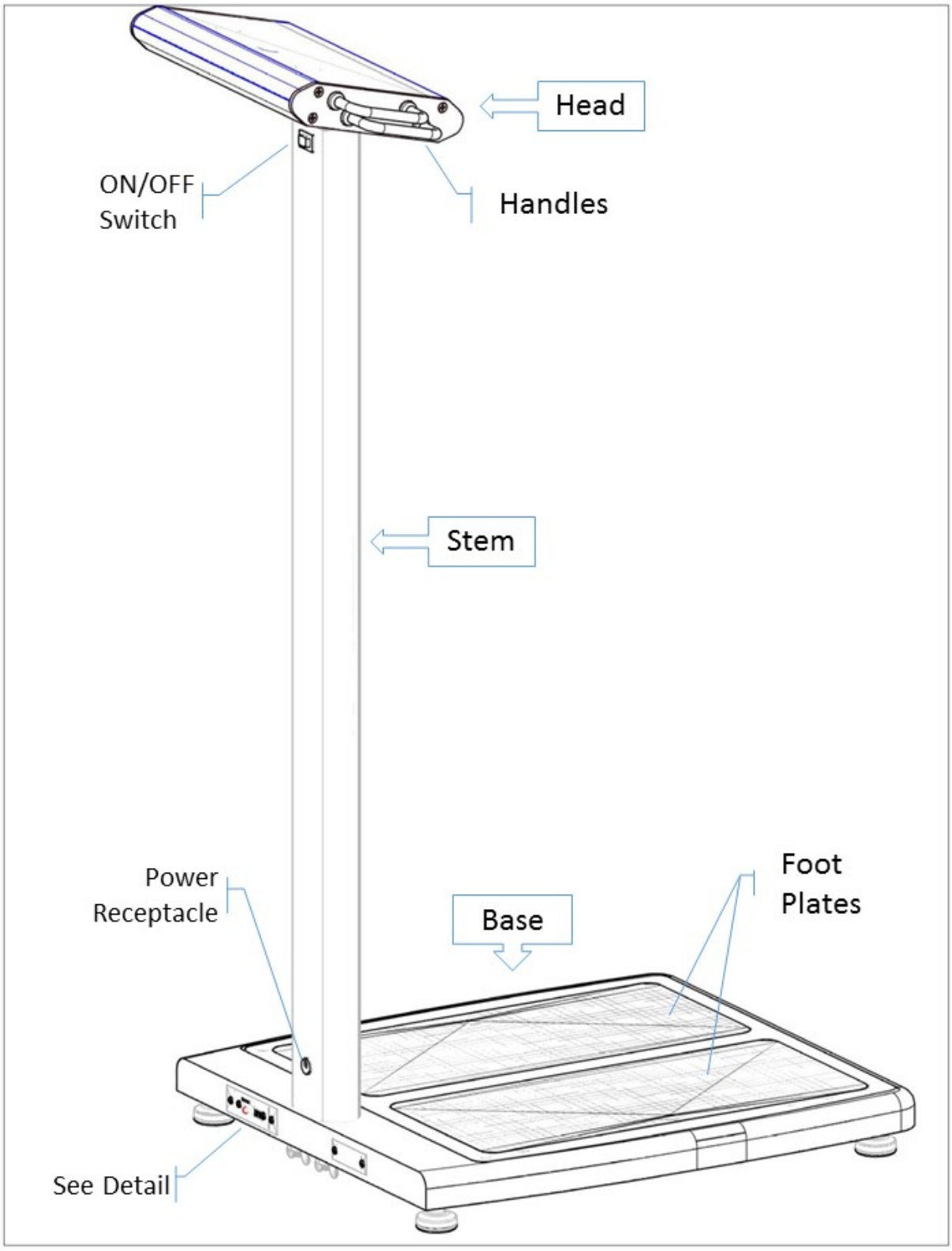
Each G6 scale is shipped disassembled in one carton. Carefully inspect the carton for shipping damage before unpacking. If damage is found, contact your shipper or a Valhalla Scientific, Inc. representative immediately at 1-800-548-9806. Claims must be filed with the shipper as soon as possible after receipt of the package. The following information details what you will find inside the main carton as you unpack the parts for assembly.

Included in the box are:

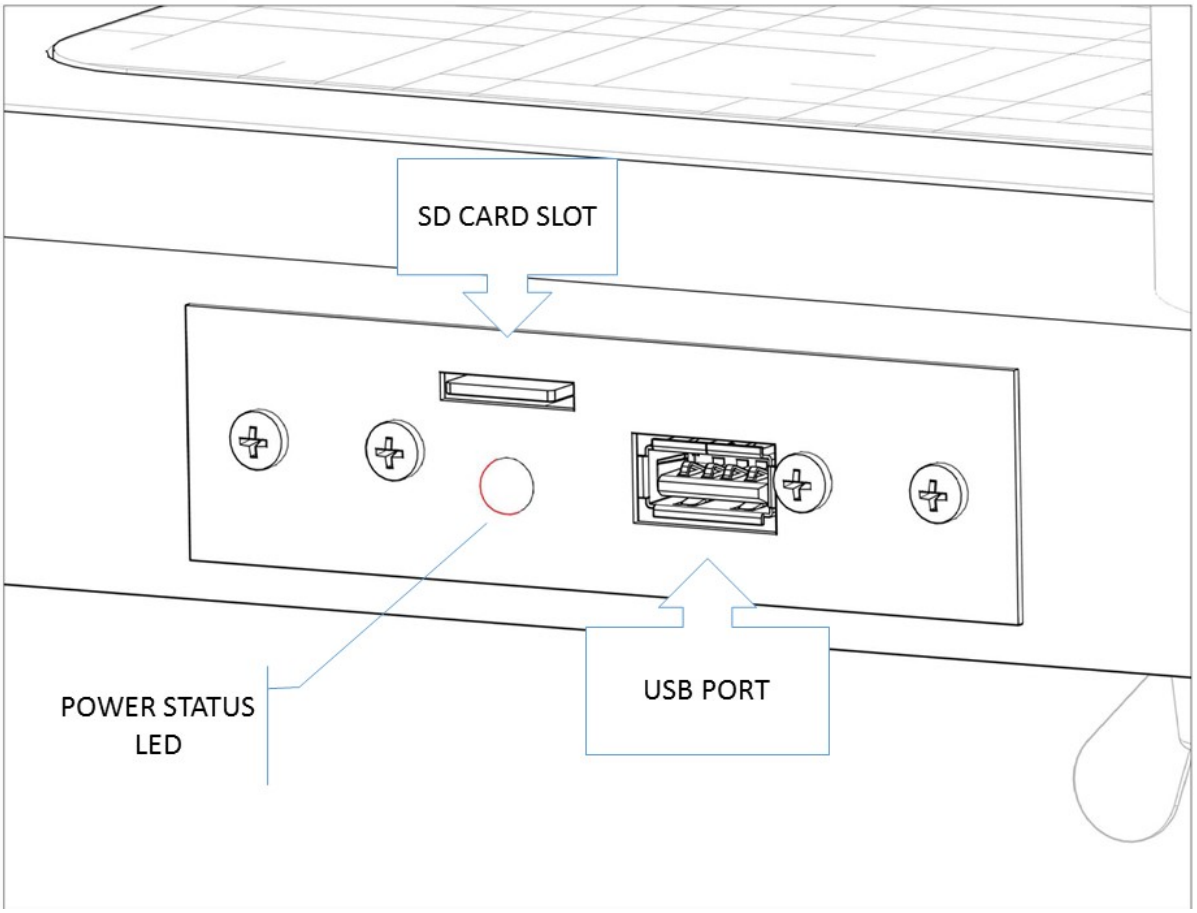
Scale (Base and Stem/Head Assembly),
Feet (4),
Lock Washers (4),
Butterfly Nuts (4),
Power Supply,
Manual,
Sample Printouts.

