

# iBMI® Chair

Model:HW-1

## Installation, Operation and Maintenance Manual

Congratulations on your purchase of iBMI® Chair, an important step toward office automation and improved safety!

This manual provides instructions how to install, operate and maintain iBMI® Chair. Please carefully read entire manual before installation and operation according to the instructions to avoid dysfunction and incidental damages due to human errors.



## **IMPORTANT NOTICE**

Please carefully read this instruction manual before installation and operation. Store this manual in a secure place for future reference.

The manufacturer or authorized dealers shall not be legally responsible for any equipment damage or personnel injury caused by incorrect installation or operation other than that covered in this manual.

This product was carefully packed and thoroughly inspected before leaving the factory. Responsibility for its safe delivery was assumed by the carrier upon acceptance of the shipment. Claims for loss or damage sustained in transit must therefore be made upon the carrier as follows:

### **VISIBLE LOSS OR DAMAGE**

Any external evidence of loss or damage must be noted on the freight bill or carrier's receipt, and signed by the carrier's agent. Failure to adequately describe such external evidence of loss or damage may result in the carrier's refusal to honor a damage claim. The form required to file such a claim will be supplied by the carrier.

### **CONCEALED LOSS OR DAMAGE**

Concealed loss or damage means loss or damage which does not become apparent until the product has been unpacked. The contents may be damaged in transit due to rough handling even though the carton may not show external damages. When the damage is discovered upon unpacking, please make a written request for inspection by the carrier's agent within seven (7) days of the delivery date and file a claim with the carrier.

### **WARNING**

**TO PREVENT THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR ANY TYPE OF MOISTURE.**

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# Introduction

## 1. iBMI® Chair

iBMI® Chair is designed for measurement of body height and weight while standing in front of the chair and sitting in the chair, respectively. These features minimize the risk of falling and possible injuries in a frail elderly during stepping up and down a traditional scale.

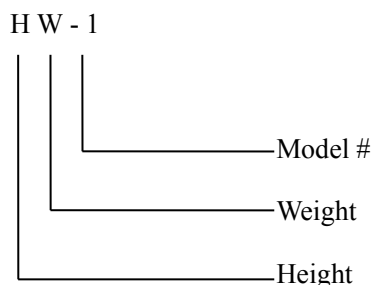
This equipment acquires signals of height and weight using electronic sensors. The readings are processed by microchip technologies and wirelessly transmitted to Bluetooth enabled APP system (i MobileMDLand, provided by MDLand International) in which body mass index (BMI) are calculated automatically.

\* Body mass index (BMI) is a measure of body fat based on height and weight that applies to adult men and women, which is used to screen for weight categories (underweight, overweight, or obese) that may lead to health problems.

## 2. Applications

This product is intended for both home and public use.

## 3. Model Interpretation



## 4. Technical Specifications

- 1) Input power: DC 5V-2A
- 2) Weight measurement range and accuracy: 5.5 lb ~485 lb (2.5kg~220kg)  $\pm 0.5\%$
- 3) Height measurement range and accuracy: 19.69~86.6 inches (50cm~220cm)  $\pm 0.39$  inches
- 4) Wireless data transmission to a Bluetooth enabled system via APP software using a standard communication protocol.
- 5) Product dimension: 800\*1050\*2300 mm
- 6) Weight: 95 lb (43 kg)

## Product Design

iBMI<sup>®</sup> Chair is a highly integrated product using advanced microchip technologies for data acquisition, transmission and processing. It is composed of pressure sensor-equipped seat chair, height pole with ultrasonic distance detectors and other components.

The unit uses high-precision cantilever beam sensors to convert pressure alteration into a small change in the electrical resistance (“semiconductor strain effect”) using a Wheatstone bridge mechanism, which is reflected as a slight difference in output voltage of the bridge circuit. After linear output amplification in the signal amplifier module, voltage signal is digitalized in the analog-digital conversion module, and finally processed by the microcontroller, resulting in the measurement of human body weight.

