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## **Know Why BIA**

Bioelectrical Impedance Analysis Technology

Bioelectrical Impedance Analysis technology, which is based on electrical impedance change signal when organism powered harmless tiny current, Measurement methods of measured organism composition.

The so-called bioelectrical impedance analysis , refers to the biological body's cells,body fluids etc constitute a similar resistance,inductance and capacitance of the electrical circuit , hinder role for the specific current,can be understand as a simple a simple organism resistance to current. When the faint high-frequency current through the body ,the body of of different composition ingredients produced by by the electrical impedance is different: non-adipose tissue has abundant electrolyte so has good electrical conductivity, while adipose tissue is almost no water so has a high electrical impedance value. Therefore, use use measure electrical impedance signal of current for body, can test human proportion of adipose tissue 、 non-adipose tissue, to understand body's physical health status .

In recent years, obesity and a variety of lifestyle diseases appear the trend of high incidence, these diseases are more closely related to the excessive accumulation of body fat.

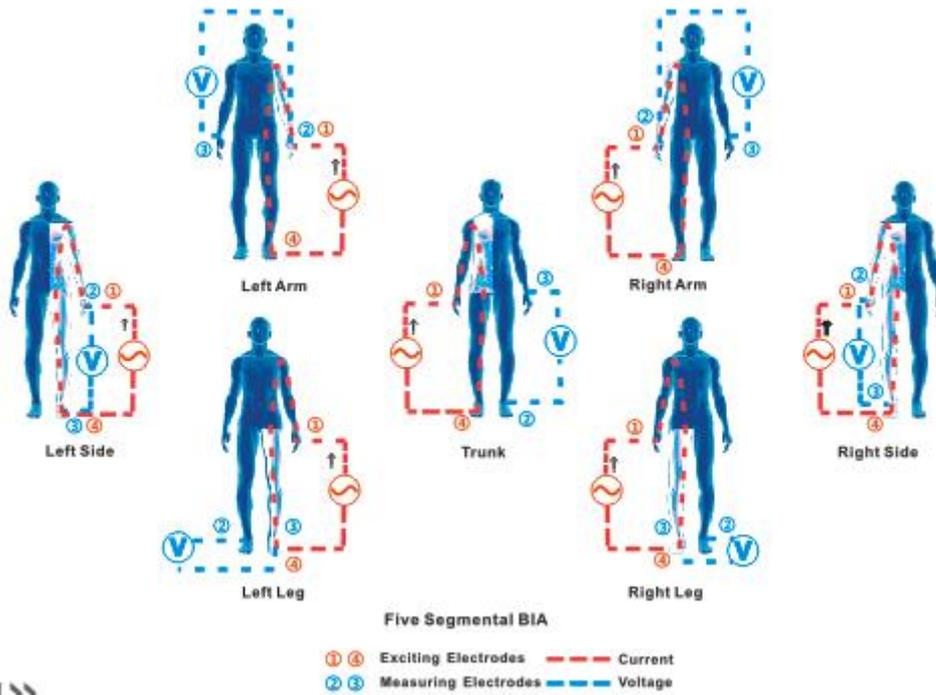
Along with the continuous improvement of medical standards, a growing number of research show that weight can not meet details research's demands of human preventive medicine and sport physiology, there exist considerable limitations for the ordinary people's physical exercise and nutritional guidance. Content and proportion of the body composition as a more comprehensive and rational system, in recent years been of great concern and strong popularity in the field of health management、competitive sports、preventive medicine、sports medicine.

This instrument to the human body imposed by the high-frequency current is 50kHz,500 microamps, close to the body's natural bioelectrical strength of the current(600 microamps), therefore ,it is absolutely safe for the human body , will not pose side effects. Owing to adopt the eight-point electrodes the whole body piecewise measurement, let body divided into five cross-sectional segment of the left and right extremities and trunk to measured electrical impedance, the body no longer will be assumed to symmetrical cylinder, to avoid the situation of human individual differences measurement error, as objectively as possible to reflect the distribution of human body composition and to minimize the

dependence on human experience in medical measurement data.