To prevent scratching any components, carefully remove each assembly from the carton and unwrap the packing materials. Set the carton aside for storage. To avoid damaging the scale parts when unpacking, do not use a box cutter, knife, scissors, or any sharp object to open the protective inner packaging.

Scale Parts


Head
ON/OFF
Switch
Handles
Stem
Power
Receptacle
Base
Foot
Plates
See Detail

Detail

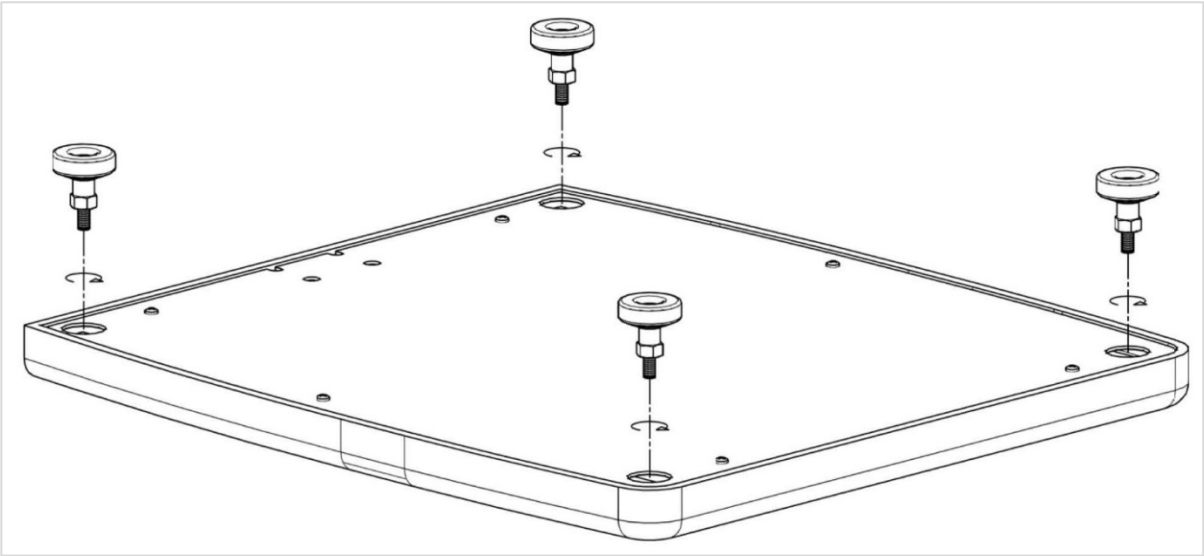


ATTENTION - WARNING

Power Status LED is an indicator that shows the status of scale's internal computer. To avoid damage to the operating system, never disconnect the power supply from the scale while the LED is ON or FLASHING. Switch the scale off with the ON/OFF switch and wait for the LED to turn off before disconnecting the power supply from the scale.

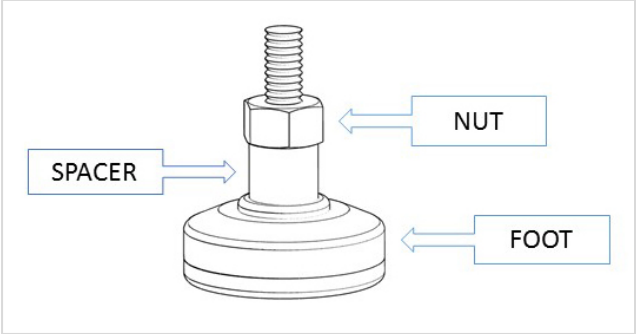
Assembly

Step 1. Remove the base from the box and install the four feet.



NOTE: The feet sub-assembly, come pre-assembled. There are 3 components to each foot assembly:

