Infant Scale

USER MANUAL

MS3500

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
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
e	Verification Scale Interval. Value expressed in units of mass. Used to classification and verification of an instrument.
CE 2460	Device conforms to (EU) 2017/745 Regulation on Medical Devices. Fourdigit number is identifier for medical device Notified Body

CE M 20 0122	Device complies with EC directives (verified models only) **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
III	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)
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
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
UK CA	Device complies with all UK applicable product legislation
	Device's polarity of power.

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

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.

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

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

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.

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

ornegligent 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, technicalinspections, 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 GuidanceandManufacturer's Declaration

Guidance and manufacturer’s declaration-electromagnetic emissions		
The product isintended 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.		
Emission test	**Compliance**	**Electromagnetic environment-guidance**
RF emissions CISPR 11	Group 1	The product uses RFenergy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronicequipment.
RF emissions CISPR 11	Class A	The product is suitable for use in all establishments other than domesticand 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	±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	± 2kV for power supply 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 25cycles 0% UT for 5 s	0% UT for 0,5 cycle 0% UT for 1 cycle 70% UT(30% dip in UT) for 25cycles 0% UT for 5 s	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 anuninterruptible power supply or a battery.
Power frequency(50, 60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	The product power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospitalenvironment.
NOTE UT is the a.c. mains voltage prior to application of the testlevel.			

Guidance and manufacturer's declaration-electromagnetic immunity

Theproduct 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 6 V in ISM bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz	3 Vrms 150 KHz to 80 MHz 6 V in ISM bands between 0,15 MHz and 80 MHz 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. **Recommended separation distance:**
Radiated RF IEC 61000-4-3	3 V/m 80MHz to 2,7 GHz	3 V/m 80MHz to 2,7 GHz	$d = 1,2 \sqrt{P}$ $d = 1,2 \sqrt{P}$ 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, [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 rangeapplies.

NOTE2

Theseguidelinesmaynotapplyinallsituations.Electromagneticpropagationisaffecte dbyabsorptionand reflection from structures, objects andpeople.

a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios,amateurradio,AMandFMradiobroadcastandTVbroadcastcannotbepredictedtheoreticallywithaccuracy.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 exceedstheapplicable 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 preventelectromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the product as recommended below, according to the maximumoutput 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** $d = 1,2\sqrt{P}$	**800 MHz to 2,7 GHz** $d = 2,3\sqrt{P}$
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.

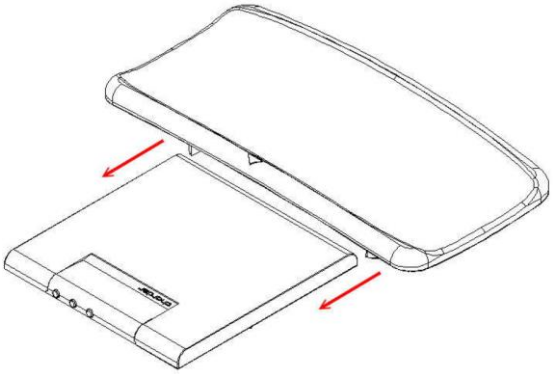
NOTE1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

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

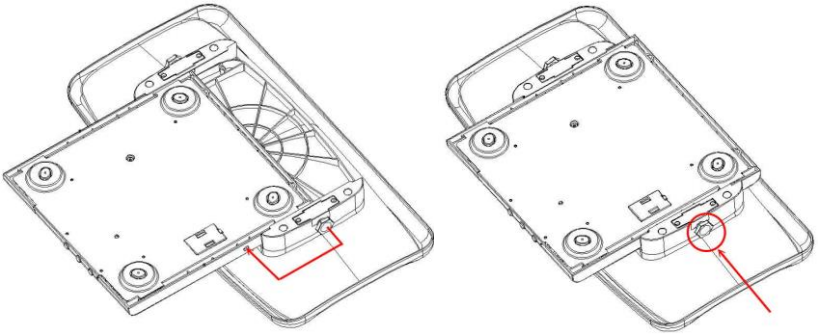
II. Installation

A. Attaching tray

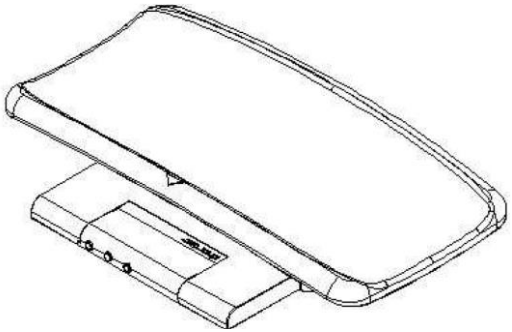
1. Slide tray onto device



2. Turn device upside down. Secure tray to device by turning knob on each side of tray. (turn clockwise to tighten, turn counter-clockwise to loosen)