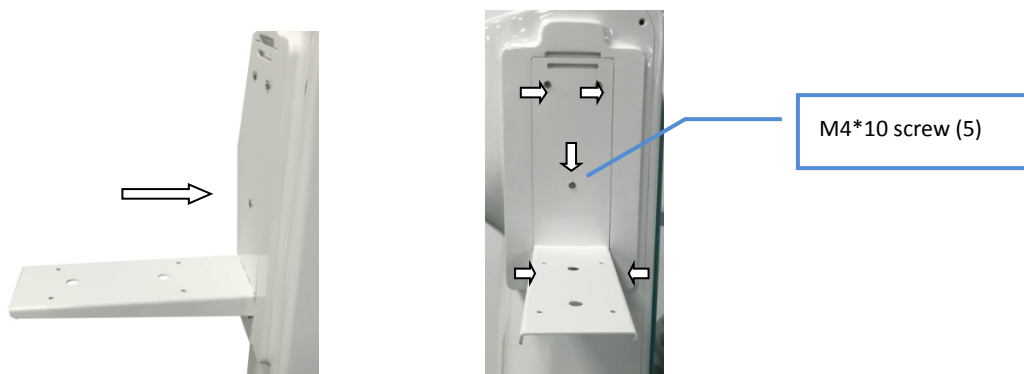
The ultrasonic sensors for height measurement detect and discriminate time difference of emitting and reflected ultrasonic waves when a wave is traveling through air and impinges on a boundary on the top of the head. This results in calculation of the distance of targeted subject in reference to the floor, automatically transmitted to the interfacing software for further processing (App).

The unit is operated using Bluetooth technologies via a mobile App with fast response time and high precision. Weight measurements in a seating position and non-contact height measurement standing on the floor in front of iBMI<sup>®</sup> Chair without stepping up/down a traditional scale maximize safety of the subject.

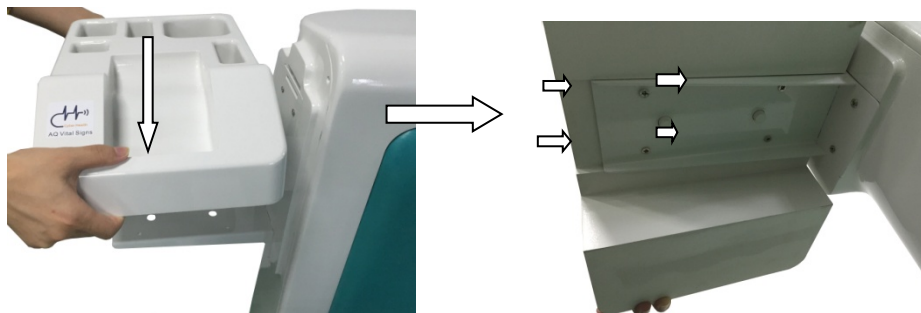
## Installation

Be sure that iBMI<sup>®</sup> Chair is placed in a climate-controlled, clean and well-ventilated environment. Please carefully read the entire manual before installation and assemble iBMI<sup>®</sup> chair as instructed.

- 1) Upon unpacking of the product from the box, inspect for any damages of the device and accessories according to the packing list.
- 2) The chair must be placed on a stably leveled floor and must be kept at least 120 mm from the wall.
- 3) Procedures to set up a tray as shown below:
  - a) The tray bracket can be mounted on either left or right side of the chair using screws provided.



- ① Align tray to the holes on the mounting bracket and then fasten the screws from the bottom of the bracket.