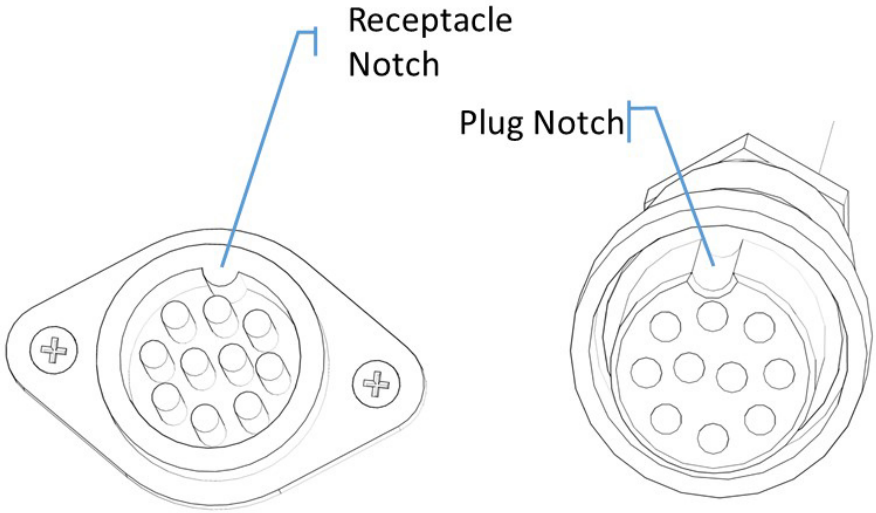
- Foot
- Space
- Nut



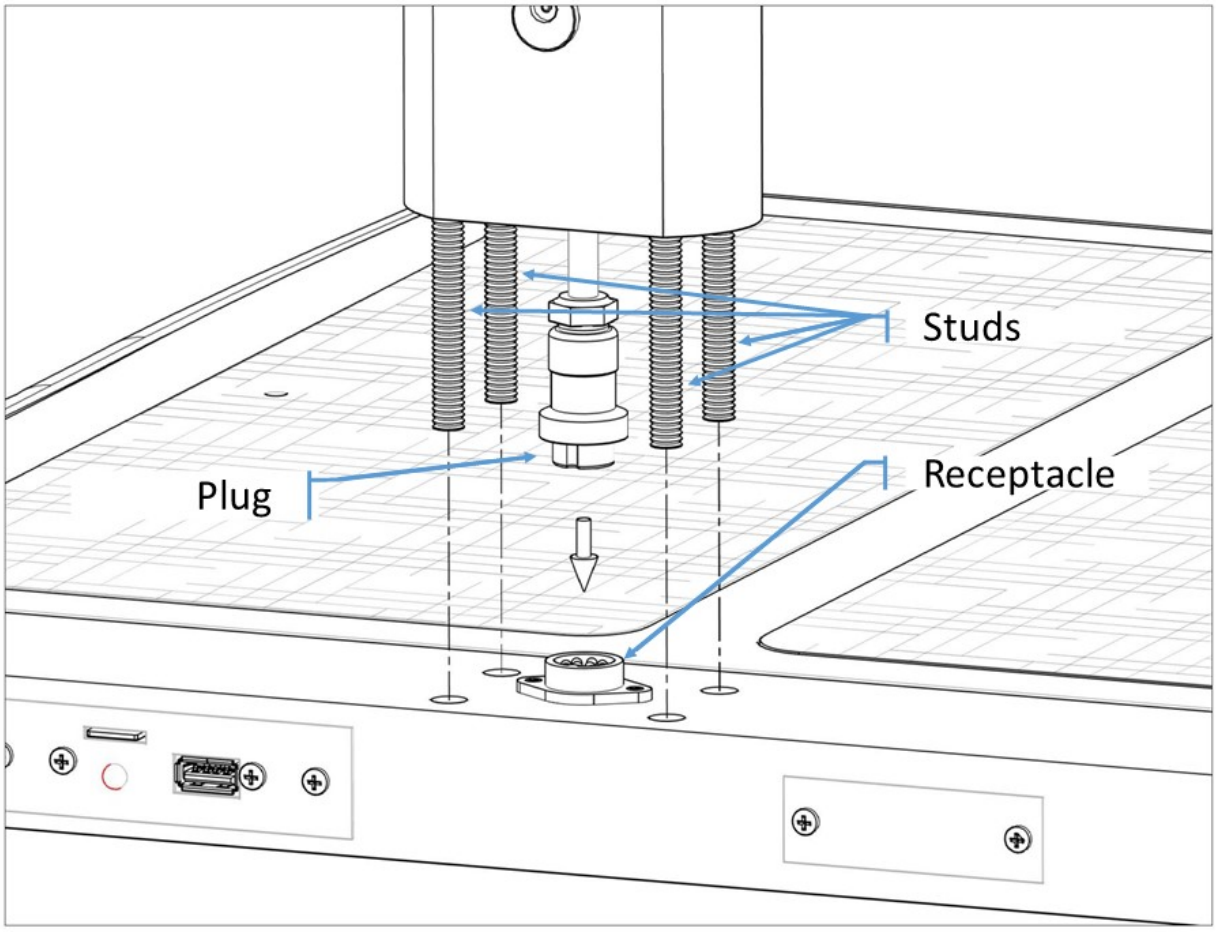
DO NOT DISASSEMBLE FOOT

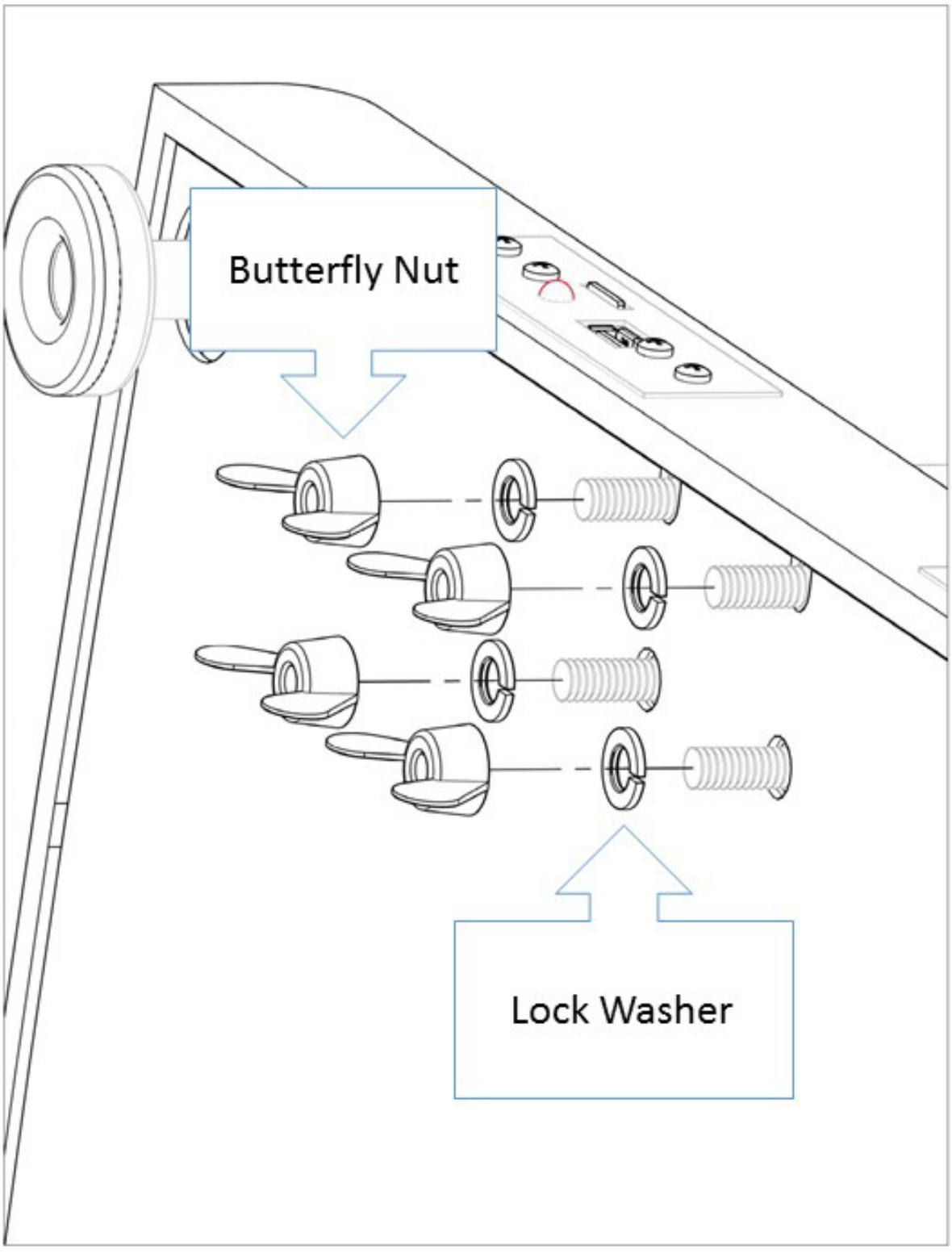
Removing the nut and/or spacer from the foot assembly will cause the scale to malfunction.

Step 2. Connect the plug from the stem to the receptacle on the base.
To properly connect, the notches on the plug and receptacle must align.



Step 3. Align the 4 studs from the stem to the 4 holes on the base and insert.



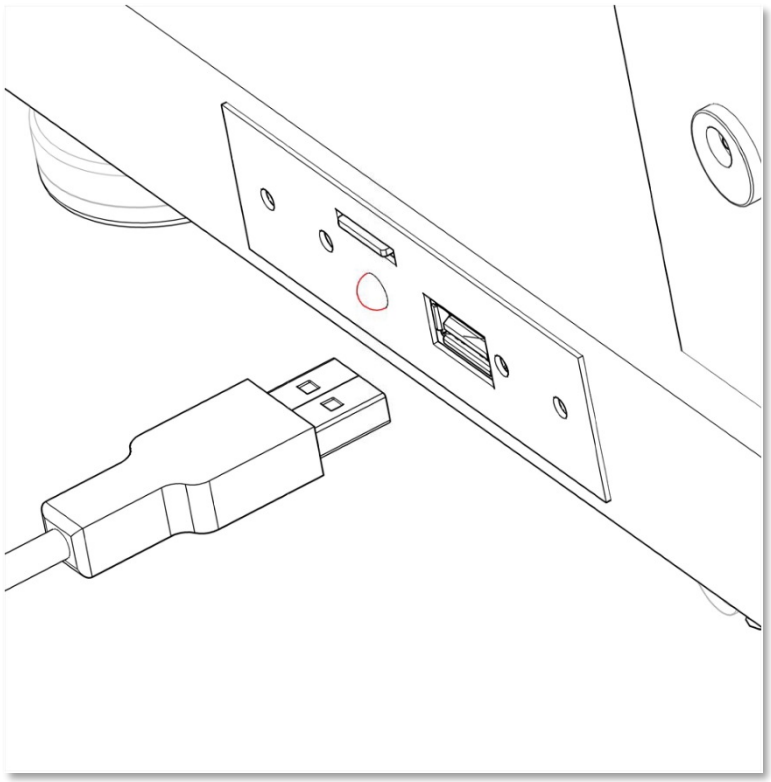


Step 4. While holding the stem and studs in place, carefully tip the scale at an angle to view the bottom of the base. Insert the 4 lock washers and tighten the butterfly nuts to the 4 studs.

Connecting Scale to Printer (USB Setup)

The G6 is designed to work with several HP printers. Before purchasing a printer, please check the list of compatible printers. (View the list online at www.homscales.com)

1. Before making connections, make sure that the scale is off. This includes the Power Status LED at the back of the base.
2. Turn on the printer and follow any first time power up and alignment procedures.
3. Connect the G6 to the HP printer by inserting one end of a standard USB cable into the scale's USB port and the other end into the printer's USB port.



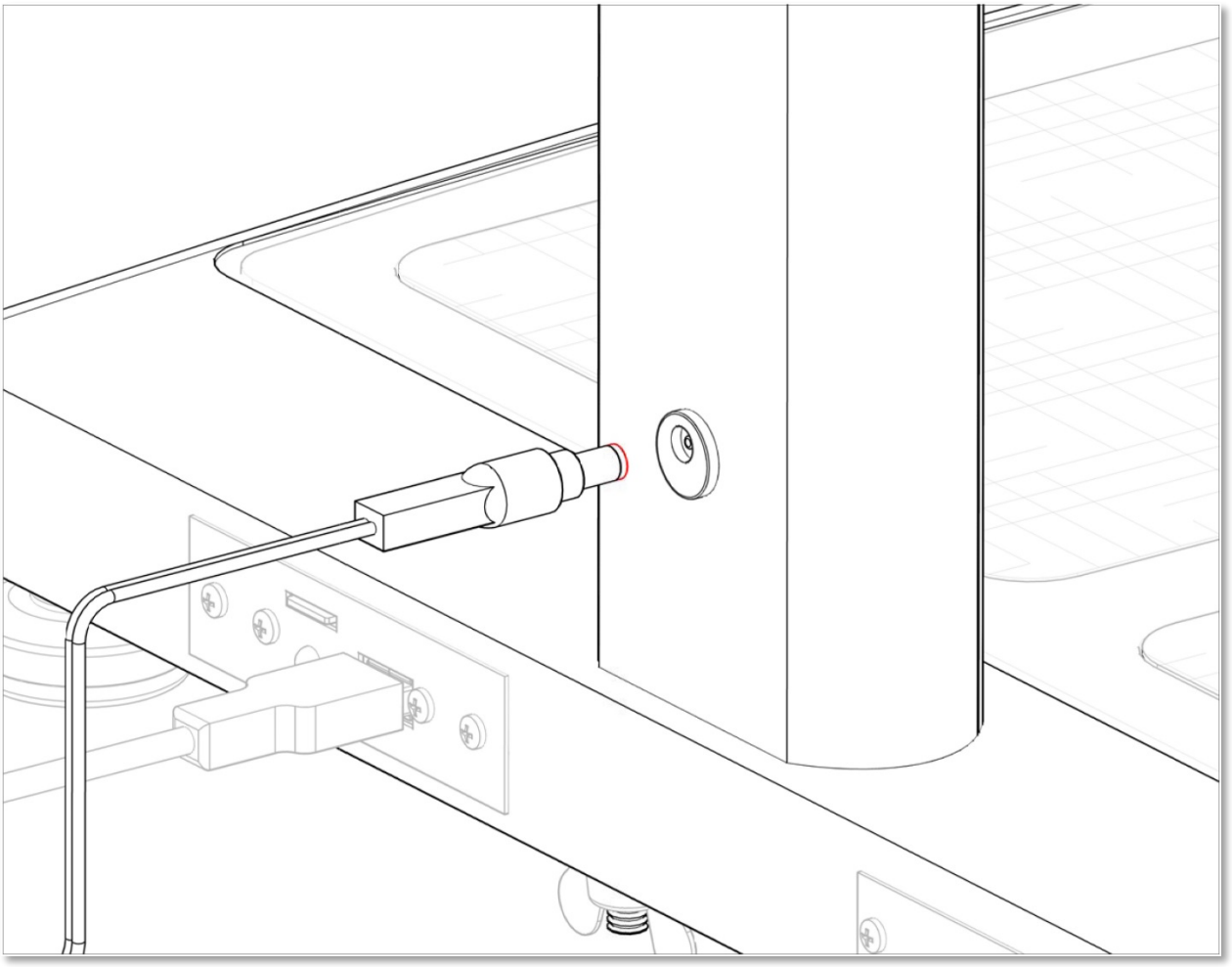
4. Make sure the printer is on and connected to the scale, then turn the scale on.

The G6 will automatically sense the printer at power-up and select the appropriate drivers.

For optimal performance, make sure to disable the printer's "auto-off" function.

Powering up

Before plugging the power supply into the wall, verify that the ON/OFF switch located on upper part of the stem is in the OFF position. Connect the power supply to the wall socket and then to the scale.



Once the connection is made, flip the switch to the ON position.

Attention:

To avoid failure, never disconnect the power supply from the scale while the Power Status LED is ON or FLASHING.

Switch the scale off from the ON/OFF switch and wait for the LED to turn off before disconnecting the power supply from the scale.

When the G6 turns on, the screen will briefly display a start-up message which includes system technical information.

