



## Infant Scale

USER MANUAL

**MS21NEOV**

Infant Scale









Please keep the instruction manual at hand and follow instruction for use.



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# Explanation of Graphic Symbols on Label/Packaging

Text/Symbol	Meaning
	Caution, consult accompanying documents before use
	Separate collection for waste of electrical and electronic equipment, in accordance with Directive 2002/96/EC. Do not dispose of device with everyday waste
	Name and address of device manufacturer, and year/country of manufacture
	Carefully read user manual before installation and usage, and follow instructions for use.
	Medical electrical device, Type B applied part
	Medical electrical device, Type BF applied part
<b>REF</b>	Device catalogue number / model number
<b>EC REP</b>	Name and address of authorized representative in the European Union
<b>MD</b>	Device is a medical device. Text indicates device category type
<b>LOT</b>	Manufacturer's batch or lot number for device
<b>SN</b>	Device's serial number
<b>UDI</b>	Device's Unique Device Identifier
<b>e</b>	Verification Scale Interval. Value expressed in units of mass. Used to classification and verification of an instrument.
<b>CE</b> 2460	Device conforms to (EU) 2017/745 Regulation on Medical Devices. Fourdigit number is identifier for medical device Notified Body

Device complies with EC directives (verified models only)

**CE** **M 20** 0122 **M**: Conformity label in compliance with Directive 2014/31/EU for non-automatic weighing instruments  
**20**: Year in which conformity verification was performed and the CE label was applied. (ex: 16=2016)  
**0122**: Identifier for metrology Notified Body



Device is a Class III scale in compliance with Directive 2014/31/EU (verified models only)



Name and address of entity importing device (if applicable)



Name and address of entity responsible for translating Information For Use (if applicable)

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**CON.**

Event counter confirming how many times device has been calibrated (if applicable)



Device conforms to Taiwan National Communications Commission(NCC) approval



Device conforms to U.S. Federal Communications Commission regulations

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**UK** **CA** **M 20** 8506 Device complies with UK non-automatic weighing instruments regulations 2016 (verified models only)  
**M**: Conformity label in compliance with Non-automatic Weighing instruments Regulations 2016  
**20**: Year in which conformity verification was performed and the UKCA label was applied. (ex: 20=2020)  
**8506**: Identifier for metrology approved body



Device complies with all UK applicable product legislation



Device's polarity of power.

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**"In case of differences, icon on device itself takes precedence"**

## **Copyright Notice**

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Charder Electronic Co., Ltd.  
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# I. Safety Notes

## A. General Information

Thank you for choosing this Charder Medical device. It is designed to be easy and straightforward to operate, but if you encounter any problems not addressed in this manual, please contact your local Charder service partner.

Before beginning operation of the device, please read this user manual carefully, and keep it in a safe place for reference. It contains important instructions regarding installation, proper usage, and maintenance.

### **Intended Purpose**

This medical device is designed to be used in accordance with national regulations, to measure weight within specifications, for weight-related usage by professionals.

For the sake of consistency, "patient" will be used to refer to infants or toddlers for the rest of this document.

Patient is placed on a tray or sling which is attached to a weighing platform for the device to measure patient weight.

### **Clinical Benefit**

Measurement results can be used by professionals to diagnose (and monitor) weight-related issues.

### **Intended medical indications/contraindications**

Measurement: patient's body weight. No known contraindications to measurement of body weight.

### **Intended patient profile**

- (a) Age: no restrictions (subject to size limitations of device and maximum capacity)
- (b) Weight: no restrictions within device weight capacity
- (c) Patient Conditions: require measurement of body weight. Can fit upon device.

### **Intended user profile**

- (a) At least 20 years old

- (b) Minimum knowledge:
  - To be able to read at a high-school level and understand Arabic numerals (e.g. 1, 2, 3, 4...)
  - Basic hygiene knowledge
  - Trained in device's operation
  - Read the instruction manual
- (c) Language
  - Able to read the language of instruction manual and on-screen instructions
- (d) Qualifications
  - No special certifications or qualifications required

### **Residual Risk Evaluation**

- (a) All foreseeable risks have been evaluated and considered acceptable. Generally speaking, the most likely risk caused by incorrect usage of the device is less accurate measurement (or inability to use device to acquire measurement), which does not pose imminent physical risk to patient or user.
- (b) Benefit-risk ratio is considered acceptable. Infant scales are an important option for measuring patients. Usage of device is unlikely to result in harm to user or patient.

### **General Handling**

- Ensure all parts are properly locked and tightened before operating the device.
- Measurement accuracy requires the subject's feet, back, and head to be straightly aligned. Please note that height can vary throughout the day
- **CAUTION:** Do not use next to equipment that may cause electromagnetic or other types of interference.

### **Safety Instructions**

Before putting device into use, please read this user manual carefully. It contains important instructions for installation, usage, and maintenance of device.

The manufacturer shall not be liable for damages caused by failure to heed the following instructions:

- The device has an expected service life of 5 years when correctly handled, serviced, and periodically inspected in accordance with manufacturer's instructions.
- Improper installation will render the warranty null and void.



- Observe permissible ambient temperatures for use

## **Maintenance**

- Please contact your local Charder distributor for regular maintenance and calibration, regular checking of accuracy is recommended; frequency to be determined by level of use and state of device.

## **Cleaning**

- Device surface should be cleaned using alcohol-based wipes.

## **Warranty/Liability**

- The period of warranty shall be eighteen(18) months, beginning on the date of purchase. Please retain your receipt as proof of purchase.
- No responsibility shall be accepted for damage caused through any of the following reasons: unsuitable or improper storage or use, incorrect installation or commissioning by the owner or third parties, natural wear and tear, changes or modifications, incorrect or negligent handling, chemical, electrochemical, or electrical interference, unless damage is attributable to negligence on the part of Charder.
- This device does not contain any user-maintained parts. All maintenance, technical inspections, and repairs should be conducted by an authorized Charder service partner, using original Charder accessories and spare parts. Charder is not liable for any damages arising from improper maintenance or usage. Dismantlement of the device will void the warranty.

## **Incident Reporting**

- Any serious incident that has occurred in relation to the device should be reported to the manufacturer, EU representative (if device is used in EU member state), and competent authority of user/subject's member state.

## B. EMC Guidance and Manufacturer's Declaration

<b>Guidance and manufacturer's declaration-electromagnetic emissions</b>		
<p>The product is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure that it is used in such an environment.</p>		
<b>Emission test</b>	<b>Compliance</b>	<b>Electromagnetic environment-guidance</b>
RF emissions CISPR 11	Group 1	The product uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A	The product is suitable for use in all establishments other than domestic and those directly connected to a low voltage power supply network which supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations /flicker emissions IEC 61000-3-3	Compliance	

## Guidance and manufacturer's declaration-electromagnetic immunity

The product is intended for use in the electromagnetic environment specified below. The customer or the user of the product 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	<u>±8 kV contact</u> <u>±2 kV, ±4 kV, ±8 kV, ±15 kV air</u>	<u>±8 kV contact</u> <u>±2 kV, ±4 kV, ±8 kV, ±15 kV air</u>	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	<u>± 2kV for power supply lines</u>	<u>± 2kV for power supply lines</u>	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	<u>± 1kV line(s) to line(s)</u> <u>± 2kV line(s) to earth</u>	<u>± 1kV line(s) to line(s)</u> <u>± 2kV line(s) to earth</u>	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	<u>0% UT for 0,5 cycle</u> <u>0% UT for 1 cycle</u>  <u>70% UT(30% dip in UT) for 25cycles</u>  <u>0% UT for 5 s</u>	<u>0% UT for 0,5 cycle</u> <u>0% UT for 1 cycle</u>  <u>70% UT(30% dip in UT) for 25cycles</u>  <u>0% UT for 5 s</u>	Mains power quality should be that of a typical commercial or hospital environment. If the user of the product requires continued operation during power mains interruptions, it is recommended that the product be powered from an uninterruptible power supply or a battery.
Power frequency(50, 60 Hz) magnetic field IEC 61000-4-8	<u>30 A/m</u>	30 A/m	The product 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.