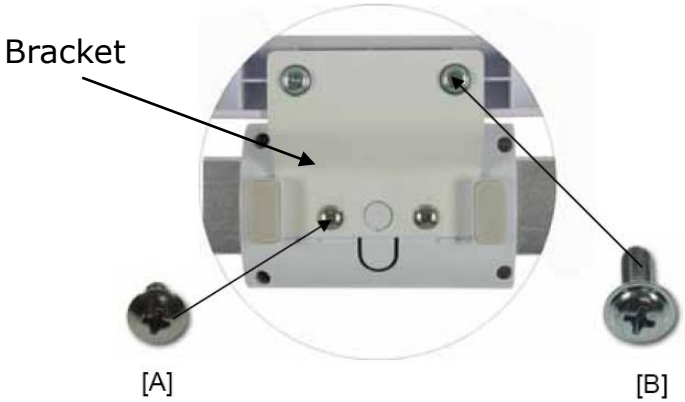


3. Device can now be used for measurement.

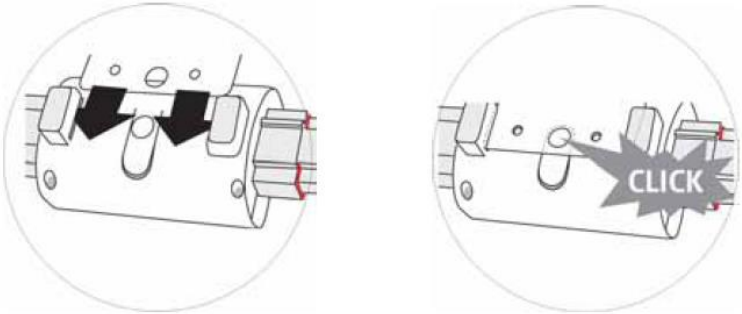


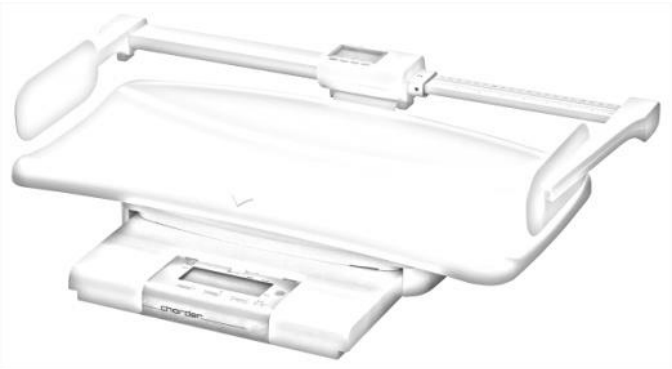
B. Height Measure Attachment

1. Attach bracket to device and baby tray, and fasten screws using screwdriver.



2. Connect height measure attachment to bracket. A clicking noise will be heard.





C. Inserting Batteries

1. Locate battery cover on bottom of device

2. Take battery connector out from housing

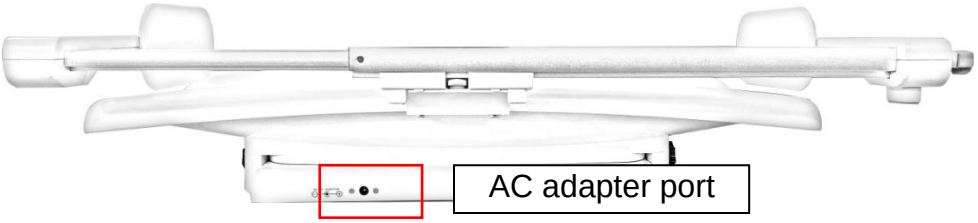
3. Device uses 9V battery

4. Connect 9V battery to connector

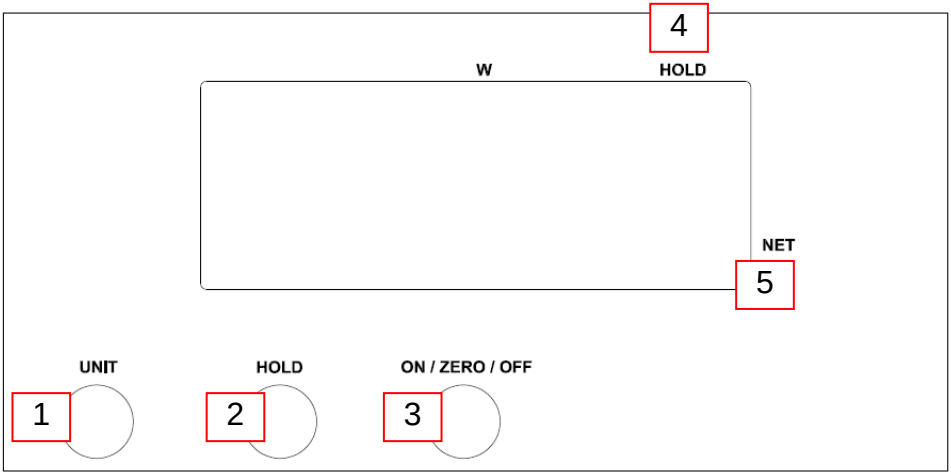
5. Place battery into housing.Close cover and turn scale right-side up. Power on device to test if batteries are installed correctly.

D. Using AC Adapter

Device can be powered viaadapterusing port located at rear of device. Plug adapter into device before plugging into mains.



III. Indicatorand Key Functions



Key Functions

1. UNIT:Switch between kg/lb

2. HOLD: Determine stable weighing value - used when weight is unstable

3. ON/ZERO/OFF: Turn device on and off. Zero scale (±2% of full capacity). Press and hold for 3 seconds to turn off device

Indicator

4. Hold: Hold function is active

5. Net: current result is net weight

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

Note: If "0.00 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.

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. Tare

The tare function allows the user to deduct the weight of objects from the device's measurement result. Tare can be used when weight of object is ≧at/above 2% of 20 kg capacity.

1. Place object that needs to be tared onto measurement platform.
2. Press **[ON/ZERO/OFF]** key after stable symbol appears on indicator. Display will indicate "0.00 kg".
3. Place 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 **[ON/ZERO/OFF]** key.

C. Hold

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

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

V. Device Setup

When the device is switched off, press and hold the **[ON/ZERO/OFF]** key. You will hear one beep- without letting go of the **[ON/ZERO/OFF]** key, press **[UNIT]** 3 times, and release the **[ON/ZERO/OFF]** key.The display will showthe software version followed by"Unit" (first option in setting menu).

In device setup:
[UNIT] to toggle menu option
[HOLD] to confirm selection / enter submenu

To save changes, toggle menu options using **[UNIT]** until  is displayed, and press **[HOLD]** to exit settings.


Unit: activate and de-activate units.

Unit options: kg, lb, oz, lb:oz

Press **[UNIT]** to toggle between unit options. Press **[HOLD]** to select a unit option, and press **[UNIT]** to toggle between On and Off. Press **[HOLD]** to confirm selection.


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 **[UNIT]**to select target time. Press **[HOLD]** to confirm selection.

Capacity: toggle maximum capacity(this function should only be changed by qualified distributors)

Capacity options: 10 kg / 15 kg / 20 kg

Press **[UNIT]** to toggle between options. Press **[HOLD]** to confirm selection.

Gravity Compensation: activate or de-activate gravity compensation (this function should only be changed by qualified distributors)

Gravity compensation options: on / off

Press **[UNIT]** to toggle between on/off. Press **[HOLD]** to confirm selection.

If Gravity Compensation is **ON**, press **[ON/OFF/ZERO]** in setting menu to adjust value. Press **[HOLD]** to adjust value, and **[UNIT]** to move to next digit. (this function should only be changed by qualified distributors)

If calibration is required. Turn off Gravity Compensation before perform calibration.

The gravity value for the device's location can be adjusted if you plan to move it to another country. Setting the correct gravity value for the new location is essential for maintaining accuracy. Please reach out to your local Charder scale service provider for assistance.

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

Press **[UNIT]** to toggle between on/off. Press **[HOLD]** key to confirm selection.

VI. Troubleshooting

Product Defects
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

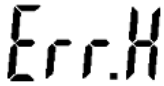
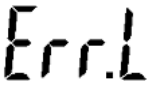
2. Indicator showing "0000" ZERO SPAN out of range
- Interference due to factors such as RF disturbance or ground vibration. Relocate device to location without interference and try again
- