Surpahs® DS2 Dual-S Digital Body Fat Scale
User Manual (V-20161B)

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QUICK START GUIDE

1. Remove the battery insulating strip before first use.
2. Place the scale on a hard flat surface. Avoid carpets, rug or soft, uneven surface.
3. If you would use the scale as a Weight-Only scale, for the first time to use the scale, you may can step onto the scale to turn it on, and then step off, wait the screen to display "0.0" and turn off, and then step on again, the screen will display your weight.
4. If you would use the scale as a Body Fat scale, remove socks and wear your feet with a clean, bare surface having them slightly damp.
5. Press "SET" to enter Setup Mode. The Profile Number will flash on the screen. Press the Up / Down arrow keys ▲ and press "SET" to select a profile number.
6. Next, select your Gender.
7. Next, set your Height.
8. Next, set your Age.
9. After entering your Age, the scale screen will display "0.0". **Please immediately step onto the scale barefoot** with your feet positioned on the sensor pads. Stand still and keep your body upright, and then display scroll body fat, water, muscle, and bone values, which you can write down to track. You do not have to remain standing on the scale, it will turn off automatically after 10 seconds. Or you may manually turn off the back of the scale to switch display unit between Kilograms (kg) and Pounds (lb).

Next time when you stand on the scale, it will identify your profile automatically according to its stored weight information.

IMPORTANT: This scale uses BIA (Bioelectrical Impedance Analysis) to determine body fat level. . BIA sends a harmless signal through the body. It is NOT intended for children or pregnant women. do NOT use this product anyone with an implanted medical device (such as a pacemaker), metal plates or screws, or contraceptive devices. When in doubt, contact your physician.

The information provided by this device is NOT meant to treat, cure, or prevent any disease or illness. This device should NOT be used by anyone who is unable to stand unaided. Consult your physician before using this device if you have other serious health issues. The accuracy of readings for these patients has not been verified. Specific medical advice should always be obtained from a physician.

Statement of Accuracy

- This device is intended for home / consumer use; it is not intended for professional use in medical environments.
- Do not use the scale on a carpet, rug or uneven surface as these can cause inaccurate results.
- This scale uses BIA (Bioelectrical Impedance Analysis) to determine body fat percentage. BIA is considered reasonably accurate for measuring groups, or for tracking body composition changes over time in individuals. However, BIA is not considered a precise device for recording of single measurements of individuals.
- As BIA is based on body water balance, your state of hydration can impact the level of accuracy. Dehydration and BIA should be an inaccurate measure to body fat and body fat levels.
- For the most consistent and accurate results, please do not measure within 30 minutes after eating, drinking, bathing, or exercising. Measure your body composition at the same time of the day, particularly early morning before a meal.
- Do not compare weight readings from one scale to another as some differences will exist due to manufacturing tolerances.
- Do not use your Doctor's scale reading as "accurate" reference to determine the accuracy of this scale. Instead, use a "certified" weight object (such as a 10 lb. or 5 kg. weight) and accurately weigh for using 10 kg/22 lb standard Chemistry weight bars on the scale.
- This scale is used for a consistent manner for the most accurate readings. While readings may vary slightly from one weighing to the next, the trend should be consistent. If you notice significant changes, your changes in body fat percentage by the scale will be verified by your physician.
- If you weigh yourself twice and get two different results, your weight lies between the two readings.

SPECIFICATIONS/FEATURES

- Measures weight, body mass index (BMI), body fat, body water, muscle and bone mass
- Tracks measurements for unlimited number of users (up to 8 profiles) with 3 levels of water percentage, bone mass, and muscle mass to genetically healthy adult (18 years of age or older)

Dimension	280x240x23mm / 11x9.5x0.9 inches
Turn On Method	Sense-On (Stand on the platform directly)
Display	Blue LCD with White Backlight
Weight Capacity	150 kg / 330 lb
Weight Unit	kg / lb
Weight Increments	0.1 kg / 0.2 lb
Body Fat Evaluation	5 1% (in the range of 5% - 50%)
Body Fat Increments	0.1% (in the range of 5% - 7.9%)
Age Range	10 - 90 years old
User Profiles	8 Users
Athlete Mode	Yes
Accuracy	2.5 kg/5.5 lb (10kg - 40 kg/ 22-88 lb) 50-100kg (110-220lb) 40-60 kg (2-88 lb) 100-150kg (220-330lb) 60-75kg (1 - 10 lb)
Power	4x1.5V AAA batteries (included)
Auto Turn Off	About 10 seconds after LCD displays "0.0" About 10 seconds after stepping off, if weight is unstable
Working Environment	10°C to 40°C / 50°F to 104°F; Humidity: 20%RH to 93% RH
Storage Environment	Temperature: -20°C to 60°C / Humidity: 20%RH to 93% RH
Low battery indication	Yes
Over load indication	Yes

SCREEN/LEGEND

	Male	Stat	Stature
	Female	Set	Setup
	Centimeter	kg	Kilogram
	Foot	lb	Pound
%	Percentage		Low Battery
kcal	Basal Metabolic Rate		

HOW DOES THE BODY FAT SCALE WORK?

Fat is essential for human body. It can not only store energy and protect viscera, but also keep the temperature of body and participate in metabolism. Body fat percentage is the percentage of fat tissue to the total weight. It is always accompanied by Fatty Acid, Triglyceride, Cholesterol, Protein and Water.

Therefore self-measuring and self-monitoring body fat level are beneficial to your health. Body Fat Scale is a convenient and fast way to measure body fat. Based on BIA (Bio-Impedance Analysis) technology, it is an accurate device that offers a quick and comfortable way to obtain your body fat level.

The Body Fat Scale sends a safe, painless, low level electronic (BIA) technology which passes a current through the body to measure the impedance. Fat mass, total body water, muscle mass, and bone mass. The electrical current is very small and may not be felt. Contact is made with the body via four stainless steel plates on scale.

BATTERY

- Uses 4 x AAA batteries.
- Make sure the polarity signs of the batteries are aligned correctly.
- Replace batteries when the low battery indicator "Lo" is shown.

When batteries are inserted, the screen will display "**8888**"

Wait until the screen display "0.0", and it is ready to use.

UNIT SELECTION

- Default displaying unit is "lb" (pound).
- To change displaying unit, press the UNIT button locate on the back of the scale, and you can choose from "kg" or "lb".

INITIALIZATION/ CALIBRATION

NOTE: To ensure measuring accuracy, the initialization process must be done at anytime the scale is moved to another place, or batteries are changed.

1. Step out from the platform to turn it on and then step off.
2. "0.0" will be displayed.

3. The scale will switch off and now is ready to use.

SETUP USER PROFILE

If you would use the scale as Weight-Only scale, you may skip this section and refer to the "WEIGHT-ONLY MODE" section. For the first time to use the scale.

The scale can store up to 8 user profiles (identified as P1 to P8) in memory.

1. Remove socks and wipe your feet with a damp cloth, leaving them slightly damp.
2. Press "SET" to enter Setup Mode. The Profile Number will flash on the screen. Press the Up / Down arrow ▲ and press "SET" to select a profile number.

3. Next, Gender will flash ▲ for blinking, select your Gender.

4. Next, set your Height.

5. Next, set your Age.

6.After entering your Age, the scale screen will display "0.0". **Please immediately step onto the scale before it turns off and remain your body still.** The scale will save your weight and body composition data to the profile number you have selected. Then it will display your weight only.

SETUP USER PROFILE

This completes the programming of your profile. The next time you use your scale, it will identify your profile by comparing your current weight with the stored weight.

Note: If your weight changes by +/-2 kg (+/-4 lbs) or more, the scale may have trouble identifying your profile. It is recommended that you re-configure your profile.

USING THE SCALE AS WEIGHT-ONLY SCALE

If you just want to measure body weight only, under the WEIGHT-ONLY mode, your profile will not be stored. You may use it to measure different weight-bearing objects.

Once the scale is initialized, as previously described, you may simply step on the scale to turn it on and measure your weight.

1. Place the scale on a flat, hard surface. Carpeted or uneven floors may affect accuracy.
2. Step onto the scale platform and remain still while the scale computes your weight.
3. Your weight will be displayed.
4. The scale will automatically turn off in about 10 seconds if there is no operation.

USING THE SCALE AS BODY FAT SCALE

If you haven't programmed a user profile, please follow the instructions in "SETUP USER PROFILE" section to complete the setup.

If it is the first time or has been moved from one place to another, please follow the instructions in "INITIALIZATION/ CALIBRATION" section to initialize.

1. For the most consistent and accurate results, please measure at the same time of the day and do not measure within 30 minutes after a meal or 120 minutes after an exercise.

2. Remove socks and wipe your feet with a damp cloth, leaving them slightly damp.

3. Step onto the scale with bare feet. Stand still and keep your body upright.

4. Wait until your weight displays, then step off.

5. Step on again. The scale screen will display "0.0". **Please immediately step onto the scale barefoot** with your feet positioned on the sensor pads. Stand still and keep your body upright, and then display scroll body fat, water, muscle, and bone values, which you can write down to track. You do not have to remain standing on the scale, it will turn off automatically after 10 seconds. Or you may manually turn off the back of the scale to switch display unit between Kilograms (kg) and Pounds (lb).

6. Next time when you stand on the scale, it will identify your profile automatically according to its stored weight information.

BODY FAT

- Ideal body fat content is NOT the same for all people. Age, sex, and heredity are variables in this measurement. The table below is a general guide. Consult your physician to determine what is best for you.

Male

Rating	Age				
	20-29	30-39	40-49	50-59	60+
Low	<13	<14	<16	<17	<18
Normal	14-20	15-21	17-23	18-24	19-25
Moderately High	21-23	22-24	24-26	25-27	26-28
High	>23	>24	>26	>27	>28

Female

Rating	Age				
	20-29	30-39	40-49	50-59	60+
Low	<19	<20	<21	<22	<23
Normal	20-28	21-29	22-30	23-31	24-32
Moderately High	29-31	30-32	31-33	32-33	33-35
High	>31	>32	>33	>34	>35

MUSCLE MASS

Muscle mass is important in determining a healthy body composition. A person with a higher % of muscle mass finds it easier to move, but needs more energy to do it. Exercise is very important in maintaining muscle mass. Muscle mass is also affected by age and body fat level. 1. The normal muscle mass percentage on the weight body are between 36% and 54% for men and between 28% and 36% for women depending on age and physical condition.

Reference: International Commission on Radiological Protection 1975 .

BONE MASS

The bone mass readings given by this scale are estimation of the amount of bone in your body. Bone mass is different from bone density which can be measured accurate. If you have any concern regarding your bones, please consult your doctor.

	Weight	Bone Mass
Men	Less than 143 lb.	5.9 lb.
	143 lb. - 209 lb.	7.5 lb.
	209 lb and up	8.1 lb.
Women	Less than 107 lb.	4.5 lb.
	110 lb. 165 lb.	5.3 lb.
	165 lb and up	6.5 lb.

KCAL

Kcal stands for Kilo-Calories, it tells you how much Kilo-Calories you need to consume each day to keep your body weight and in toning.

TROUBLESHOOTING

- The scale is designed for sole measurements. In order to get the most accurate and consistent results, step onto your feet within a damp cloth, leaving them slightly damp, before stepping on the scale. Repeat measurements again, maintaining maximum contact between your feet and the sensor pads.
- The condition of the skin on the bottom of your feet can affect the results. The natural effects of aging activity can make the skin hard. Take the reading with clean and slightly damp feet for best measurements.

Issues	Cause	Solution
"- - -" or "- - - -"	Overload. The scale will turn off in a few seconds.	Step onto the scale and hold still for the weight to be displayed (up to 5 Stones).
Lo	Low battery. The scale will turn off in a few seconds.	Replace with new batteries
Abnormal measuring results. Too high, too low, or huge difference between measurements	Cold environment. Either your hands or your feet are too dry.	Place the scale in a warm room for a while before measuring. Wipe your feet with a damp cloth. Here are some tips to keep your feet moist:
After standing on the scale, the LCD doesn't light up.	1. Batteries are exhausted 2. Batteries are not installed correctly	Replace with new batteries. Install batteries properly.
Nothing display on the screen after the device is power off.	Batteries are exhausted	Replace all the 4 batteries with new.
Can not process whether on body as the device can not be fixed, some noise and fuse	Step onto the platform with some or more wearing.	Please keep barefooted during measurement and keep the feet and the sensor pads clean and dry.
	The scale can not identify a possible Profile with over load weight.	Please choose a Profile ID following the instruction in "SETUP PROFILE" section.
	The user data is saved a Profile, then what the scale found.	Please choose a Profile ID following the instruction in "SETUP PROFILE" section.
The scale power off automatically	Low battery.	Replace all the 4 batteries with new.

MAINTENANCE AND CARE

- The product is intended for home / consumer use only, it is not intended for professional use in medical environments.
- Clean exposed parts with a soft, slightly damp cloth. To remove stains, use a mild soap.
- Never use abrasives, caustic waxes, leaded cloths, harsh cleaning agents, or sprays.
- Do not immerse scale in water.
- Treat your scale with care to ensure the best performance. It contains sensitive electronic components that can be damaged by rough handling.
- Do not attempt to lubricate, disassemble, or open the scale casing as this will void warranty.
- Always weigh yourself on the same scale every time for consistency.
- Do not compare weight readings from one scale to another as some differences do exist due to manufacturing tolerances.
- Place your scale on a hard, even floor to ensure the greatest accuracy and consistency.
- It is recommended that you measure at the same time of the day, preferably early evening before a meal, for the most consistent results.
- Your scale stands up or down to the nearest increment.
- If you weigh yourself twice and get two different results, your weight lies between the two.
- Do not dispose of batteries in fire. Batteries may explode or leak. Remove batteries from the scale if it will not be used for a long period.
- Do not store the scale where you store cleaning chemicals. The vapors may affect the electronic components. Store your scale in a cool, dry place.
- Store your scale in a clean, dry location at room temperature. Dust, dirt, and moisture from humidity can accumulate and do the weighing sensors causing inaccuracy or malfunction.
- To prevent battery damage, do not store anything on the scale.

FCC REGULATIONS

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

APPENDIX A

EMC Guidance

Table 1 Guidance and MANUFACTURER's declaration – ELECTROMAGNETIC EMISSIONS for all ME EQUIPMENT and ME SYSTEMS

Guidance and manufacturer's declaration – electromagnetic emissions	
The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.	
Emissions test	Compliance
RF emissions CISPR 11	Group 1
RF emissions CISPR 11	Class B
Harmonic emissions IEC 61000-3-2	Not applicable
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable

Table 2 Guidance and MANUFACTURER's declaration – electromagnetic IMMUNITY – for all ME EQUIPMENT and ME SYSTEMS that are not LIFE-SUPPORTING

Guidance and manufacturer's declaration – electromagnetic immunity			
The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.			
IMMUNITY test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±15 kV air	±8 kV contact ±15 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	Not applicable	Mains power quality should be that of a typical commercial or hospital environment
Surge IEC 61000-4-5	±1 kV line(s) to line(s) ±2 kV line(s) to earth	Not applicable	Mains power quality should be that of a typical commercial or hospital environment
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% UT (>95% dip in UT) for 0.5 cycle 40% UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT) for 25 cycles <5% UT (>95% dip in UT) for 5 sec	Not applicable	Mains power quality should be that of a typical commercial or hospital environment. If the user of the device requires continued operation during power mains interruptions, it is recommended that the device be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3A/m	3A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE UT is the a.c. mains voltage prior to application of the test level.			

Table 4 Guidance and MANUFACTURER's declaration – electromagnetic IMMUNITY – for all ME EQUIPMENT and ME SYSTEMS that are not LIFE-SUPPORTING

Guidance and manufacturer's declaration – electromagnetic immunity			
The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.			
IMMUNITY test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 Vrms 150 kHz to 80 MHz 3 V/m 80 MHz to 2.5 GHz	Not applicable 3 V/m	Portable and mobile RF communications equipment should be used no closer to any part of the device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** $d = 1.2\sqrt{P}$ $d = 1.2\sqrt{P}$ 80 MHz to 800 MHz $d = 2.3\sqrt{P}$ 800 MHz to 2.5 GHz where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range. Interference may occur in the vicinity of equipment marked with the following symbol:
NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies. NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

[1] Field strengths from fixed transmitters, such as base stations for radio (cellular / cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the area in which the device is used exceeds the applicable RF compliance level above, the device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the device.

[2] Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

WARRANTY

This product is warranted against defects in materials and workmanship for one year from the date purchase, when used in accordance with the instructions provided. This warranty does not cover damages or breakage from accident, misuse, abuse, commercial use, or unauthorized adjustment and/or repair.

CMAC INC. shall not be liable for loss of use or any other incidental, consequential or indirect damages resulting from any breach of this warranty. This warranty gives you specific rights, and you may also have other rights which vary from state to state.

Should this product require service our replacement at our option) which under warranty, please visit website **www.surpahs.com** and submit a support ticket

If you have any questions about this product, please visit www.surpahs.com, or scan the QR code, find the support link.

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