The startup will be followed by a series of system configuration checks. Once the display goes blank, the scale is ready to be used.

Section II - Operations

How to Take a Measurement

1. Have the patient remove their shoes and socks and stand on the scale[1].
2. Ensure the patient remains still while the scale measures their weight.
3. When prompted, enter the Age.
   On G62 Duo scales only: For children (4 to 17y11m) the age must be entered in Years and Months. From 4 to 9 you will need to press enter after the year is entered, from 10 to 17 the scale will automatically skip to the month field. For Adults 18 to 99, no months are required.
   Press the flashing ENTER button to confirm.
4. The screen will prompt you to enter the Height.

The height may be entered in the following format. A height of 6 feet 2 inches can be entered as:

6+2

The ½ button is used to add a half inch to the height.

For example 5 feet 7.5 inches is entered as:

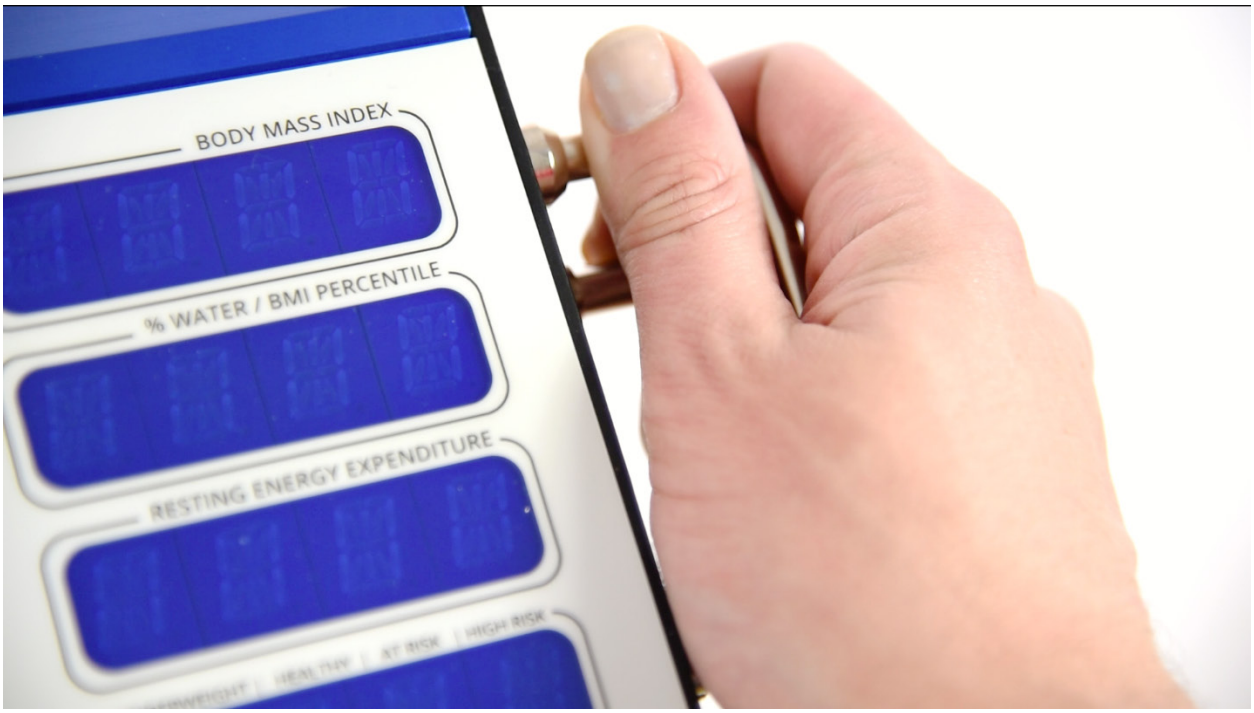
5+7+½

If a wrong number is pressed, press CLR (clear) to start over.

Press the flashing ENTER button to confirm the height and move to the next step.

5. When prompted, select Male or Female and press the flashing ENTER button to confirm selection.
6. When prompted, have the patient grip the handles so that the palm of each hand makes contact with both handles on both sides of the display module. The thumb should rest gently on top of upper handle. The scale will now measure their bio-impedance and display their results.

[1] ATTENTION: G61 does NOT require removal of shoes and socks



7. To print the results, select graphic or plain and press ENTER. (See Section IV - *Printouts for details on the print types).*

How to Recall the Last Measurement

The G6 allows the user to recall the last measurement and reprint it. To recall the last results:

1. Press the RCL button on the display panel. The data will be displayed.
   The display is be cleared by pressing the CLR button.
2. To print the results, select graphic or plain and press ENTER.

The last results will be erased if the scale is turned off.

Section III – Understanding Results and Norms

In order to determine a discernable change in body composition a 3 % change in body weight is recommended.[2]

Body Weight: Indicates the gross total body weight.

% Body Fat: Total Percent of Body Fat. Norms are based on age[3]

%Body Fat Norms				
Male:	**Under Fat**	**Optimal**	**Overfat**	**Obese**
Ages 4-5	<12	12-19	19-23	23+
Age 6	<12	12-20	20-24	24+
Age 7	<13	13-20	20-25	25+
Age 8	<13	13-21	21-26	26+
Age 9	<13	13-22	22-27	27+
Ages 10-11	<13	13-23	23-28	28+
Age 12	<12	12-23	23-28	28+
Age 13	<12	12-22	22-27	27+
Age 14	<11	11-21	21-26	26+
Age 15	<10	10-21	21-25	25+
Ages 16-18	<10	10-20	20-24	24+
Ages 18-39	<10	10-21	21-26	26+
Ages 40-59	<11	11-22	22-27	27+
Ages 60+	<13	13-24	24-29	29+
Female:	**Under Fat**	**Optimal**	**Overfat**	**Obese**
Age 4	<14	14-22	22-26	26+
Age 5	<14	14-22	22-26	26+
Age 6	<14	14-23	23-27	27+
Age 7	<15	15-25	25-29	29+
Age 8	<15	15-26	26-30	30+
Age 9	<16	16-27	27-31	31+
Age 10	<16	16-28	28-32	32+
Ages 11-13	<16	16-29	29-33	33+
Ages 14-16	<16	16-30	30-34	34+
Age 17	<16	16-30	30-35	35+
Age 18	<17	17-31	31-35	35+
Ages 18-39	<20	20-34	34-39	39+
Ages 40-59	<21	21-35	35-40	40+
Ages 60+	<22	22-36	36-41	41+

[2] Schoeller, Dale. Human Body Composition: Human Kinetics, 2005. Print

[3] Based on National Institute of Health/World Health Organization Guidelines.

Body Mass Index: BMI is a value derived from the mass (weight) and height of an individual. The BMI is defined as the body mass divided by the square of the body height.

% Body Water: Proper hydration norms are based on % body fat[4].
Note: G6-Duo does not display %Body Water in Pediatric Mode.

Proper Hydration Ranges		
Body Fat%	Male %Water	Female %Water
10-15	72-65	60-56
16-23	64-59	55-49
24-28	58-54	48-44
29-34	53-49	43-39
35-40	48-45	38-33

% BMI: Displayed only for children (4-17), the BMI percentile is the ranking of the child's BMI when compared to other children the same age and gender.
Note: %BMI is only available on G6-DUO scales.

REE: Resting Energy Expenditure is the number of calories required over 24 hours to maintain vital organs and body functions. REE is determined by integrating the muscle mass value as a predictive variable for each individual.

Health Status: The health status indicator window is based on recommended BMI ranges[5].

Health Status Ranges - Adult				
	Underweight	Healthy	At Risk	High Risk
BMI	< 18.5	18.5 – 24.9	25 – 29.9	> 30

On the G6 Duo models, for children under the age of 18, the Health Status indicator is based on the BMI Percentile.

Health Status Ranges - Pediatrics				
	Underweight	Healthy	At Risk	High Risk
% BMI	< 5	5 – 85	86 – 94	> 95

[4] Schoeller, Dale. Human Body Composition: Human Kinetics, 2005. Print
[5] Based on CDC Guidelines

Fat Free Mass: Fat Free Mass refers to the portion of the body composed of muscle, bones, organs and fluids.

Caloric Burn Rates: Caloric Burn Rates are determined by adding the REE calories to various levels of physical activity. For your own calculations, remember 3500 calories make one pound of fat.

Visceral Fat: Visceral fat is body fat that is stored within the abdominal cavity and is therefore stored around a number of important internal organs such as the liver, pancreas and intestines.

Visceral Fat Level Range[6]		
Normal	High	Very High
1 – 9	10 – 14	15+

[6] Simplified Estimation Method for Visceral Adipose Tissue. North American Association for the Study of Obesity.

Section IV - Printouts

When the results are displayed, the G6 allows you to select the print type, Plain or Graphic.

Plain Printouts

The Plain printout is a single page containing all the results from the measurements and calculations.

Programming Number of Copies

The user can pre-define the number of copies to print. The default value is 1.

To change the value:

1. Without stepping on the scale,
   Press # **3** to access Settings Menu
2. When prompted [MENU ?], press **Plain**.
3. Enter the number of copies you wish to print (1 thru 9).
4. The scale will display DONE and return to standby.

Graphic Printouts

The Graphic printout is a multi-page report designed for specific preprinted paper. The G6 is programmed to handle several different graphic layouts.

Note that the G6 Duo models automatically default to the 7 page Pediatric printout for individuals under the age of 18.

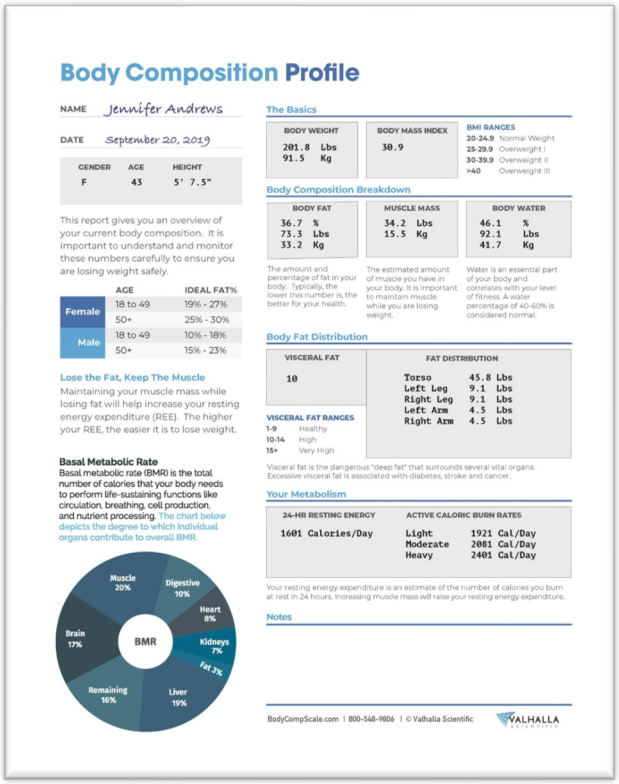
To properly load the Illustrated Printouts in the printers, place the pre-collated pages face down, header in.

Selecting Default Graphic Report Type

Your G6 scale enables you to select the 5 page Adult/Bariatric or the 3 page Fitness graphic printout.

1. Without stepping on the scale, Press # **3** to access Settings Menu –
   When prompted [MENU ?], press **Graphic**.
2. Enter “0”for the five page Adult Bariatric printout type P055B.
3. Enter “1”for the single page graphic printout type P111A.
4. Enter “4”for the three page Fitness printout type P431A.
5. Enter “5”for the single page graphic printout type P511A.
6. The scale will display DONE and return to standby.

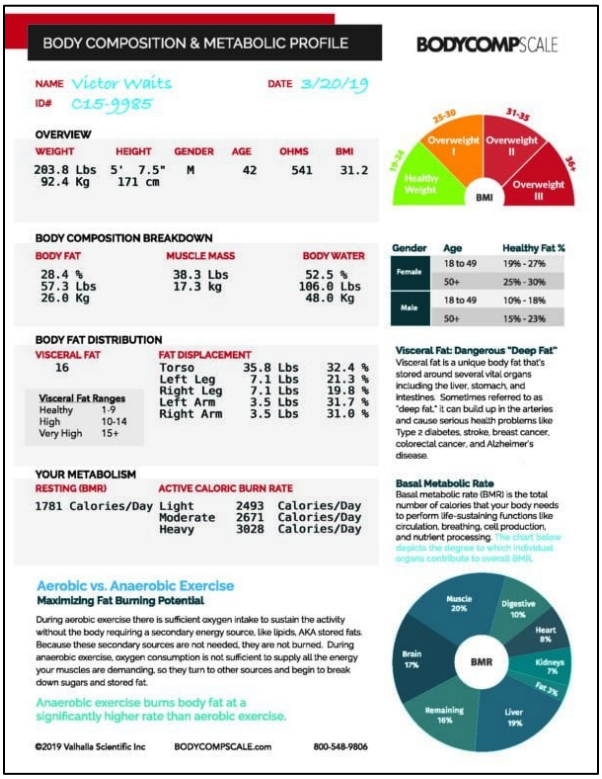
5 page Adult Bariatric Printout Type P055B



Single Page Graphic Type P111A

FITNESS PRINTOUTS

3 Page Fitness Printout Type P431A



BODY COMPOSITION & METABOLIC PROFILE

BODYCOMPSCALE

NAME Victor Waits DATE 3/20/19
ID# C15-9985

OVERVIEW

WEIGHT	HEIGHT	GENDER	AGE	OHMS	BMI
203.8 Lbs 92.4 Kg	5' 7.5" 171 cm	M	42	541	31.2

BODY COMPOSITION BREAKDOWN

BODY FAT	MUSCLE MASS	BODY WATER
28.4 % 57.3 Lbs 26.0 Kg	38.3 Lbs 17.3 kg	52.5 % 106.0 Lbs 48.0 Kg

BODY FAT DISTRIBUTION

VISCERAL FAT: 16

Visceral Fat Ranges: Healthy 1-9; High 10-14; Very High 15+

FAT DISPLACEMENT		
Torso	35.8 Lbs	32.4 %
Left Leg	7.1 Lbs	21.3 %
Right Leg	7.1 Lbs	19.8 %
Left Arm	3.5 Lbs	31.7 %
Right Arm	3.5 Lbs	31.0 %

YOUR METABOLISM

RESTING (BMR): 1781 Calories/Day

ACTIVE CALORIC BURN RATE	
Light	2493 Calories/Day
Moderate	2671 Calories/Day
Heavy	3028 Calories/Day

Aerobic vs. Anaerobic Exercise

Maximizing Fat Burning Potential

During aerobic exercise there is sufficient oxygen intake to sustain the activity without the body requiring a secondary energy source, like lipids, AKA stored fats. Because these secondary sources are not needed, they are not burned. During anaerobic exercise, oxygen consumption is not sufficient to supply all the energy your muscles are demanding, so they turn to other sources and begin to break down sugars and stored fat.

Anaerobic exercise burns body fat at a significantly higher rate than aerobic exercise.

Gender	Age	Healthy Fat %
Female	18 to 49	19% - 27%
	50+	25% - 30%
Male	18 to 49	10% - 18%
	50+	15% - 23%

Visceral Fat: Dangerous "Deep Fat"

Visceral fat is a unique body fat that's stored around several vital organs including the liver, stomach, and intestines. Sometimes referred to as "deep fat," it can build up in the arteries and cause serious health problems like Type 2 diabetes, stroke, breast cancer, colorectal cancer, and Alzheimer's disease.

Basal Metabolic Rate

Basal metabolic rate (BMR) is the total number of calories that your body needs to perform life-sustaining functions like circulation, breathing, cell production, and nutrient processing. The chart below depicts the degree to which individual organs contribute to overall BMR.

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Single Page Graphic Type P511A

7 Page Pediatric Printout Type PQ71A

Section V - Special Modes

Weight Only Mode

The G6 allows you to take weight only measurements.

To enable this measurement mode: Press **Weight Only** before stepping onto the scale.

The scale will display WGT ON. Step on the scale and press **Enter**. The display will count down from 5 to 1 and display your weight.

To clear the weight: Press **CLR**

Athletic Mode

To qualify as "athletic", the individual must meet the following requirements:

Work out 40 minutes in duration (20 min aerobic/20 min anaerobic), 3 days a week, for at least the last 6 months.

To enable the Athletic Mode predictive equation:

1. Before stepping on the scale**,** Press **7**. The screen will display: [ATH MODE Y/N?]
2. Press the **YES** key to enable the Athletic Mode equations, **NO** to cancel.

These steps will enable the Athletic Mode for a single use. After the test is performed, the G6 will automatically return to Standard Mode measurements.

Bodybuilder Mode

To qualify as a "bodybuilder" the individual must be at least 20% above their ideal weight (as defined in the Metropolitan Life Height/Weight Tables), and that weight must be primarily muscle mass.

To enable the Bodybuilder Mode predictive equation:

1. Before stepping on the scale**,** Press **8**. The screen will display: [BB MODE Y/N?]
2. Press the **YES** key to enable the Body Builder Mode equations, **NO** to cancel.

These steps will enable the Bodybuilder Mode for a single use. After the test is performed, the G6 will automatically return to Standard Mode measurements.

Section VI – Customizing

Lock Option

The Lock option allows you to "lock" the G6 and prevent it from being used by unauthorized people. When the G6 is locked, you will be required to enter an authorization ID before each test.

To enable the Lock feature:

1. Press **3** to access Settings Menu
2. When prompted [MENU ?], press # **9**. The screen will display: [PIN? Y/N?]
3. Press the **YES** key to enable the Lock Pin Option, **NO** to cancel.

The default authorization ID number is 1234. The ID can be changed at any time.

To change the Authorization ID Number:

1. Press **9** to access Maintenance Menu
2. When prompted [MENU ?], press # **1**. - *Enter (PW):* **1973**
   The screen will display: [NEW PIN ----]
3. Enter the new 4 digit ID.

Note: The master PIN/Password is 1973 and this number can always be used to access the menu should you forget the new PIN/Password.

Print Ohms Option

The Print Ohms option gives you the choice of whether or not to print the measured bio-impedance value on the printouts. When you first receive the scale, the Print Ohms function is set to OFF.

To enable the printing of the Ohms measurement:

1. Press **3** to access Settings Menu
2. When prompted [MENU ?], press # **5**. The screen will display: [OHMS MODE Y/N?]
3. Press the **YES** key to enable the Print Ohms Option, **NO** to cancel.

Physician ID

The G6 allows the user to set a physician's ID. The ID can be a number up to 8 digits and if set will be printed on the printouts under "Prepared By:"

To set the Physician ID:

1. Press **5** before stepping on the scale. The screen will display: [ID 0000 0000]
2. Enter the preferred ID, up to 8 digits and press **ENTER**.

The Physician ID can be changed or reset at any time.

Patient ID Option

The Patient ID option gives you the choice of using a Patient ID with every test. When you first receive the scale, the Patient ID function is set to OFF.

To enable the Patient ID Option:

1. Press **3** to access Settings Menu
2. When prompted [MENU ?], press # **4**.
   The screen will display: [ID MODE Y/N?]
3. Press the **YES** key to enable the Patient ID Option, **NO** to cancel.

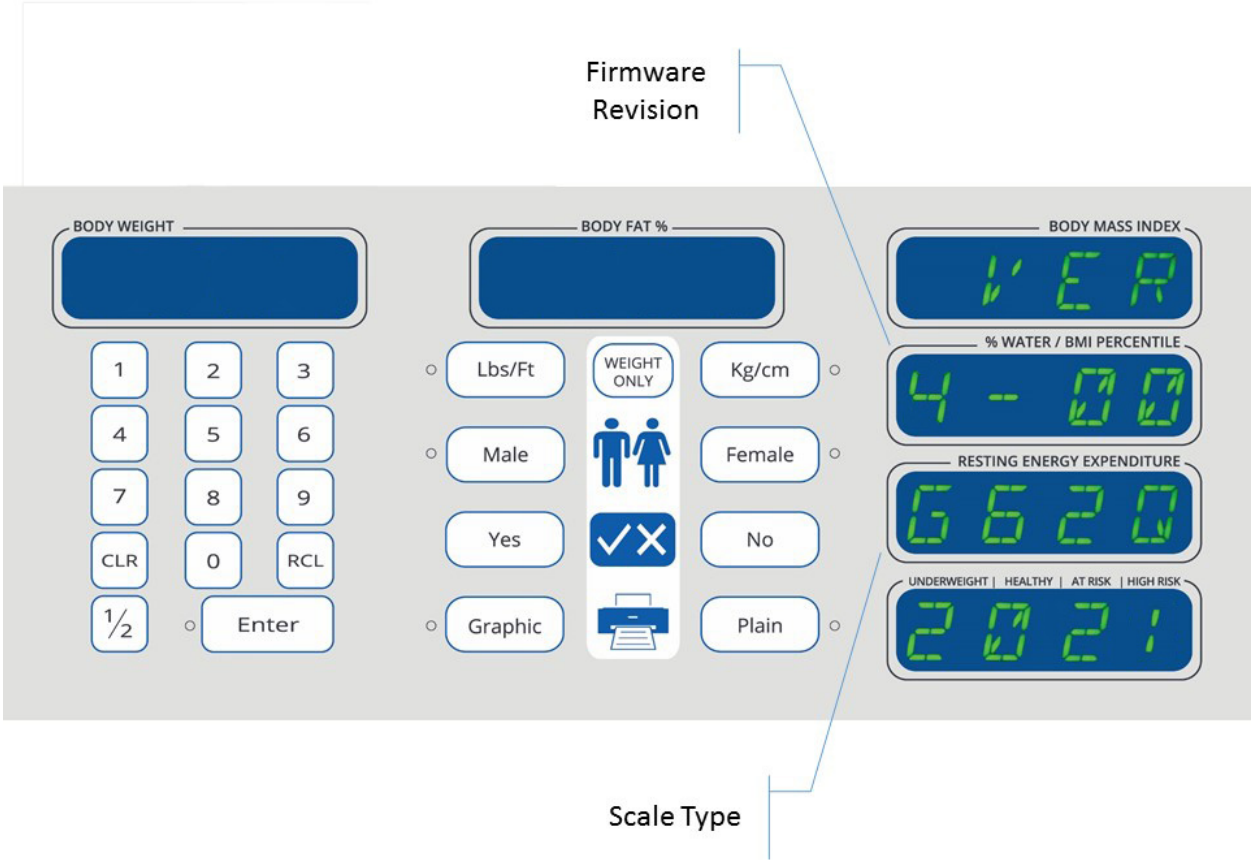
Section VII – Maintenance

The following pages provide instructions for maintenance, cleaning, calibration, and troubleshooting for the G6 scale.

Caution: Before first use, or after long periods of non-use, check the scale for proper operation and function. If the scale does not operate correctly, refer to qualified service personnel.

1. Check overall appearance of the total scale for any obvious damage, wear, and tear.
2. Inspect the AC adapter for cord cracking or fraying, or for broken/bent prongs.

Display Information



To access technical information about the scale, press [4] on the keypad. The screen will display Firmware Revision, and Model Number of the scale. Press [CLR] cancel.

Calibration

Before calibrating your ELITE, you will need a reference weight between 200 and 350 Lbs. The scale can be calibrated using lower weights; however, to ensure the linearity of the measurements, we recommend the above-listed weight range as a calibration reference.

Make sure that the scale is on a level surface and the feet are screwed in tight.

1. **Press 9** to access Menu.
2. When prompted [MENU ?], press the # **9**. The screen will display: [CAL Y/N?]
3. Press the **YES** key to start calibration, **NO** to cancel.
4. When prompted [ZERO CAL], remove any weight from the scale, and press **ENTER**. The scale will calibrate the zero reference as it counts down from 10 to 0.
5. When prompted [WGT ON], place a weight on the scale, and press **ENTER**. The scale will calibrate the weight reference as it counts down from 10 to 0.
6. When prompted [CAL WGT?], type the value of the weight applied to the scale, and press **ENTER**.

   Note: always enter the value in a 4 digit format. Example 200 Lbs enter 2000, or 309.2 Lbs enter 3092.
7. The screen will display the cal factor. Verify that the Cal Factor is between 8000 and 9000. Press **ENTER.**
8. [CAL DONE].

For questions regarding the Calibration instructions, please contact Valhalla Scientific, Inc. Scales Customer Service at 800-548-9806 or 858-457-5576.

Zero Calibration

Press 0 when scale is idle to reset any zero offset.

Cleaning

Proper care and cleaning is essential to ensure a long life of accurate and effective operation.

Caution: Disconnect the scale from the power supply prior to cleaning the unit.

ATTENTION - WARNING

Power Status LED is an indicator that shows the status of scale's internal computer. To avoid damage to the operating system, never disconnect the power supply from the scale while the LED is ON or FLASHING. Switch the scale off with the ON/OFF switch and wait for the LED to turn off before disconnecting the power supply from the scale.

1. Clean all external surfaces with a clean damp cloth or tissue. Mild antimicrobial or antibacterial soap and water solution may be used. Dry with a clean soft cloth.

2. Do not immerse the scale into cleaning or other liquid solutions.

3. Do not use Isopropyl Alcohol or other solutions to clean the display surface.

4. Do not use abrasive cleaners.

Troubleshooting

Issue	Cause	Solution
Unable to print[7]	Incompatible printer	Verify that the printer being used is on the list of compatible printers.
	Low Ink, out of ink	Check if ink cartridges are low and need to be replaced.
	Use of non-approved or refurbished cartridges	Make sure that the ink cartridges are authentic HP. Some printers do not work well with refurbished or third party cartridges.
	No paper in tray	Verify that there is paper in the correct paper tray.
	Loose USB Cable	Verify that the USB cable is firmly connected to both the scale and printer.
	Defective USB Cable	Replace the USB Cable.
	Scale does not communicate with printer.	Turn off scale. Wait for the Power Status LED to turn off. Make sure that the printer is on and connected to the scale. Turn Scale on. Wait for scale to finish count down.
Graphic forms not printing properly	Wrong collation selected	Set the scale collation to match printer. To properly load the Illustrated Printouts in the printers, place the pre-collated pages face down, header in.
Scale does not turn on.	Wrong power supply used	Verify that the factory provided power supply unit is being used.
	Damaged power supply	Contact technical support at 1-800-548-9806.
	No power to AC outlet	Verify that the outlet used has power.
	Power strip is off	Reset or turn on the power strip.
	Power supply not connected	Verify that the power supply is properly connected to the power receptacle.
	Power Switch in the OFF position	Turn the power switch to the ON position.
Scale not sensing weight	Feet are not installed on the base	Verify that all four feet have been properly installed on to the base. Refer to the assembly procedure in the manual.
	Standoff or nut removed from feet	Verify that during assembly, spacer or nut was not removed from the feet before installing them to the base. See assembly step 1.
	10 Pin plug is disconnected	Remove the stem/head assembly from the base and verify that the cylindrical 10 pin plug is connected to the receptacle. Refer to the assembly procedure in the manual.
Inconsistent weight measurements	Scale is not on a level surface	Turn the scale off. Move the scale to a level surface or adjust the leveling feet.
Scale does not process body composition after patient grips handles.	User did not remove shoes and socks	Remove shoes and socks and try again
	Very dry or callused hands or feet	Use lotion on hands and/or feet.

[7] Cause and Solutions may depend on the model of printer.

Section VIII – Compatible Printers

Please see enclosed list of compatible printers or contact customer service for a list of printers that will work with your Body Comp Scale.

For additional information, call 1-800-548-9806

Visit our website at www.bodycompscale.com