USER MANUAL
MS3400-1
Stand-on Floor Scale

Please keep the instruction manual at hand all the time for future reference.

Explanation of Text/Symbols on Device 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
REF	Device catalogue number / model number
EC REP	Name and address of authorized representative in the European Union
MD	Device is a medical device. Text indicates device category type
LOT	Manufacturer's batch or lot number for device
SN	Device's serial number
UDI	Device's Unique Device Identifier
	Value in mass units (verified models only). This is the difference between two consecutive display values, used to classify and verify a scale
CE 2460	Device conforms to 93/42/EEC as amended by 2007/47/EC Medical Device Directive. Four digit number refers to Notified Body.
	Name and address of entity importing device (if applicable)
	Name and address of entity responsible for translating Information For Use (if applicable)

Copyright Notice
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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.

Clinical Benefit

Measurement results can be used by professionals to monitor weight-related issues.

General Handling

- Device should be placed on stable, flat, solid, non-slippery surface.
- Usage on soft surfaces (ex: carpet) may result in inaccurate results.
- Ensure all parts are properly locked and tightened before operating the device.
- Device is intended to measure one subject at a time.

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:

- Batteries should be kept away from children. If swallowed, promptly seek medical assistance.
- The device has an expected service life of 5 years when correctly handled, serviced, and periodically inspected in accordance with manufacturer's instructions.
- Always comply with appropriate regulations when using electrical components under increased safety requirements.

- Improper installation will render the warranty null and void.
- Ensure voltage marked on power supply matches mains power supply.
- The device is intended for indoor use only.
- Observe permissible ambient temperatures for use
- Device meets requirements for electromagnetic compatibility. Do not exceed the maximum values specified in the applicable standards.

Environmental

- All batteries contain toxic compounds; batteries should be disposed of via designated competent organizations. Batteries should not be incinerated.

Cleaning

- Device surface should be cleaned using alcohol-based wipes. Corrosive cleansing liquids should not be used. Pressure-washers should not be used.
- Do not use large amounts of water when cleaning the device, as it may cause damage to the internal electronics.
- Always disconnect device from mains power before cleaning.

Maintenance

- Device does not require routine user maintenance. However, regular checking of accuracy is recommended; frequency to be determined by level of use and state of device, or local metrology/measuring instrument regulations if applicable. If results are inaccurate, please contact local distributor.

Warranty/Liability

- 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 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.
- 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.

Disposal

- This product is not to be treated as regular household waste, but should be taken to a designated collection points for electronics. Further information should be provided by local waste disposal authorities.

 **Warning**

- Only the original adapter should be used with the device. Using an adapter other than the one provided by Charder may cause malfunction.
- Do not touch the power supply with wet hands.
- Do not crimp the power cable, and avoid sharp edges.
- Do not overload extension cables connected to the device.
- Route cables carefully, to avoid tripping.
- Keep device away from liquids.
- Do not remove the plug by yanking on the cable.
- Use only a correctly wired (100-240VAC) outlet, and do not use a multiple outlet extension cable.
- Do not under any circumstances dismantle or alter the device, as this could result in electric shock or injury as well as adversely affect the precision of measurements.
- Do not place the device in direct sunlight, or in close proximity to an intense heat source. Excessively high temperatures may damage the internal electronics.

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

Guidance and manufacturer's declaration-electromagnetic emissions		
The MS3400-1 Stand-on Floor Scale 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.		
Emission test	**Compliance**	**Electromagnetic environment-guidance**
RF emissions CISPR 11	Group 1	The device 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 B	The device is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that 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 MS3400-1 Stand-on Floor Scale 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 ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 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	± 2kV for power supply lines + 1kV for input/output lines	+ 2kV for power supply lines + 1kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1kV line(s) to line(s) ± 2kV line(s) to earth	+ 1kV line(s) to line(s) + 2kV line(s) to earth	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	0% UT for 0,5 cycle 0% UT for 1 cycle 70% UT(30% dip in UT) for 25 cycles 0% UT for 5 s	0% UT for 0,5 cycle 0% UT for 1 cycle 70% UT(30% dip in UT) for 25 cycles 0% UT for 5 s	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	30 A/m	30 A/m	The device 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 MS3400-1 Stand-on Floor Scale is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that 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 6 V in ISM bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz 3 V/m	3 Vrms 150 KHz to 80 MHz 6 V in ISM bands between 0,15 MHz and 80 MHz 80 % AM at 1	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