## Guidance and manufacturer's declaration-electromagnetic immunity

The product is intended for use in the electromagnetic environment specified below.

The customer or the user of the product should assure that is used in such and environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 KHz to 80 MHz  <u>6 V in ISM bands between 0,15 MHz and 80 MHz</u> 80 % AM at 1 kHz	3 Vrms 150 KHz to 80 MHz  <u>6 V in ISM bands between 0,15 MHz and 80 MHz</u> 80 % AM at 1 kHz	Portable and mobile RF communications equipment should be used no closer to any part of the product including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.  <b>Recommended separation distance:</b> $d = 1,2 \sqrt{P}$ $d = 1,2 \sqrt{P}$ 80MHz to 800 MHz $d = 2,3 \sqrt{P}$ 800MHz to 2,7GHz 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, <sup>a</sup> should be less than the compliance level in each frequency range. <sup>b</sup>  Interference may occur in the vicinity of equipment marked with the following symbol:  
Radiated RF IEC 61000-4-3	3 V/m 80MHz to 2,7 GHz	3 V/m 80MHz to 2,7 GHz	

NOTE1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE2

These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

a 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 location in which the product is used exceeds the applicable RF compliance level above, the product should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the product.

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

**Recommended separation distance between portable and mobile RF communications equipment and the product**

The product is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the product can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the product as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = 1,2\sqrt{P}$	80 MHz to 800 MHz $d = 1,2\sqrt{P}$	<u>800 MHz to 2,7 GHz</u> $d = 2,3\sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance  $d$  in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where  $p$  is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

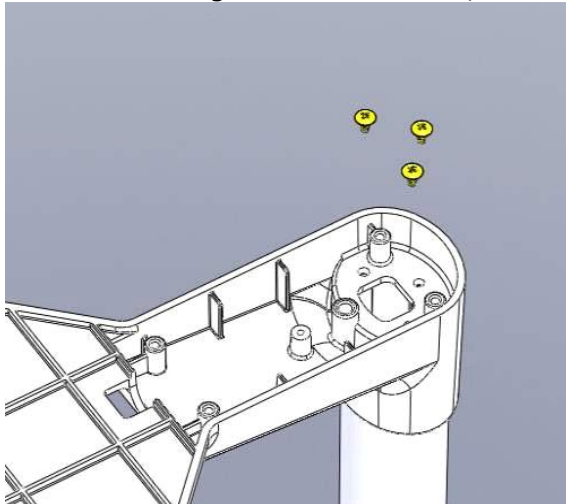
NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

## II. Installation

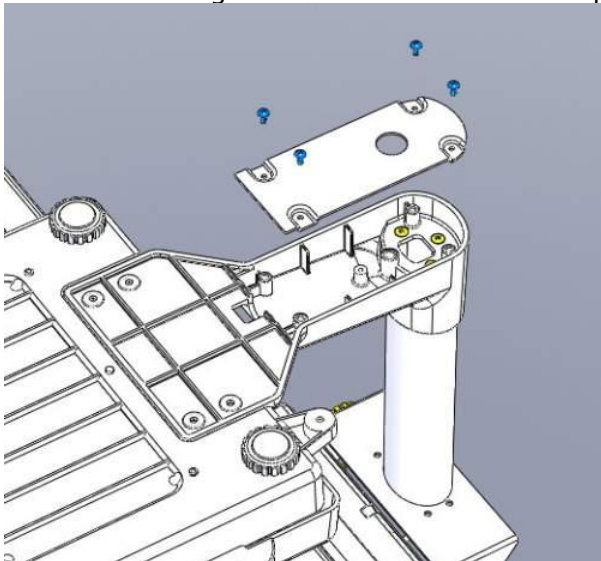
### A. Assembly

#### Column

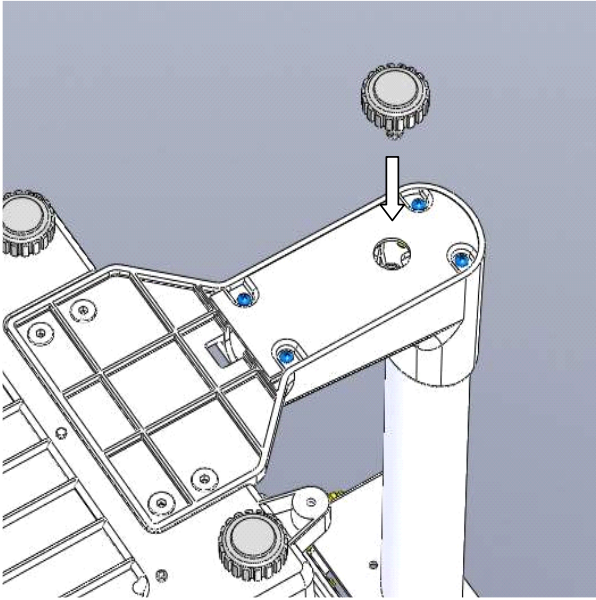
1. Fasten and tighten three screws, securing column with base.