- ② The tray is mounted to the left side of the Chair after completion:



b) Installation of height measurement pole:



① Insert the vertical pole (2) into the pole locker (3) as shown:



② Pass the cable attached to horizontal pole through the vertical pole (2)

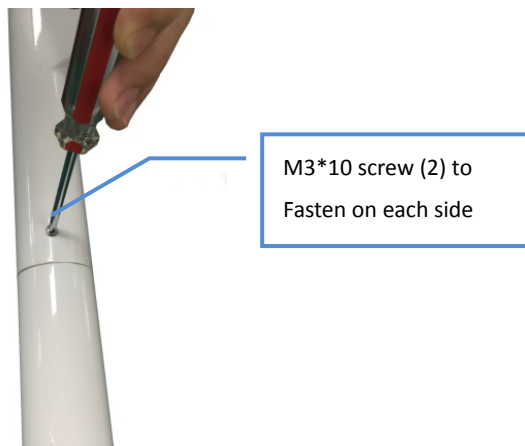


- ③ As the cable connector is exposed from the other end of the vertical pole, align the notch at the bottom end of the vertical pole with the horizontal pole as shown:



- Attention:**
1. Cable connector must be exposed from the end
  2. Make sure the notch is aligned (facing installer) with the horizontal pole.

- ④ Fixation of the horizontal pole and the vertical pole: Rotate the poles to the appropriate positions. Use a tool to fasten two M3\*10 screws to the vertical pole.

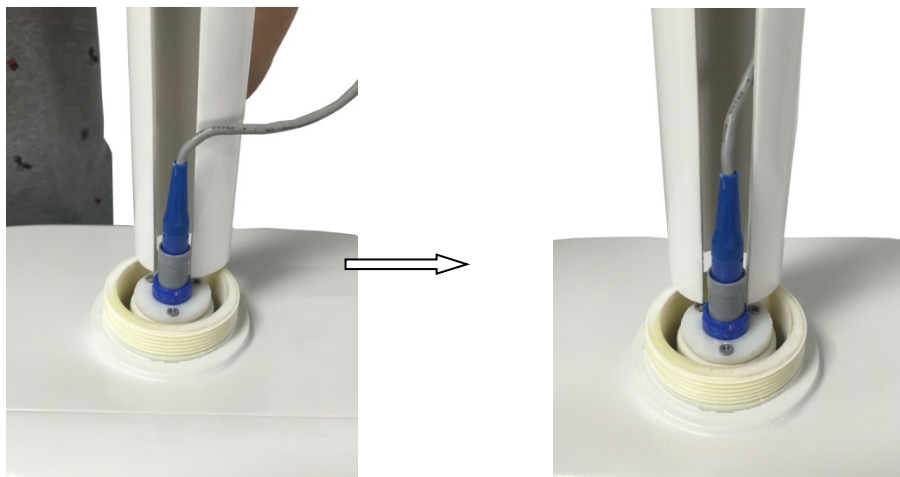




- ⑤ Hold the height measurement pole in an upright position, align and plug the cable connector to the port on the top of the chair



- ⑥ The connector must be aligned and inserted completely as shown in the arrow-indicated direction and the remaining cable needs to be secured inside the notch.

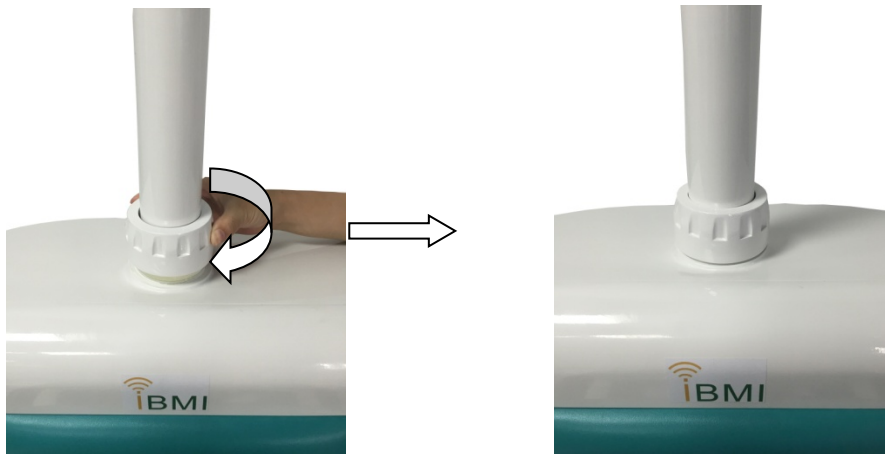


- ✧ **Attention: Remaining cable needs to be secured inside the notch. Failure to secure the cable may cause damage resulting in malfunction of height measurement.**

- ⑦ Properly orient and insert the vertical pole into the pole holder on the top of the chair:



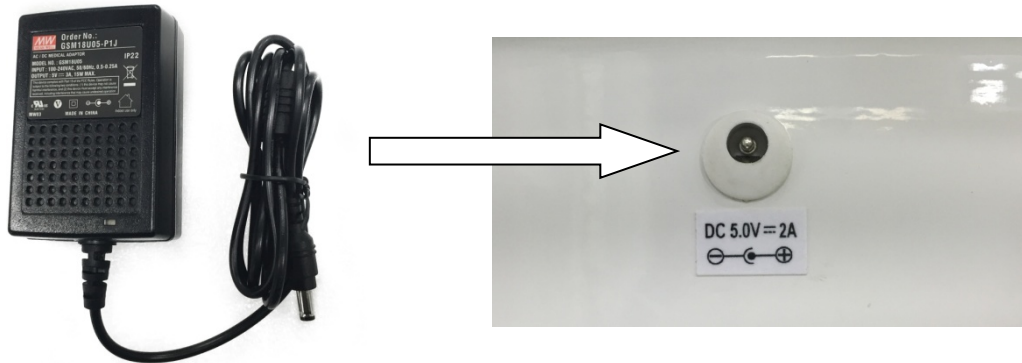
- ⑧ Fasten the pole locker clockwise as shown:



Congratulations! You have completed installation of your iBMI<sup>®</sup> Chair!



- c) Power Connection: Plug output port of DC adaptor to the power input jack on the back of the chair:



- ✧ **Attention:** Only use electric power DC adaptor provided by the manufacturer. Use of any other adaptors is strictly prohibited, voiding Warranty Coverage in case of any device damage.

## Operation Instructions

### A. Preparation

1. Before measurement, make sure that iBMI<sup>®</sup> Chair is placed on a stably leveled floor surface to prevent negative effects on measurement and personal injury.
2. Plug DC adaptor output port to the power input jack on the back of the chair.
3. Turn on Bluetooth on the mobile device.
4. Bluetooth indicators on the client App (i.e. iClinicMobile) turn from grey to blue (active mode).
4. Start measurement.

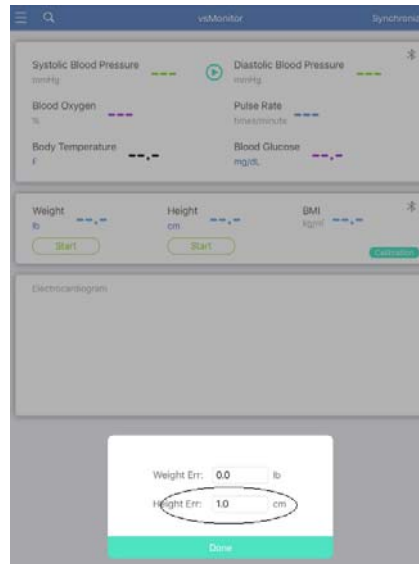
### B. Height Measurement

1. A person must stand on the ground in the front of iBMI<sup>®</sup> Chair at the same level as the chair base.
2. The person's head must be directly under height detector at the front end of the horizontal pole.
3. Stand upright and keep still. Click "Start" on the client app to initiate measurement.
4. When steady result is shown after approximate 3-5 seconds, click "Stop" on the client App to save the measurement result.

- ✧ **Attention:** "Stop" button must be clicked on the client app in order to save the results. Otherwise

no results will be saved and the data will be cleared.