	80MHz to 2,7 GHz	kHz 3 V/m 80MHz to 2,7 GHz	the frequency of the transmitter. **Recommended separation distance:** d = 1,2 √*P* d = 1,2 √*P* 80MHz to 800 MHz d = 2,3 √*P* 800MHz 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[a], should be less than the compliance level in each frequency range[b]. Interference may occur in the vicinity of equipment marked with the following symbol: 

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 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 re-orienting or relocating the device.

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

Recommended separation distance between portable and mobile RF communications equipment and the MS3400-1 Stand-on Floor Scale

The device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the device 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√*P*	**80 MHz to 800 MHz** d =1,2√*P*	**800 MHz to 2,5 GHz** d =2,3√*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

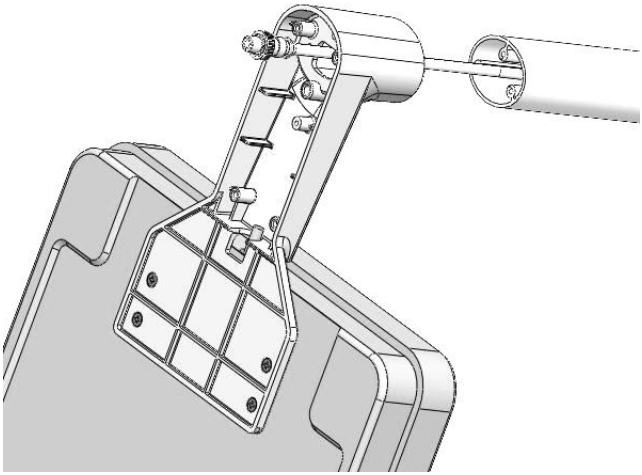
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where p is the maximum output power rating of the transmitter in watts (W) according to the transmitter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

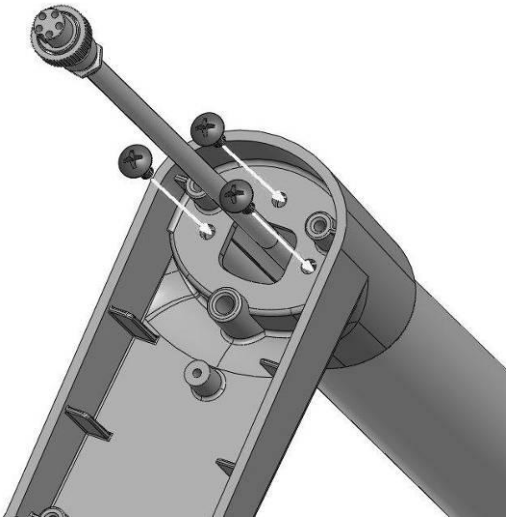
II. Installation

A. Assembly

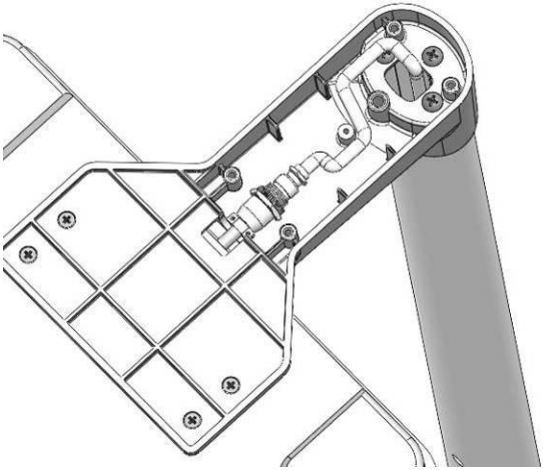
1. Insert column into column seat.



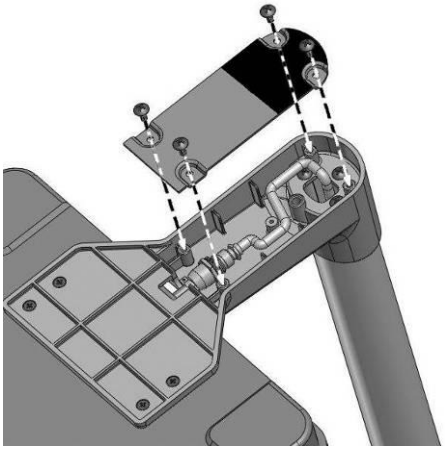
2. Insert and fasten 3 x M4*0.7*15 screws at the bottom of the base

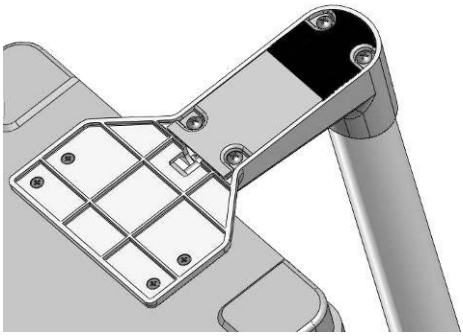


3.Route the cable along the gap in the column seat.



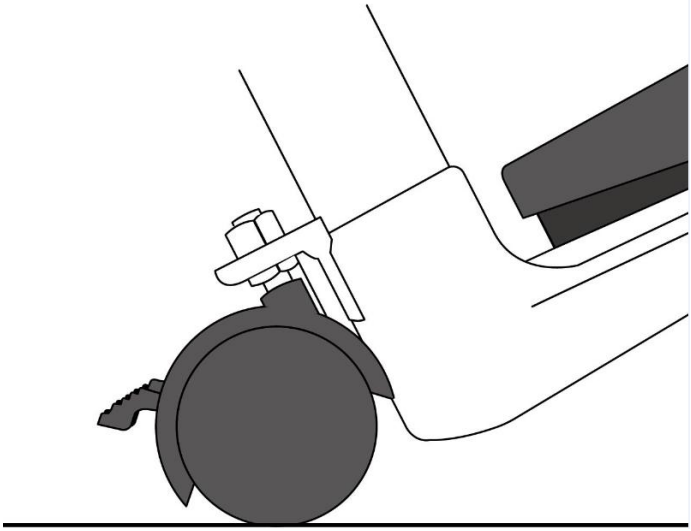
4. Place bottom cover in position. Insert and fasten 4 x M4*0.7*8 screws.



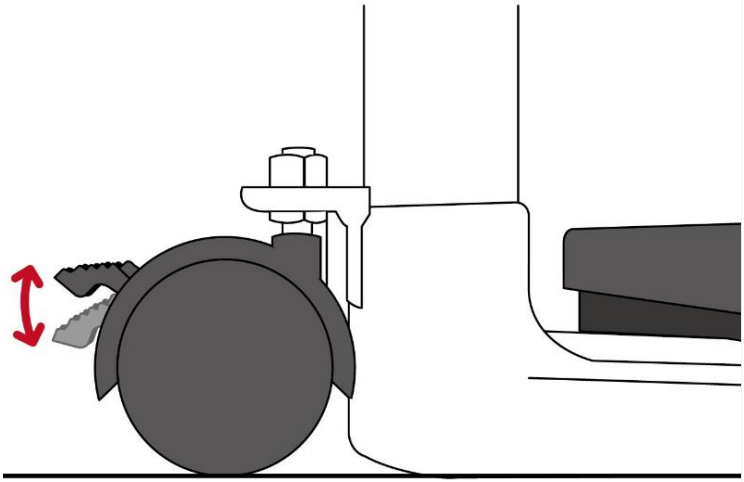


Using wheel castor (optional)

1. If installed on device, wheel castor is located behind column



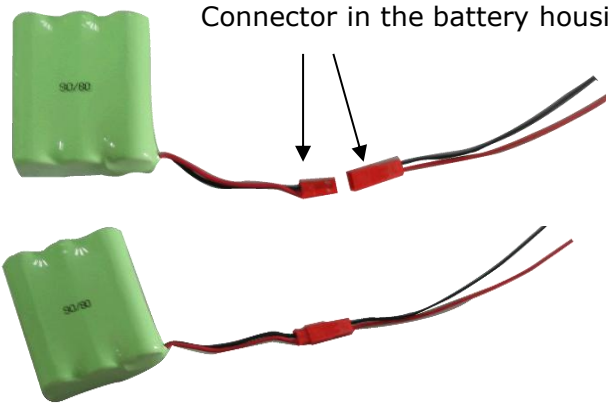
2. Press the brake down to lock the castor wheel



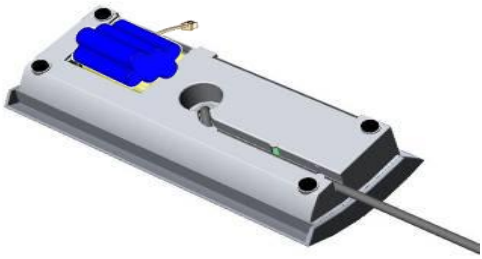
B. Replacing Batteries

1. Open battery housing cover, and remove battery holder from compartment.

2. Disconnect rechargeable battery cable from connector in the battery compartment



3. Connect cable with connector, and insert rechargeable battery pack in battery compartment.



4. Place battery cover in place

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.

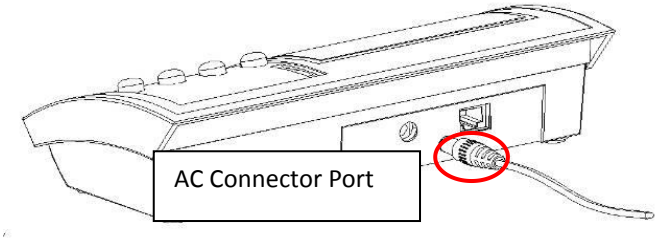
If 

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

C. Using Adapter

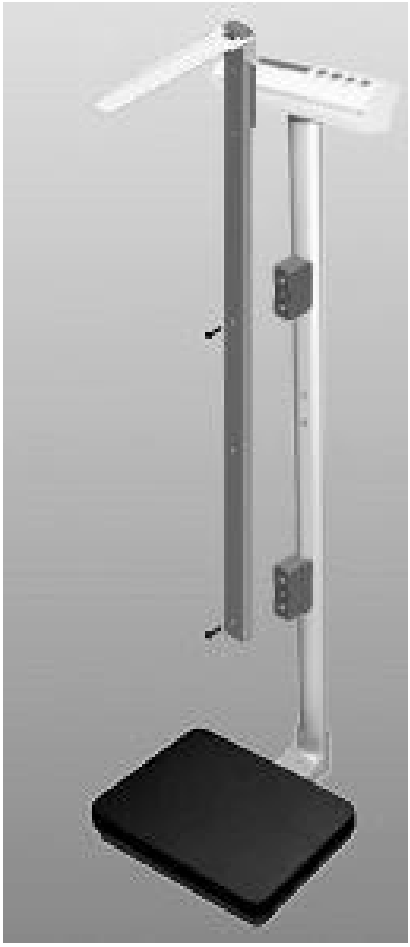
1. Connect adapter to indicator before connecting to mains power supply
2. Disconnect adapter from mains power supply before unplugging adapter pin from indicator.

NOTE: Connect adapter to charge rechargeable batteries. Please charge batteries for at least 14 hours before first use.



D. Attaching Height Stadiometer to Column

Step 1. Attach two fixing blocks to column using four flat-head screws



Step 2. Attach height rod to blocks using two flat-head screws

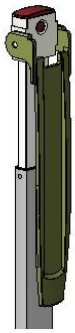
Item	Name	Quantity
1	Fixing block screws	4
2	Fixing blocks	2
3	Height Rod to fixing block screws	2

* Photo of display for reference only. Please refer to the actual product.

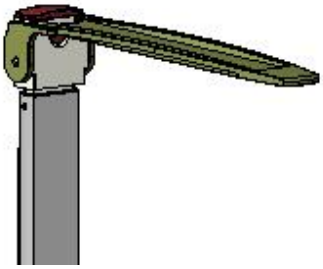
E. Using HM201M Height Stadiometer

Measurement over 121 cm

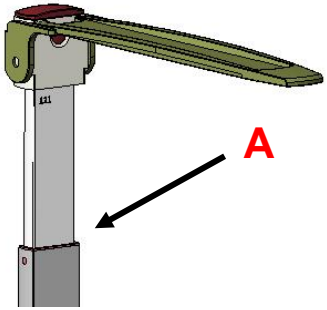
1. Pull out rod



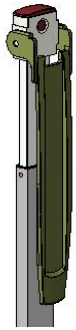
2. Unfold head piece to horizontal position



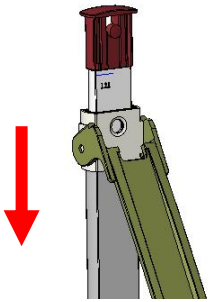
3. Height reading found at point A



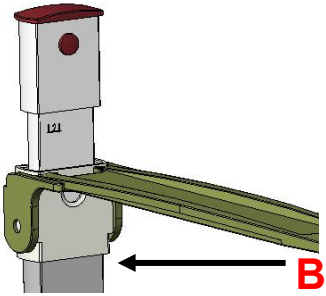
Measurement under 121 cm



1. Fold head piece and press buckle



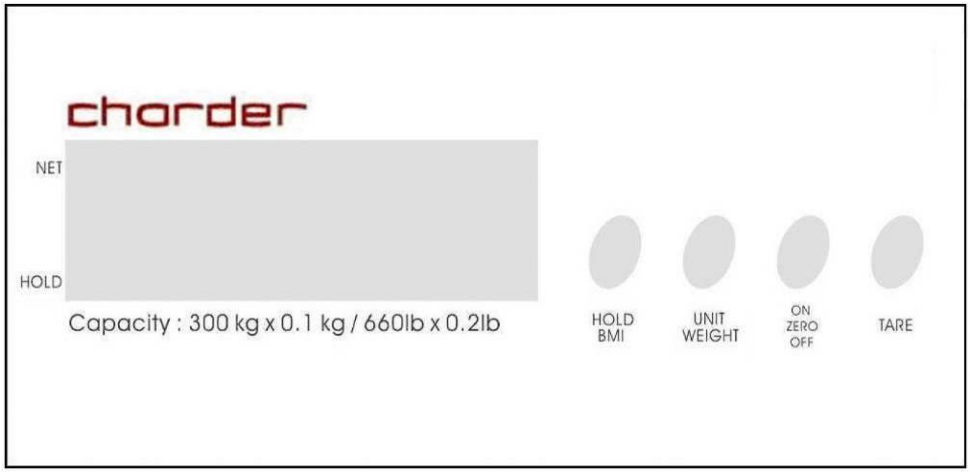
2. While pressing on buckle, pull down head piece



3. Height reading found at point B

III. Indicator

Indicator



Key Function

1. HOLD/BMI: Determine stable weighing value - used when weight is unstable. Press and hold for 3 seconds to enter BMI mode.
2. UNIT/WEIGHT: Switch between kg/lb. Change height value when indicator is in BMI mode.
3. ON/ZERO/OFF: Power on or power off. Zero weight value.
4. TARE: Allows user to deduct weight from reading.

IV. Using Device

A. Basic Operation

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

Once "0.0 kg" appears on indicator, device is ready for measurement.

Note: If "0.0 kg" does not display on indicator, press **[ON/ZERO/OFF]** key to zero the device. This function can be used for weight within ±2% of full capacity.

Guide subject to stand 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/BMI]** key. An arrow will blink next to the "HOLD" mark on the indicator.
3. Guide subject to stand 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 step off from device.
5. To release the locked weight, press the **[HOLD/BMI]** key again to return to the device to normal mode.

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

C. BMI

1. In normal mode, press and hold the **[HOLD/BMI]** key for at least 3 seconds to enter BMI mode.
2. Display will show last recorded height. Left-most digit will flash.

3. Press **[UNIT/WEIGHT]** key to change height value. Press **[HOLD/BMI]** key to manually move to next digit.
4. After inputting height, press **[TARE]** to confirm.
5. Proceed to weigh subject as usual. Indicator will alternate between weight and BMI display.

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

6. Press and hold **[HOLD/BMI]** key to return to normal mode.

Category	**BMI (kg/m^2)**	**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)

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 "0.0 kg".
3. Guide subject (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.

V. Troubleshooting

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

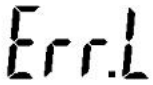
- Faulty on/off key
- Broken or damaged wires causing short circuit or faulty connection
- Safety fuse burnout
- Faulty adapter

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

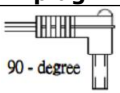
Error Message	Reason	Action
	**Low battery warning** Voltage of battery is too low to operate device	Replace batteries, or plug in adapter
	**Overload** Total load exceeds device's maximum capacity	Reduce weight on measurement platform and try again
	**Counting Error (too low)** Signal from loadcells too low	Error normally caused by faulty loadcell or wiring. Please contact local dealer of Charder.
	Zero count over calibration zero range +10% while power on	If problem persists, re-calibration required. Please contact local dealer of Charder.
	Zero count under calibration zero range -10% while power on	If problem persists, re-calibration required. Please contact local dealer of Charder.

VI. Product Specifications

Model		MS3400-1
Display		DP2701
Weight Measurement	**Capacity**	300 kg x 0.1kg
	Accuracy	±2e
	Unit	kg / lb
	LCD Screen	1.0-inch LCD screen
Dimensions	**Overall**	310(W) x 460(D) x 1070(H) mm
	Platform	310(W) x 310(D)
	Column	900 mm
	Device Weight	5.3 kg
Key Functions		On/Zero/Off, Hold/BMI, Unit/Weight, Tare
Data Transmission		RS232 **NOTE**: Device should be connected to network by qualified distributors only
Power Supply		Rechargeable battery / Power adapter
Operation Temperature & Humidity		5℃~35℃ 15% / 85% RH
Standard Accessories		User manual*1, Power Adapter*1
Optional Accessories		Height Stadiometer

Warning

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

AMP VOLTAGE	DRAWING NO.	CE APPROVED TYPE NO. / MODEL NO.	TYPE	Adapter plug
12V 0.5A	CD-AD-00011	UES06WOCPU-120050 SPA	US	
			EU	
			UK	
			AU	

Notes

Notes

VII. Declaration of Conformity

Manufacturer hereby declares that this product is in conformity with the regulations and standards outlined in the following directives:

CE M 22 0122	**2014/31/EU Non-automatic Weighing Instruments Directive**

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

Authorized EU Representative:

EC REP

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