2. Fasten and tighten four screws to secure panel at bottom of base.

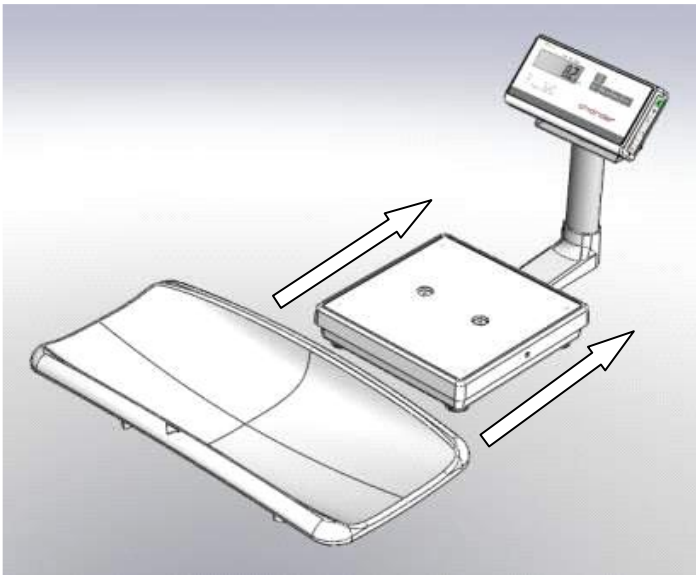


3. Insert adjustable foot into base panel. Turn counter-clockwise to extend, clockwise to retract

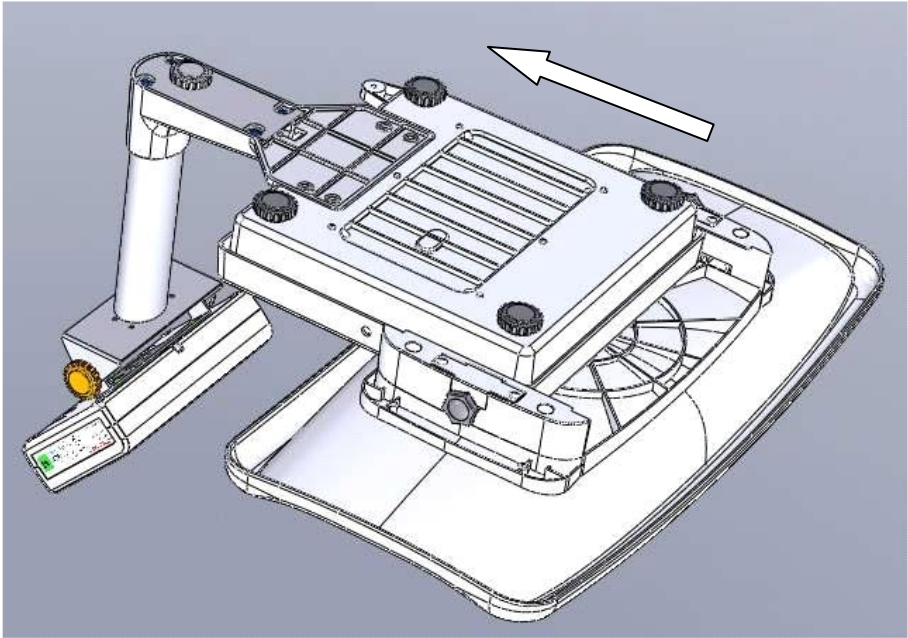


**Tray Assembly**

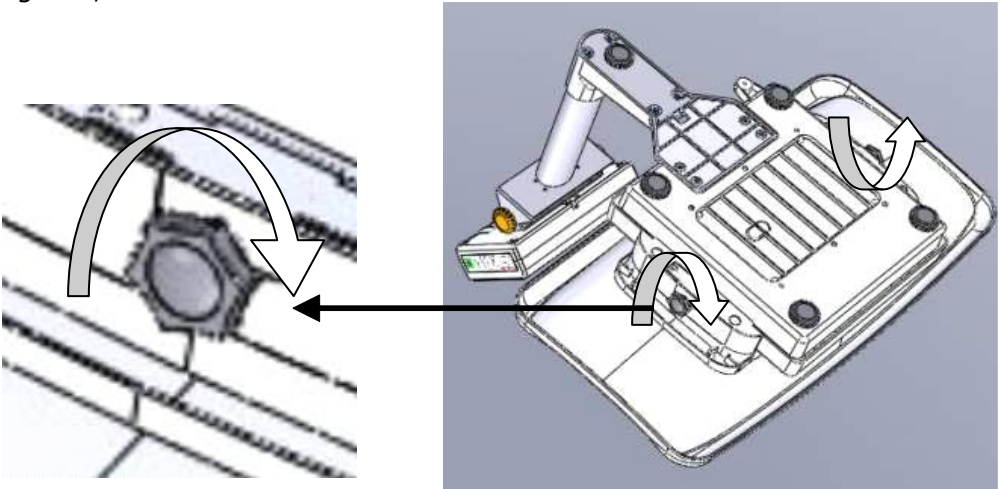
1. Slide tray onto measurement platform.



3. Slide tray onto measurement platform (reverse view)



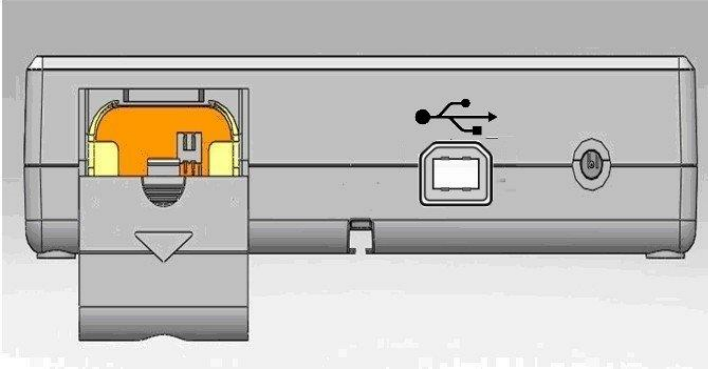
4. Tighten side screws to secure tray to platform. Turn clockwise to tighten, counter-clockwise to loosen.



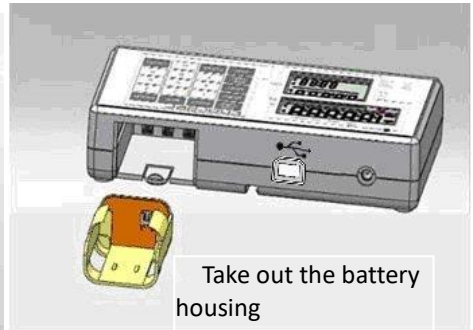
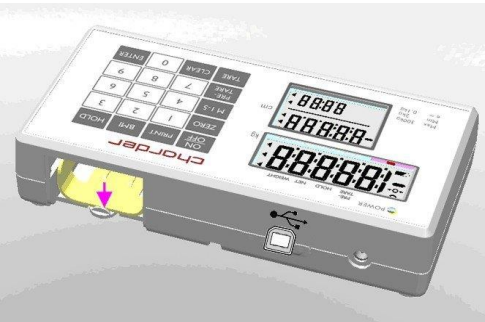


## B. Inserting Batteries

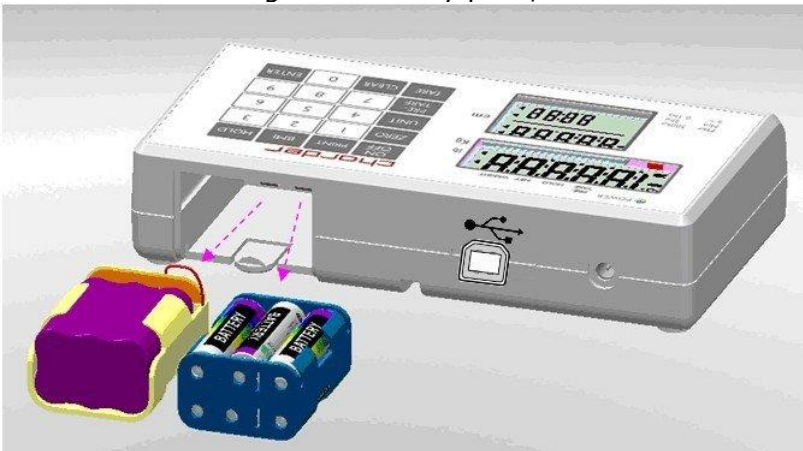
### 1. Open battery housing cover



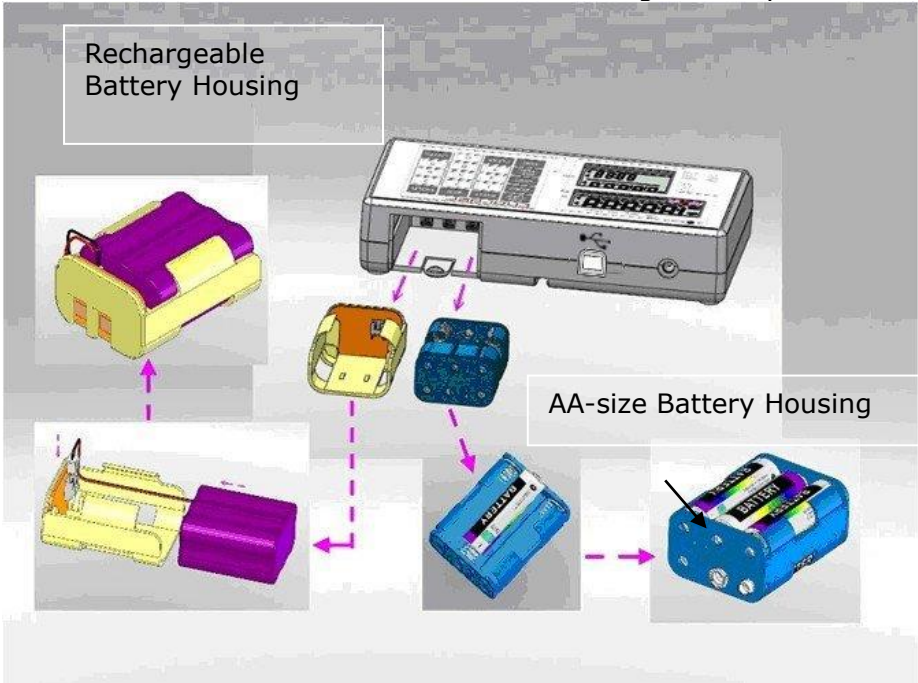
### 2. Accessing batteries



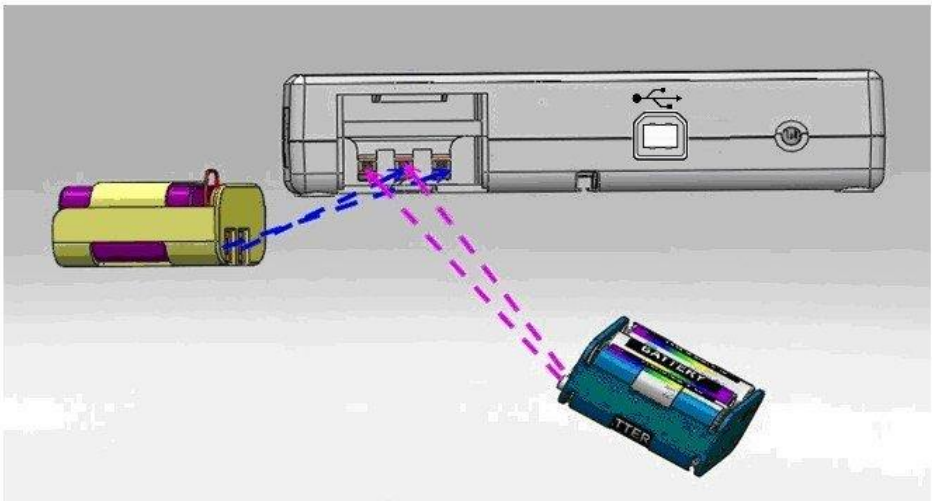
### 3. Use either rechargeable battery pack, or AA batteries



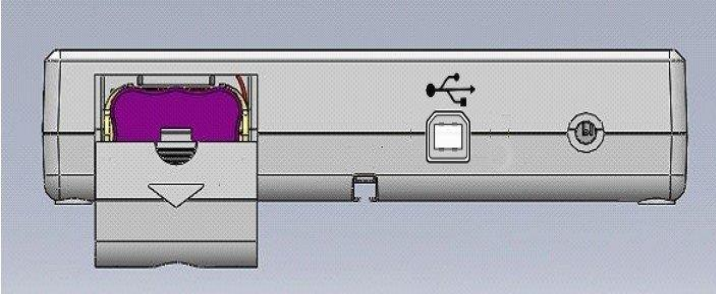
4. Ensure batteries are installed into the housing correctly



5. Install the battery housing into the compartment, and make sure the right side of housing pin is facing towards inside of the connecting position



6. Slide back the cover to close the battery housing compartment. Turn on power to confirm that battery is correctly installed.

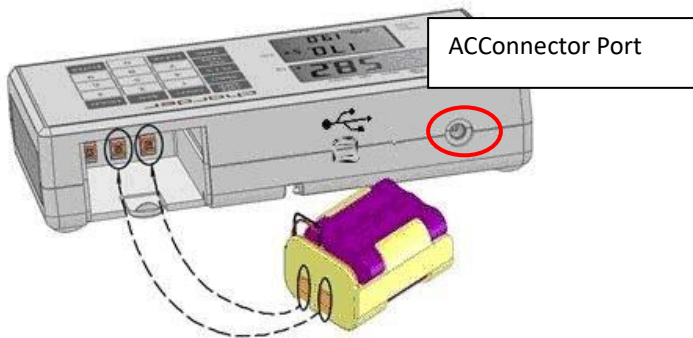


### Using Rechargeable Battery (optional)

The rechargeable battery should be recharged at least once every 3 months, regardless of if the device has been used. Battery can be charged by plugging device's exclusive adapter into AC Connector Port.

After a long period in storage (e.g. >3 months), the battery should run a full cycle (charge/discharge) to allow it to restore full capacity.

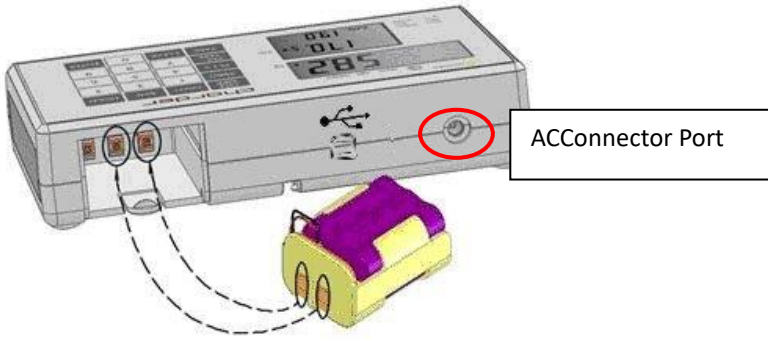
Ensure rechargeable battery housing is installed and inserted properly into the compartment.



If . Lo prompt displays on the LCD, please charge battery promptly to avoid battery damage.

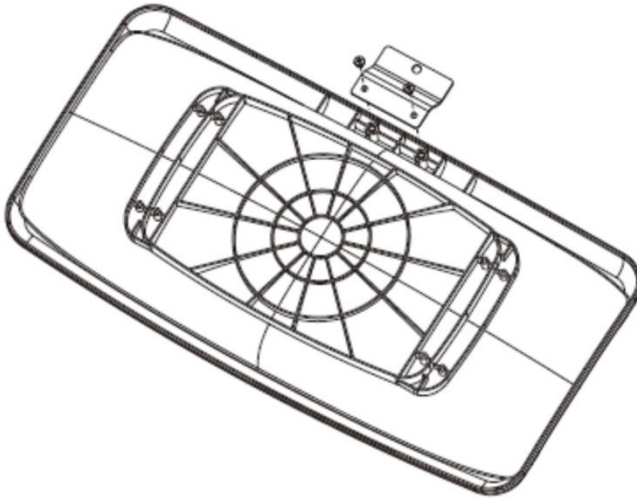
## C. Using Adapter

1. Connect adapter to indicator before connecting to mains power supply
2. Disconnect adapter from mains power supply before unplugging adapter pin from indicator.

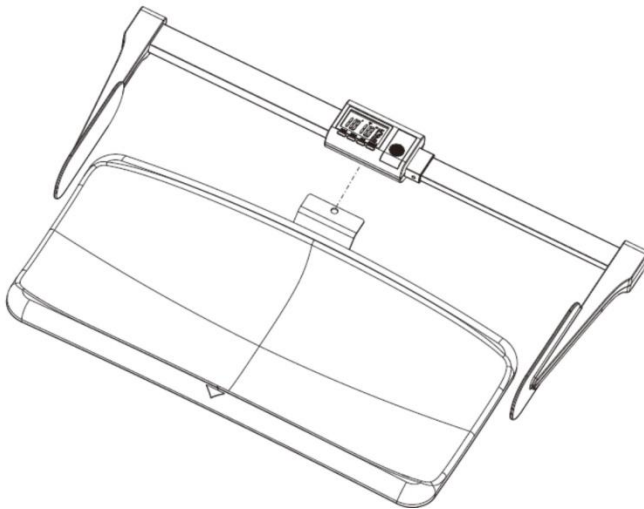


## D. Attaching Height Rod to Device

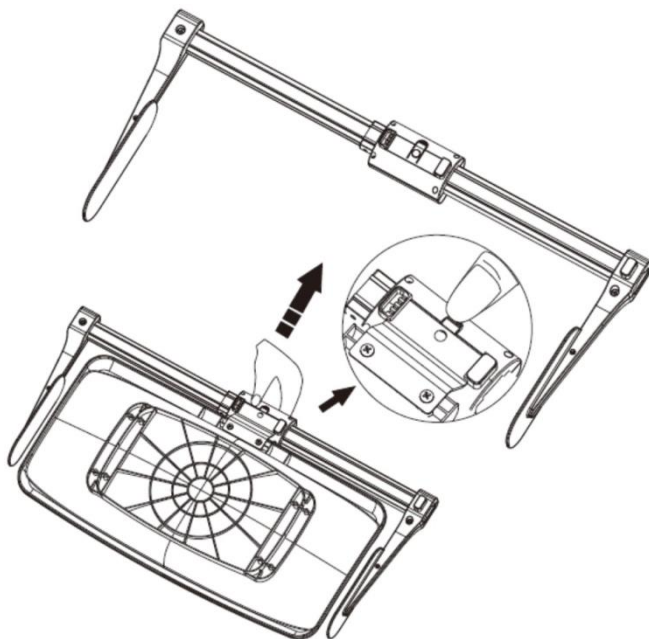
1. Attach bracket (SS-5611) to tray with two screws.



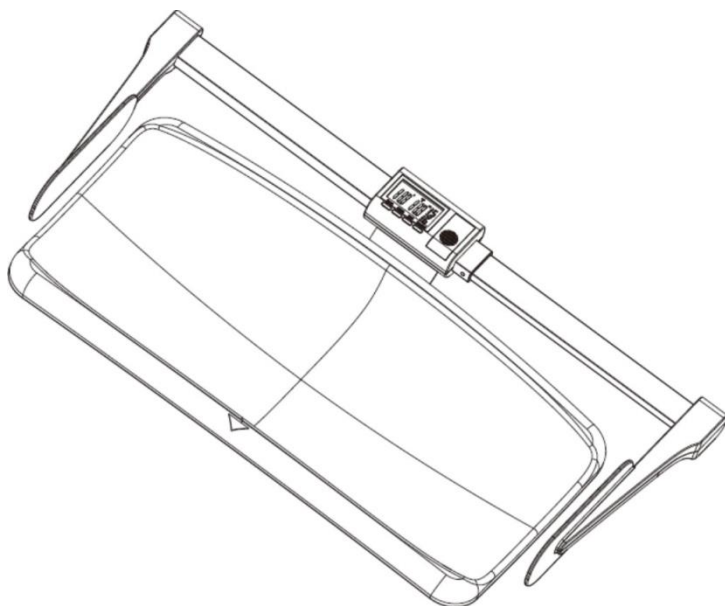
2. Slide height Rod onto bracket.



3. Push until secure

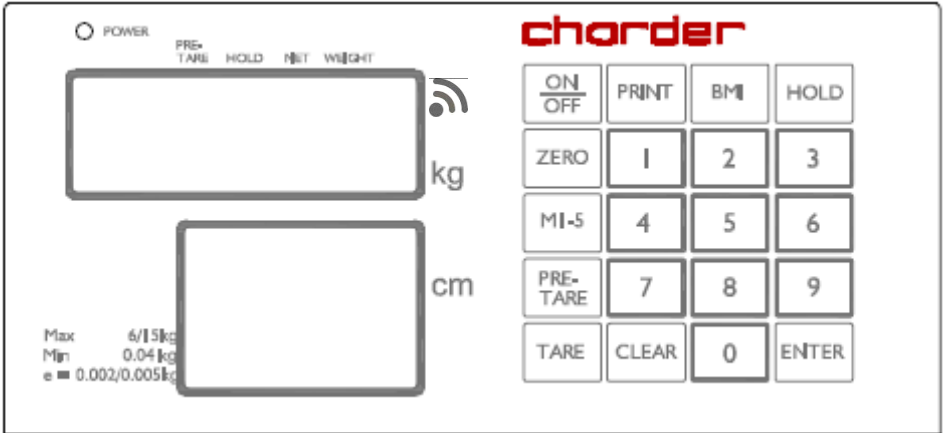


4. Assembly complete



# III.. Indicator

## A. Indicator and Key Functions



(Wireless functionality optional)

### Key Function

1. **ON/OFF**: Power on or power off.
2. **ZERO**: Reset display to 0.0 kg display (can be used if within  $\pm 2\%$  of full capacity). Press and hold for 3 seconds to enter device settings.
3. **M1-5**: Saving pre-tare values (up to 5)
4. **PRE-TARE**: Pre-tare the known weight of an object (ex: chair) before beginning measurement.
5. **TARE**: Allows user to deduct weight from reading after measurement
6. **PRINT**: When printer or PC is connected to the scale, press this key to print results
7. **BMI**: Calculation of Body Mass Index
8. **HOLD**: Determine stable weighing value - used when weight is unstable. Press and hold for 3 seconds to enter time setting.
9. **0-9**: For entering digits.
10. **CLEAR**: Clear incorrect data input.
11. **ENTER**: Confirm input.

## B. Display layout

### Unit Mark (kg)

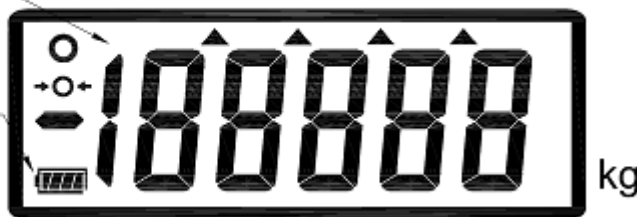
Indicates that the weight is shown in pounds

### Power Index

100% → 75% → 50% → 25%

○ POWER

PRE- TARE HOLD NET WEIGHT



### Unit of height (cm)

Indicates that the height is shown in centimeters

### BMI

Body Mass Index is a height to weight ratio, and is calculated by the following formula



## Definitions

**Stable symbol:** Indicate that weight is stable.

**Zero symbol:** Weight is at zero

**Minor weight:** Weight under zero.

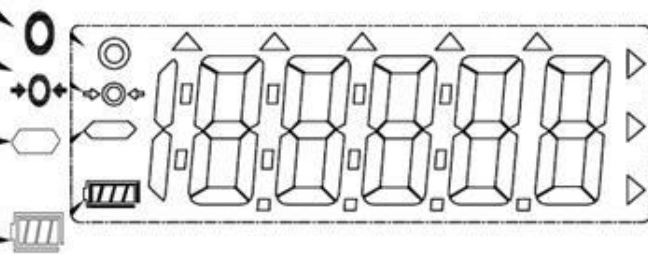
**Low battery:** Battery needs to be charged or replaced.

Stable Symbol

Zero Symbols

Minor Weight

Low Battery





## IV. Using Device

### A. Basic Operation

Switch on the device using **[ON/OFF]** key. The device will automatically perform self-calibration, displaying software version.

Once "0.00 kg" appears on indicator, device is ready for measurement.

**Note:** If "0.00 kg" does not display on indicator, press **[ZERO]** key to zero the device. This function can be used for weight within  $\pm 2\%$  of full capacity.

Carefully place subject upon the measurement platform. After the weight has stabilized, the "stable" symbol will appear on indicator.

**Note:** If subject's weight exceeds scale capacity (including tare), indicator will display "Err" prompt due to overload.