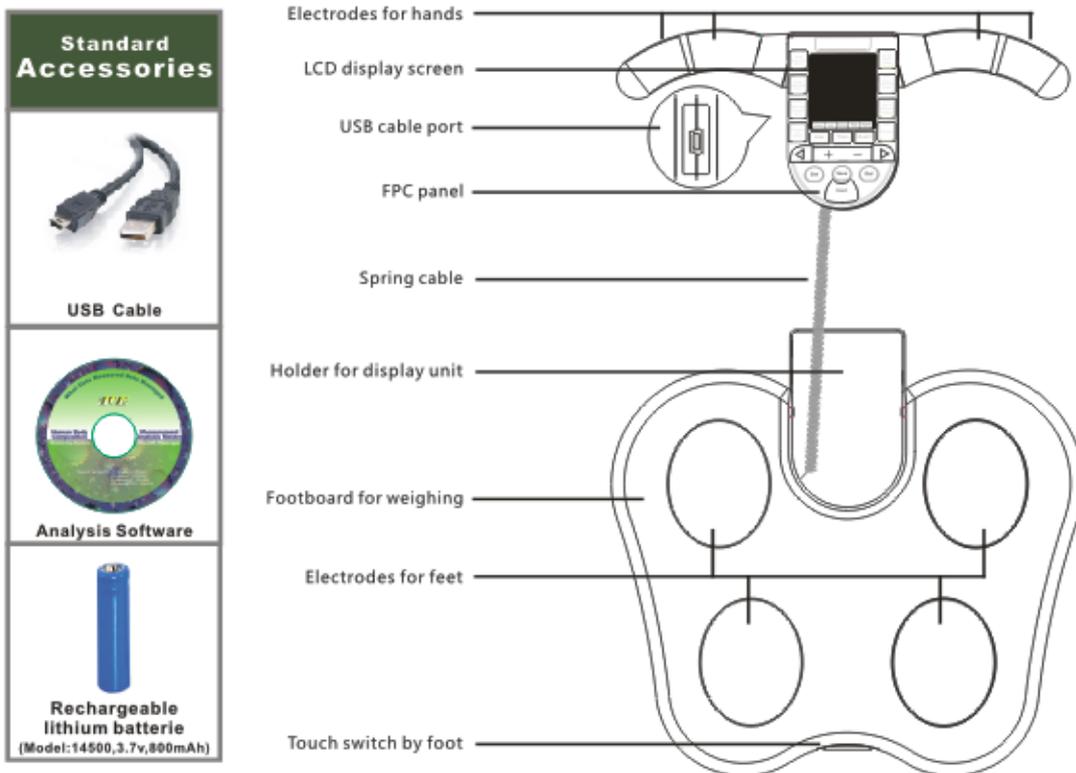
### **Segmental BIA Measurement**

Body composition to determine whether an objective reflection of the human physical health, depends on the measuring instruments, measurement techniques, and body composition database, body composition view that the instrument is involved in this user guide of the company's own R & D body composition measuring instrument, have full intellectual property and technology patents, Use the most advanced segment of the international BIA technology to measure body electrical impedance. Use Sectional measurement technology, the human body is no longer assumed to be a uniform cylinder, but is divided into five sections were measured, and thus more a true reflection of the relationship between the proportion of body composition and the resistance of the signal.

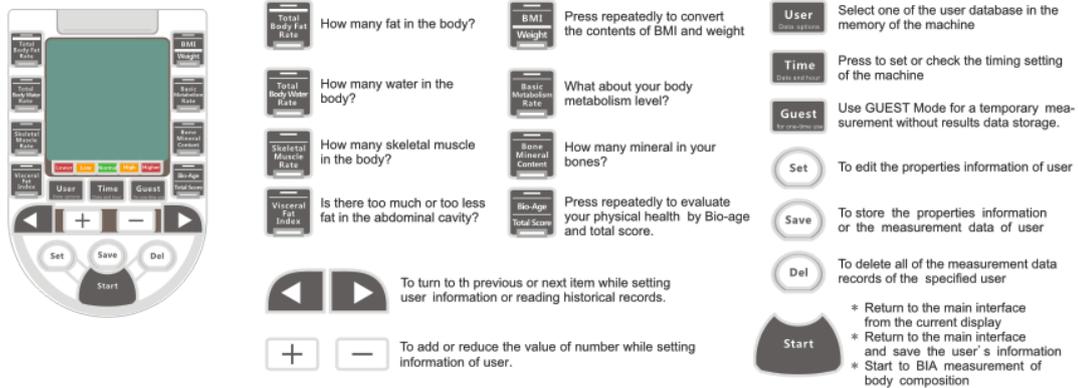


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## Product Structure



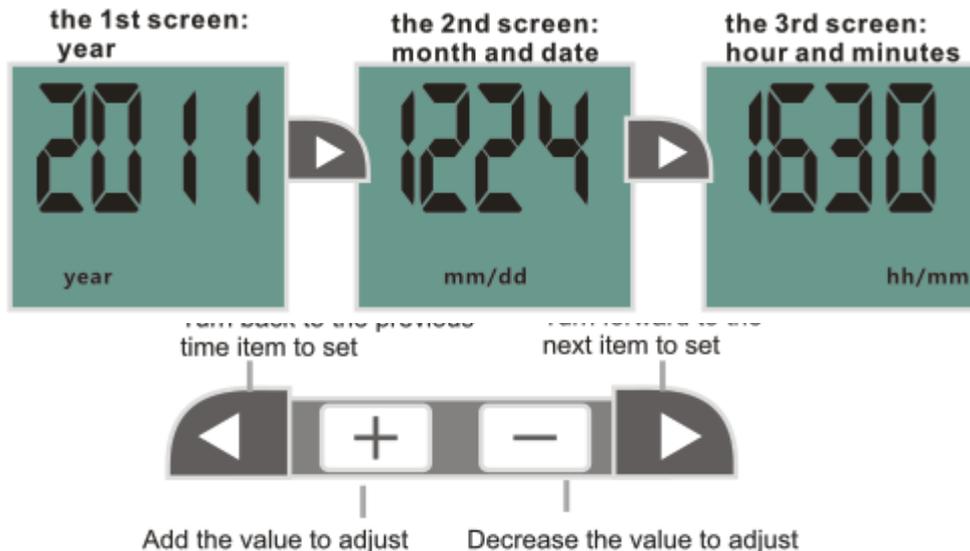
## Function of Panel Buttons



## What to do of the first use

### 1、 The time setting of the instrument

If is the first time that the unit has turned on or replaced the batteries, it comes into the time setting mode automatically, in order to ensure the normal operation of the database. What we need to set include year, month, date, hour and minutes, according to the screen display.



How to adjust the settings and change the value

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Notes:When the connection of instruments and analysis software, the software will automatically set the time of the instrument to coincide with the computer , does not need hands to manually set .

## 2、 Establishment of user

For the body constitution and health management, long-term monitoring of body composition measurement is more meaningful than the single measurement.

### 1) Select the user barcode

While the screen display 0.0kg,press " user" button to select the user code (e.g. :press five times " user " button, to select the user code five),then press "set" button to enter the edit mode to edit the information of the user.

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During the course of selecting barcode, the screen will display each user's information stored in the memory of machine to confirm the selection.



Example :  
Barcode 3 has been used for the height of 165 cm in a 25 years old female user. If you are this female user, press "start" key to start directly measuring. If you are not , press "user" key to continue selecting your barcode.

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## 2) Input the user’s information

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The instruments need to use the user's gender, height, age to analyzed and determine body composition measurement result. Therefore, to create a you need to input the user’s gender, height, birthday for the 1st time use. In each project setting interface, the + - keys on the keyboard are used to adjust the numbers or choose gender.

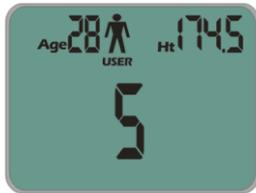


## 3) Generate user

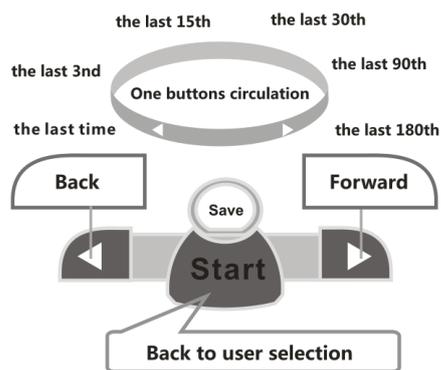
Make sure that the personal data settings are correct , and press the Save button to save the user information and the user database formally generate. The screen displays as shown below, please confirm the accuracy of the information then you can start measuring body composition, otherwise press the "Set" button to modify.

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After input the date of birth, the system will automatically calculate the age of the user according to the system time, so please make sure set the correct time when just starting up.



While non-first user selected the correct code, backward and forward button can be used to queries directly the records data of body composition stored in the instrument.



## Operation Process And Special Function

### Step 1st Turn On

Kick the switch by foot lightly, and the screen display "CRL" to tell it is preparing for weighing. Do not stand on the instrument until the screen shows "0.0kg".

### Step 2nd User Selection

Press "user" button to select user. e.g., to select "User 5th" you need to press the button five times. Every time you press

user button, the screen displays the corresponding user information. Unused user data are expressed as "-", and can be activated by pressing the "set" button.

#### Step 3rd BIA Measurement

When a user code has been chosen, the screen shows the user information and the chosen code. Barefoot stand on the board of the machine and press the "start" button, and then grasp the handle, arms natural prolapse and wait peaceful. Within 10 seconds the measurement will be done and the screen displays the results of your body composition.

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#### Step 4 Read The Result

You can read the result data by pressing the related buttons. The forward or backward flip buttons are used to read the corresponding indicators of historical data stored in the instrument, and the system will automatically calculate the difference value between history data and current data. The "save" key is used to store the result data into the device.

#### Step 5th Power Off

Kick the switch lightly by foot and the device can be shut down.

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If there is no any operation within three minutes, the device will automatically shut down to save power.

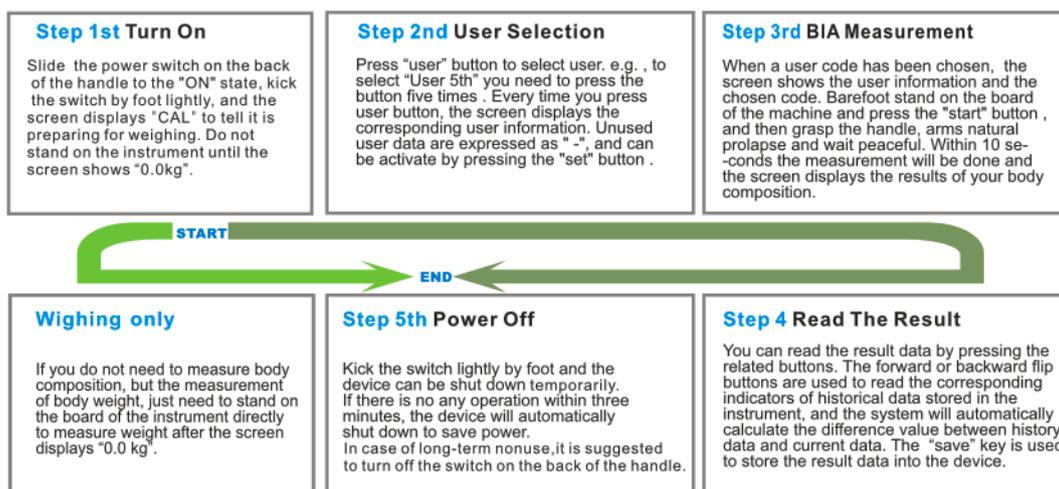
Weight only

If you do not need to measuring body composition, but the measurement of body weight, just need to stand on the board of the instrument directly to measure weight after the screen displays "0.0kg".

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### Operation Process And Special Feature

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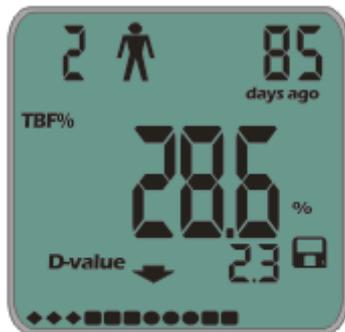


### Historical Data Tracking And Comparison

We can trace the historical data stored in the instrument, and calculate the change between the current results and past data, find out what has happened inside our bodies, so that we can offer scientific evidence for our exercise, weight loss and fitness management.

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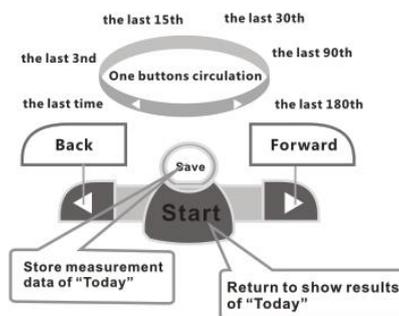
On the screen, "Difference Value" abbreviated as "D-Value".



Example:  
The value of TBF% 85 days ago was 28.6% and today the value has been declined for 2.3%.

Difference Value="today" Data-Historical Data

Result of the above equation is negative, indicates that the index has declined, and expressed as  $\blacktriangledown$ , Otherwise expressed as  $\blacktriangleup$ .



Using the same measurement posture

Body composition measurement is a high-precision biometrics science, even small changes can also lead to the different measurement results. That is why we suggest you had better measure with the same posture each time

to get the steady results. Arms natural prolapse and try to keep your body calm is recommend.

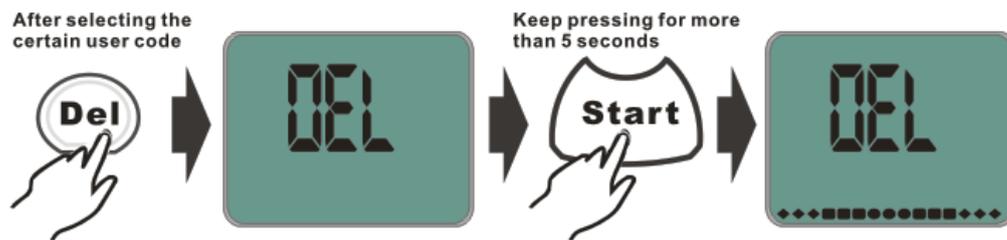
To measured in a calm state of body,help us to get a more realistic body data.Exercise,bathing,eating and other activities can lead to vigorous water movement of body,not conducive to the measurement of body composition,so do not try to measure in the above activities.The most appropriate measurement time is after waking up in the morning,fasting measurements at this time can be more realistic to reflect the situation of human body composition.



### Clear User's Database

In some special cases users need to clear the record stored inside the instrument of the specified user. The DEL operation can achieve this purpose.Please note that

this operation is irreversible, those records that have been deleted cannot be restored, do it with caution please.



After the clear operation, the instrument automatically shuts down. When it is turned on again, the information and the measurement record of the original user has been completely removed.

### **Power Supply Of The Device**

There are two types of our devices according to two different ways of the power supply: AA dry batteries model and lithium battery model.

#### **1. Low battery reminder:**

No matter what power supply mode, the symbol  is shown on the screen to remind us that the power is in short supply, please take the following measures to continue the power supply for the instrument at this time:

1) For dry batteries model: replacement of the batteries in time, after then do not forget to adjust time setting after the replacement.

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2)Lithium cell model:Timely put the instrument with a computer connected via USB cable charging,you can also use the USB port of the transformer connected to the electricity network for charging.During the charging process,the light on the right top of the control panel lights red means the charging not completed yet,otherwise it lights green means the charging done.You should disconnect the USB connection to stop charging,so as to avoid loss of lithium battery life.



2.For dry battery models,try to use batteries with high quality,in case of long-term nonuse of the instruments,it is suggested that remove batteries to avoid that battery fluid leaks damage the instrument.

3.For lithium cell models,it is prohibited to unplug lithium cell to charging or discharging.

### **Unexpected Crash**

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Accidental crash state refers to the situation that the system of the instrument can not receive an external instruction although it is turned on. In this state, the machine can not shut down properly, and it must be restarted by completely cutting off the power supply in physical.

1. For dry battery models, we just need to reinstall the batteries and turn on the instrument to solve the problem.

2. For lithium cell models, we need to restart the instrument, by sliding the power switch located on the back of the handle to "OFF" state and then to "ON" state again.



**Slide the power switch to the "ON" state, the instrument will be turned on;  
Slide the power switch to the "OFF" state, the instrument will be turned off.**

**In case of long-term nonuse, it is suggested to turn off this switch.**

## Notes on safety

1. It is forbidden to use this instrument combined with any of these medical devices below. Otherwise it might cause malfunction or even life-threatening.

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1)Medical electronic devices implanted such as pacemaker.

2)Medical electronic devices for life-supporting such as an artificial heart.

3)Portable electronic medical devices such as electrocardiograph.

4)This instrument is forbidden to be used by the people who are implantable metal stent or metal bones materials.

2.This device is not medical devices, only serves for personal health management auxiliary purposes.

1)The measurements are for reference only but not for medical test result.

2)It is suggested to use the measurement data with the advice of specialist.

3.Installation must comply with the specifications to ensure the measurement accuracy.

1)Caution to prevent slipping when use on slippery ground.

2)Can not use this instrument on the carpet, grass or other soft ground.

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3)To avoid interference,do not use mobile phones and other signal transmitting and receiving terminals during the measurement.

4)Don't try to disassemble or repair the instrument by yourself,please contact with our after-sale technical staff if there is any instrument failure.

5)Thick calluses on the sole of the foot or in palms might cause larger deviation or unstable measurement, please remove the thick calluses, or soak your foot or hands in warm water before BIA measurement.

4.Due to the abnormal activity of the body of water will seriously affect the body composition measurements, it might not be able to accurately measure the body composition indicators of the persons following:

- \*The menstrual period's women

- \*Gravida

- \*Patients with fever due to colds and other reasons

- \*Artificial dialysis patients

- \*Edema disease patients

- \*Patients with severe osteoporosis

### **Installation of Analysis Software**

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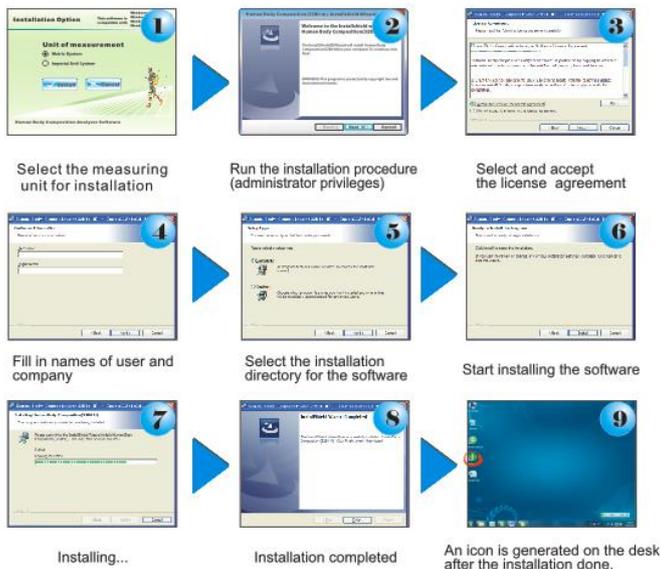
This product comes with a set of analysis software which applies only to the specified models. The installation process is as follows:

1. Select the measuring unit for installation.
2. Run the installation procedure (administrator privileges)
3. Select and accept the license agreement.
4. Fill in names of user and company.
5. Select the installation directory for the software.
6. Start installing the software.
7. Installing.....
8. Installation completed.
9. An icon is generated on the desk after the installation done.

Note: Select the operation to allow the installation if any anti-virus software pop-up warning window during the installation process.

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## Operation of Analysis Software

### 1.Startup Interface

Double-click the shortcut icon of the software on the desktop to run it, the startup interface pop-up as shown. Some security software may misidentification the software dangerous, please allow its running as safe software.

### 2.Create A New Account

Creating and login to your account, you can save your personal information and body composition measurement records in the computer's hard drive to facilitate long-term use and analysis of body composition

data. Click on the “New User” button on the startup screen, and then fill in the information on the registration interface in turn, then click “Create” button, and you can create a new account successfully.

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### 3、 User Login and Visitor Mode

In the startup screen, fill in the account name and password, you can log on to the individual accounts database. Sometimes, we need to do some temporary body composition testing, without the need to save data to hard disk. In this case, we can use “Visitor Mode”. In the “Visitor” mode, we need to enter the user’s personal information for each measurement, and the results data will not be stored in the hard disk.

### 4、 Administrator Mode

On the startup interface, click “Admin Mode” button and enter the password, you can manage all user information and measurement records in the database, including the operation such as follows:

**Resetting password:** reset a certain account’s password for the user who forgot their passwords.

**Deleting users:** delete the useless accounts and their measurement records.

**Deleting measurement data:** delete measurement records of some certain users.

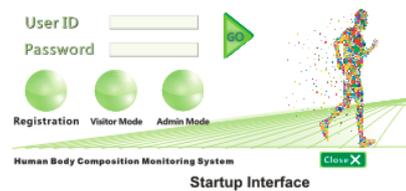
**Importing and Exporting the database:** transfer the database to new computers.

Note: the default password is “ACE” and you can reset it in the admin mode interface.

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Account	User	Delete User	Delete Record	Clear Questionnaire	Reset PW
1400110013	Sharon	Delete User	Delete Record	Clear Questionnaire	Reset PW
1400110422	Borden	Delete User	Delete Record	Clear Questionnaire	Reset PW
1400110329	Arlica	Delete User	Delete Record	Clear Questionnaire	Reset PW
1400110303	Jacky	Delete User	Delete Record	Clear Questionnaire	Reset PW

Buttons: Reset Administrator Password, Export Database, Import Database, Close

Admin Mode

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