- ✧ **Attention:** Any adjustment of factory default height of the iBMI<sup>®</sup> chair needs software compensation on the client App, for example, decrease in chair height by 1 cm requiring to enter +1 as shown below:



### C. Weight Measurement

1. The person should steadily sit in the chair preferably with whole body weight centered at the middle of the chair.
2. During the measurement period, the person must lift his/her feet off the ground and must not lean on the back of the chair. His/her arms may be placed on the arms of the chair.
3. Click “Start” on the client App to initiate measurement.
4. When steady result is shown after approximate 3-5 seconds, click “Stop” on the client App to save the measurement result.

- ✧ **Attention:** “Stop” button must be clicked on the client app in order to save the results. Otherwise no results will be saved and the data will be cleared.

## Important Instructions for Safety and Operation

When using this unit, basic safety precautions should always be followed to reduce the risk of fire, electric shock, or personal injury. Please carefully read and understand all instructions to follow all warnings.

1. Place this unit securely on a stable surface to avoid serious damage and/or injury if the unit falls.
2. Do not use this unit near water, for example, near a bathroom, washbowl, kitchen sink, or the like although this device uses 5 V low-voltage power, causing no harm to human body under normal operating conditions.
3. Do not use plastic height poles for weight bearing and lifting or forcibly grabbing.
4. Do not use chair arms for unit-lifting or moving. Do not push or pull the unit roughly to avoid damage.
5. Do not place any items on the chair other than weighing. To prolong the life-span of the unit, please do not place iBMI<sup>®</sup> Chair for general seating use.
6. Please do not turn on/off power repetitively within a short period of time. You must wait for at least 2 minutes to turn on after turning off to avoid damages.
7. To reduce the risk of electric shock, do not disassemble this unit. Contact an authorized service personnel when needed. Opening or removing covers may expose you to dangerous voltages or other risks.

## Troubleshooting to common problems

| Problems                                 | Possible causes  | Solutions   |
|--|--|---|
| Cannot turn on the device                | 1) Power cable is not connected<br>2) Power adaptor is loosen                                      | 1) Make sure the power cable is connected properly<br>2) Plug the power adaptor to make sure the connection is tight  |
| No result is shown                       | 1) The data is out of measurement range<br>2) Measurement button is not pressed<br>3) System error | 1) Only results within the measurement range can be shown<br>2) Press Measurement button to start<br>3) Make records for error details and contact customer support immediately |
| Measurement results with large deviation | 1) Do not make measurement following the standard methods<br>2) System error                       | 1) Make measurement following the methods in the instructions<br>2) Make records for error details and contact customer support immediately                                     |

## Transportation, storage and warranty

1. Transportation: The device cannot be handled roughly or stacked during transportation process.
2. Storage: The units must be placed indoor in a climate-controlled environment free of corrosive gas.
3. Package inspection: The original packing should include Product Certificate, User Manual and Packing Slip. Carefully examine contents or accessories according to Packing Slip. Inspect and report any damages during transportation.

### 4. Warranty disclaimer

This Limited Warranty covers any defects in material or workmanship under normal use during the Warranty Period of 12 months (One Year) from the date of delivery. Repair or replacement of the defective unit or parts because of improper material or workmanship, under normal use and maintenance is free of charge during the Warranty Period. To obtain warranty service, you must first contact us to determine the problem and the most appropriate solution for you. You must also present evidence of purchase (product certificate **and** purchase receipt/invoice). The warranty will be voided if product certificate or purchase receipt/invoice is altered. Please keep your evidence of purchase properly as warranty proofs since no replacement documents are issued in case of loss.

This Limited Warranty does not cover conditions, malfunctions or damage not resulting from defects in material or workmanship: (1) The damage is caused due to improper usage, maintenance or storage; (2) The damage is caused by any unauthorized services; (3) Lack of evidence of purchase or lack of authenticity of documents; (4) Damage due to irresistible circumstances.

## Caution:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into a n outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.


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.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### RF Exposure

The equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.



**iBMI<sup>®</sup> Chair and are  registered trademarks of CYBER HEALTH TECH LLC**

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