### B. Hold

The hold function determines average weight, designed to be used if subject's weight will not stabilize (ex: an active child).

**Note:** if fluctuation is too severe, average weight determination will be difficult and hold may not function correctly

1. Switch on the device normally.
2. Press the **[HOLD]** key. "HOLD" will be displayed on the indicator.
3. Carefully place subject on measurement platform.
4. After a few seconds, the average weight will be displayed on the indicator. This weight will be locked - at this point, subject can be removed from device.
5. To release the locked weight, press the **[HOLD]** key again to return to the device to normal mode.

**Note:** Hold function can be activated before or after subject is placed on measurement platform. However, if subject finds it difficult to hold still, we recommend activating Hold after subject is placed on platform.

### C. BMI

1. In normal mode, press the **[BMI]** key to enter BMI mode.
2. Display will show last recorded height. Left-most digit will flash.

3. Enter height using numeral keys (ex: 30 cm). Input will automatically move to next digit. Press **[CLEAR]** key to re-input. Press **[TARE]** key to manually move to next digit.
4. After inputting height, press **[ZERO]** to confirm.
5. Proceed to weigh subject as usual. Indicator will display weight, height, and BMI.

**NOTE:** Hold function can be used at this time if weight is unstable

6. Press **[BMI]** key to return to normal mode.

Category	BMI (kg/m <sup>2</sup> )	Risk of obesity-related disease
Under	< 18.5	Low
Normal	18.5-24.9	Average
Over	24.9-29.9	Slightly Increased
Obese I	30.0-34.9	Increased
Obese II	35.0-39.9	High
Obese III	> 40	Very High

(World Health Organization adult BMI standards)

**NOTE:** though BMI is calculated in the same way, subjects under the age of 18 should use separate standards for interpretation, in comparison with percentile charts for their age group.

## D. Tare

The tare function allows the user to deduct the weight of objects from the device's measurement result.

1. Place object that needs to be tared onto measurement platform.
2. Press **[TARE]** key after stable symbol appears on indicator. Display will indicate "0.00 kg".
3. Carefully placesubject (plus tared object) to be weighed upon measurement platform. Conduct measurement.
4. To clear tare value, remove all objects from measurement platform, and press **[TARE]** key.




## E. Pre-Tare

The Pre-Tare function is used to subtract the known weight of a substance prior to weighing. The MS21NEOV can store 5 sets of pre-tare values.





Pre-tare values can be stored using two different methods: "Load Weight", or "Input Manually".



After pre-tare weights have been stored, they can be recalled by holding the **[PRE-TARE]** key for 3 seconds.

### A. Load Weight



DESCRIPTION	EXAMPLE
<p>Press M1-5 key after loading weight on the platform; the indicator will display blinking "m" symbol.</p>	
<p>Press numeral key 1 ~ 5 to assign this number with the current pre-tare weight.</p>	
<p>Press <b>[ENTER]</b> key to store pre-tare weight; the indicator will make a beep sound.</p>	

## B. Input Manually

DESCRIPTION	EXAMPLE
<p>Press <b>[PRE-TARE]</b> key. Left-most digit will begin blinking.</p> <p>If no further action is taken within 6 seconds, indicator will return to normal mode</p>	 <p>The image shows the Chordar scale's LCD display with '0.0' and 'kg' units. The keypad has a 'PRE-TARE' key highlighted with a red box. The display also shows 'ON/OFF', 'PRINT', 'BMI', 'HOLD', 'ZERO', '1-3', 'M1-5', '4-6', 'TARE', 'CLEAR', and 'ENTER' keys.</p>
<p>While digit is blinking:</p> <p>Enter pre-tare weight using 0~9 keys.</p> <p>Ex: to pre-tare 5.0 kg of weight, press 0-0-5-0.</p> <p>Ex: to pre-tare 13.5 kg of weight, press 0-1-3-5.</p> <p>Press <b>[ENTER]</b> key to confirm the pre-tare weight.</p>	 <p>The image shows the Chordar scale's LCD display with '5.0' and 'kg' units. The keypad is highlighted with a red box, indicating that the pre-tare weight has been entered.</p>
<p>Indicator will display minus sign to the left of pre-tare weight value.</p>	 <p>The image shows the Chordar scale's LCD display with '-5.0' and 'kg' units. A red box highlights the minus sign and the digits '5.0'.</p>
<p><b>To save this pre-tare weight value in memory:</b></p> <p>Press M1-5 key; the blinking "m" symbol will appear on the display.</p>	 <p>The image shows the Chordar scale's LCD display with '-5.0' and 'kg' units. The keypad has an 'm' symbol on the display and the 'M1-5' key highlighted with a red box.</p>

<p>Press numeral key 1 ~ 5 to assign this number with the current pre-tare weight.</p>	
<p>Press <b>[ENTER]</b> key to store pre-tare weight; the indicator will make a beep sound.</p>	

### C. Recall Pre-Tare Weight

DESCRIPTION	EXAMPLE
<p>Press and hold <b>[PRE-TARE]</b> key for 3 seconds. Indicator will display pre-tare value M1 first. The pre-tare value will flash.</p>	
<p><b>Press numeral keys 1 ~ 5 to choose pre-tare value</b></p>	
<p>Press <b>[ENTER]</b> key to confirm which pre-tare weight to select; the device will automatically deduct pre-tare weight.</p>	

Press **[CLEAR]** key to return to Normal Mode



NOTE: Pre-tare weight must be under max capacity, otherwise screen will show 0.00 after **[ENTER]** key is pressed, and the operator will have to re-input pre-tare settings.

## F. Print




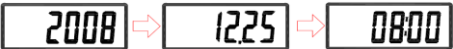
If thermal printer is connected to indicator, results can be printed by pressing **[PRINT]** key.

## V. Device Setup

### A. Setting Time & Date

Press and hold **[HOLD]** key for 3 seconds to enter Time Setting mode.

Example: Inputting 2008, Dec 25, 8:00am

	<b>Year Setting</b> Enter year using numeral keys 0-9. Press <b>[HOLD]</b> key once completed to proceed to month & date setting.
	<b>Month &amp; Day Setting.</b> Enter month, followed by day using numeral keys 0-9.  Ex: December 25th is "12.25". Input 1-2-2-5.  Press <b>[HOLD]</b> key once completed to proceed to time setting.
	<b>Time Setting</b> Enter time (24hr format) using numeral keys 0-9.  Ex: 08:00am is input by pressing 0-8-0-0.  Press <b>[HOLD]</b> key once completed to confirm time settings and proceed to confirmation.
	Device will display new time and date settings, cycling between year, month & day, and time.  YYYY→MM.DD→:HH:MM  Press <b>[HOLD]</b> key to return to normal weighing mode.

## B. Device Setup

When the device is switched on, press and hold the **[ZERO]** key for about 3 seconds, until the display shows the "SETUP", followed by "A.OFF" (first option in setting menu).

In device setup menu:

**[TARE]** to toggle next menu option

**[ZERO]** to toggle previous menu option

**[HOLD]** to confirm selection / enter submenu

A digital display showing the text "A.OFF" in a segmented font.

**Auto Power-Off:** Instruct device to shut off automatically after a certain period of time.

Auto off options: 120 sec / 180 sec / 240 sec / 300 sec / off

Press **[HOLD]** to toggle between time options, and **[TARE]** to confirm selection.

A digital display showing the text "bUrr" in a segmented font.

**Buzzer/Beep:**

When function is turned on, beeping noise will be made when: indicator is turned on, keys are pressed, and weight is stable.

Press **[HOLD]** to toggle between on/off, and **[TARE]** key to confirm selection.

A digital display showing the text "Hold 05" in a segmented font.

**Hold Stop:** When Hold Stop is "on", Hold will deactivate after subject leaves measurement platform.

Press **[HOLD]** to toggle between on/off, and **[TARE]** key to confirm selection



The icon shows the word "Language" in a stylized, outlined font.

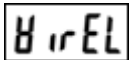
**Language:** Set thermal printer language

Press **[HOLD]** to toggle between English, Italian and Polish. Press **[TARE]** key to confirm selection.

The icon shows the word "Font" in a stylized, outlined font.

**Font size:** Set thermal printer font size.

Press **[HOLD]** to toggle between normal and double (larger). Press **[TARE]** key to confirm selection.

The icon shows the text "BT / Wifi" in a stylized, outlined font.

**BT / Wifi (optional):** If device has BT or Wifi module installed, the function can be turned OFF/BT/Wifi.

Press **[HOLD]** to toggle between OFF/BT/Wifi, and **[TARE]** to confirm selection.

The icon shows the text "Print Set" in a stylized, outlined font.

**Print Set (optional):** If device has Wi-Fi module installed, this option will appear.

Press **[HOLD]** to toggle between "Auto" and "PKEY". Press **[TARE]** to confirm selection.

If "Auto" is selected, weight measurement will be automatically sent to connected printer or device. If "PKEY" is selected, transfer will occur manually only after **[PRINT]** key is pressed.

# VI. Setup USB Connection to PC

For successful connection, PC hardware connected to device must be compatible with USB 2.0 or above. Operators should select a USB cable length that is most suitable to the operating environment.

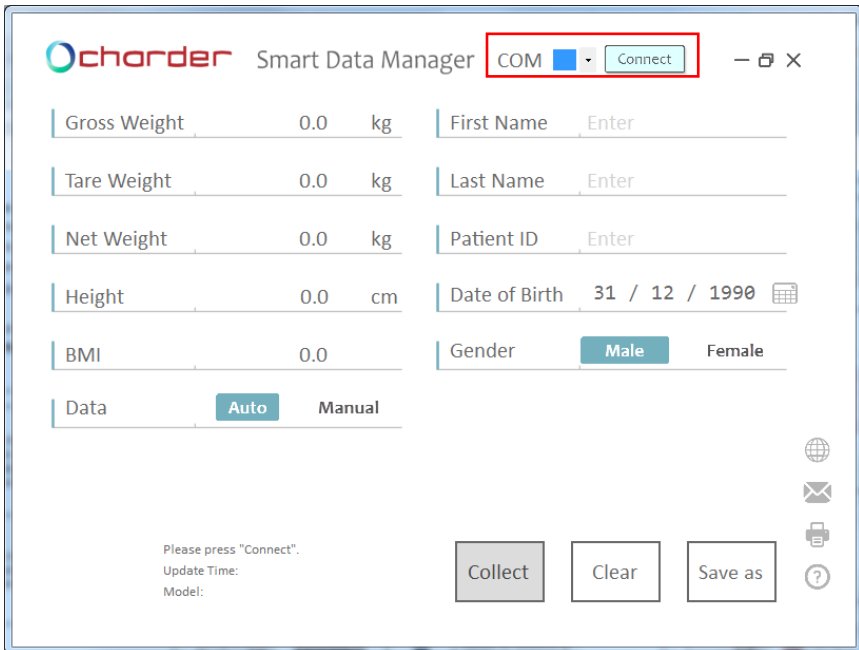
1. Charder Smart Data Manager can be used to connect the device to a PC. The software program can be downloaded from the Charder website:

**[LINK URL]** <https://www.chardermedical.com/download.htm>

2. Connect USB cable to device indicator and PC. Follow installation instructions.

## Program Setup

1. After installation of Charder Smart Data Manager is complete, software will automatically search for COM port. Press **[Connect]**. Once connected, **[Connect]** button will change to **[Disconnect]**.



## Conducting Measurement

1. Input subject's first name, last name, patient ID, date of birth (DD/MM/YYYY), gender, and height (for BMI calculation) into software if needed. Press **[Clear]** to clear all input.

**NOTE:** information can also be input after weight measurement.

The screenshot shows the 'chorder Smart Data Manager' interface. On the left, there are weight measurement fields: Gross Weight (0.0 kg), Tare Weight (0.0 kg), Net Weight (0.0 kg), Height (167.0 cm), and BMI (0.0). The 'Height' field is highlighted with a red box. On the right, there are personal information fields: First Name (Jane), Last Name (Doe), Patient ID (20190201), Date of Birth (31 / 12 / 1965), and Gender (Male/Female). The 'Male' button is selected. At the bottom, there are 'Auto' and 'Manual' buttons for data collection, and 'Collect', 'Clear', and 'Save as' buttons. A status bar at the bottom indicates 'Please press "Connect"', 'Update Time:', and 'Model:'.

2. Conduct measurement. If **[Auto]** is selected, results will be transmitted from device to software automatically and displayed on the left of screen. If **[Manual]** is selected, user must press "Collect".

The screenshot shows the 'chorder Smart Data Manager' interface after a measurement. The weight measurement fields on the left now show: Gross Weight (72.5 kg), Tare Weight (0.0 kg), Net Weight (72.5 kg), Height (167.0 cm), and BMI (26.0). The 'Height' field is highlighted with a red box. The personal information fields on the right remain the same. The 'Auto' button is selected. At the bottom, there are 'Collect', 'Clear', and 'Save as' buttons. A status bar at the bottom indicates 'Data updated.', 'Update Time: 06/03/2020 11:40:05', and 'Model:'.

## Saving & Printing Results

1. Press **[Save as]** to save measurement results as .csv file on PC. Default file name is same as user ID. (ex: 20190201.csv) To track changes and multiple measurements for the same subject, we recommend not changing the default file name.

chorder Smart Data Manager COM 5 Disconnect

Gross Weight 72.5 kg First Name Jane

Tare Weight 0.0 kg Last Name Doe

Net Weight 72.5 kg Patient ID 20190201

Height 167.0 cm Date of Birth 31 / 12 / 1965

BMI 26.0 Gender Male Female

Data Auto Manual

Data updated.  
Update Time: 06/03/2020 11:40:05  
Model:

Collect Clear Save as

## 2. Result example:

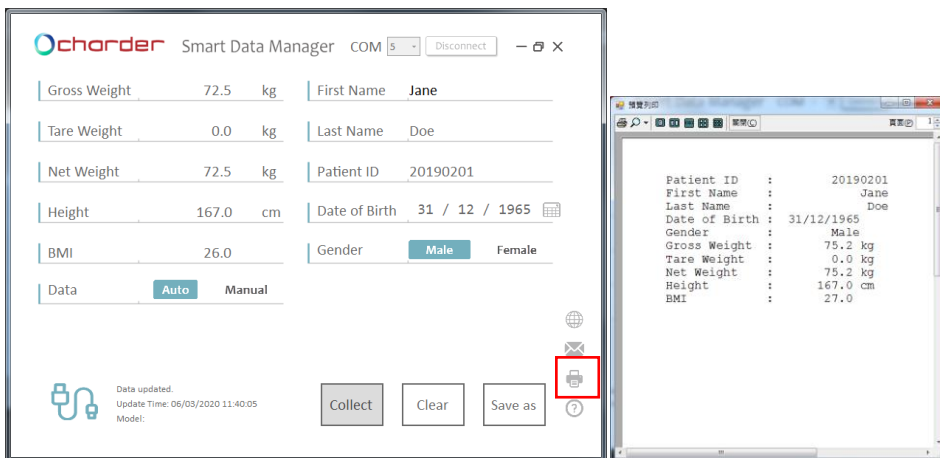
	A	B	C	D	E	F	G	H	I	J
1	Patient ID	First Name	Last Name	Date of Birth	Gender	Gross Weight	Tare Weight	Net Weight	Height	BMI
2	20190201	Jane	Doe	31/12/1965	Male	72.4 kg	0.0 kg	72.4 kg	167.0 cm	26
3										
4										
5										

If previous results were saved in "20190201.csv", new results also need to be saved as "20190201.csv" (overwriting old file) in order to save multiple results for the same subject.

	A	B	C	D	E	F	G	H	I	J
1	Patient ID	First Name	Last Name	Date of Birth	Gender	Gross Weight	Tare Weight	Net Weight	Height	BMI
2	20190201	Jane	Doe	31/12/1965	Male	72.4 kg	0.0 kg	72.4 kg	167.0 cm	26
3	20190201	Jane	Doe	31/12/1965	Male	75.2 kg	0.0 kg	75.2 kg	167.0 cm	27
4										

Results will be saved in chronological order of measurement.

3. Press the printer icon to print out result using a printer connected to the PC.



## VII. Wireless Connection

If the device has the wireless or BT module installed, the indicator can transmit measurement results wirelessly. Please see Charder wireless or BT software instructions for details.

## VIII. Troubleshooting

### Product Defects

Charder's warranty is effective for the original purchaser of this device, subject to the terms and conditions listed in the Warranty Program & Return Policy.

1. If Charder is responsible for a fault or defect present upon receipt of the unit, Charder shall either repair the fault, or supply a replacement unit. Should the repairs or replacement delivery fail, statutory provisions shall be valid. The period of warranty shall be two years, beginning on the date of purchase. Please retain your receipt as proof of purchase.
2. No responsibility shall be accepted for damage caused through any of the following reasons: unsuitable or improper storage or use, incorrect installation or commissioning by the owner or third parties, natural wear and tear, changes or modifications, incorrect or negligent handling, chemical, electrochemical, or electrical interference, unless damage is attributable to negligence on the part of Charder.

If device is not covered under warranty, a service maintenance charge will apply, plus cost of replacement parts.

Before contacting your local Charder distributor for repair service, we recommend considering the following troubleshooting procedures:

### Self-inspection

#### 1. Device will not power on

- If battery power is depleted, replace with new batteries
- If batteries are not used, check if the power adapter is plugged into the device properly. Check if power adapter is plugged into mains properly

#### 2. Indicator showing "0000" ZERO SPAN out of range

- Interference due to factors such as RF disturbance or ground vibration. Relocate device to location without interference and try again
- Unstable platform feet - adjust platform feet according to bubble level indication (clockwise to retract, counter-clockwise to extend) and try again
- External objects interfering with measurement platform. Clear platform of objects and try again

- Device may not function properly on soft surfaces such as carpets or lawns. Relocate device to location with solid, stable floor
- If the steps above cannot resolve the problem, re-calibration may be required to correct weighing accuracy

### **3. Connection failure for data transmission to PC or printer**

- Ensure wires are connected correctly between indicator and PC or printer
- Ensure printer is supplied with power. Ensure PC software is set up properly as indicated in this manual

### **Distributor support required**

If the following errors occur, we recommend contacting your local Charder distributor for repair or replacement services:

#### **1. Device will not power on**

- Faulty on/off key
- Broken or damaged wires causing short circuit or faulty connection
- Safety fuse burnout
- Faulty adapter

#### **2. Indicator damage**

- Possible hardware defects include: uneven brightness in LCD screen, blurred text, smeared rainbow screen, incorrect decimal display
- Unable to save or read data
- Indicator shows "ERRL" after device is switched on
- Keys not responding
- Buzzer malfunction

## Error Messages

Error Message	Reason	Action
Lo	<b>Low battery warning</b> Voltage of battery is too low to operate device	Replace batteries, or plug in adapter
Err	<b>Overload</b> Total load exceeds device's maximum capacity	Reduce weight on measurement platform and try again
Err.H	<b>Counting Error (too high)</b> Signal from loadcells too high	Error normally caused by faulty loadcell or wiring. Please contact distributor
Err.L	<b>Counting Error (too low)</b> Signal from loadcells too low	Error normally caused by faulty loadcell or wiring. Please contact distributor
00000	Zero count over calibration zero range +10% while power on	Re-calibration required. Please contact distributor
00000	Zero count under calibration zero range -10% while power on	Re-calibration required. Please contact distributor
Err.P	<b>Program Error</b> Fault with device software	Error normally caused by faulty loadcell or wiring. Please contact distributor
Err.Ad	<b>Program Error</b> Fault with device software	Please contact distributor



# IX. Product Specifications

## A. Device Information

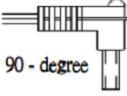
<b>Model</b>		<b>MS21NEOV</b>
<b>Display</b>		DP3710
<b>Weight Measurement</b>	<b>Capacity</b>	0-6 kg x 2g 6-15kg x 5 g
	<b>Accuracy</b>	±1.5e
	<b>OIML</b>	Class III
	<b>LCD Screen</b>	1.0-inch LCD screen (5 1/2 digits)
<b>Dimensions</b>	<b>Overall</b>	560(W) x 450(D) x 470(H) mm
	<b>Tray</b>	560(W) x 290(D) x 65(H) mm
	<b>Device Weight</b>	4.8 kg
<b>Key Functions</b>		On/Off, Zero, Print, BMI, Hold, Pre-Tare, Tare, Clear, Enter, 0~9, M1-5
<b>Data Transmission</b>		USB, Wireless Module (optional) <b>NOTE:</b> Device should be connected to network by qualified distributors only
<b>Power Supply</b>		Rechargeable battery pack (optional) or 6 AA batteries / Poweradapter
<b>Operation Environment</b>		0°C~+40°C 15% / 85% RH 700 hPa ~1060 hPa
<b>Optional Accessories</b>		Thermal Printer, Height Meter
<b>Standard Accessories</b>		Adjustable Feet x1, Flat head machine bolt (for plate) x3, Flat head machine bolt x4, Column Plate x1, User manual x 1, USB cable x1, Power Adapter x1

## B. Power Adapter Standards



### Warning



The device is only compatible with the power adapters specified in the dashed block below.

<b>AMP VOLTAGE</b>	<b>DRAWING NO.</b>	<b>CE APPROVED TYPE NO. / MODEL NO.</b>	<b>TY PE</b>	<b>Adapter plug</b>
12V 2A	CD-AD-00041	UES24LCP-120200SPA	US	 90 - degree
	CD-AD-00041	UES24LCP-120200SPA	EU	
	CD-AD-00041	UES24LCP-120200SPA	UK	
	CD-AD-00041	UES24LCP-120200SPA	AU	



## X. Declaration of Conformity

This product has been manufactured in accordance with the harmonized European standards, following the provisions of the below stated directives:

	<b>(EU) 2017/745 Regulation on Medical Devices</b>
	<b>2014/31/EU Non-automatic Weighing Instruments Directive</b> (OIML models only)

### **RoHS Directive 2011/65/EU and Delegated Directive (EU) 2015/863**

### **Radio Equipment Directive 2014/53/EU**

(applicable if wireless module is used)

### **Part 15 of the Federal Communications Statement Rules**

This device may not cause harmful interference.

This device must accept any interference received, including interference that may cause undesired operation.

*Please see separate document showing on sticker of device for above markings.*

Authorized EU Representative:



**Obelis s.a.**

Bd Général Wahis, 53  
B-1030 Brussels  
Belgium

### **Manufactured by:**



Charder Electronic Co., Ltd.  
No.103, Guozhong Rd., Dali Dist.,  
Taichung City 41262 ,Taiwan

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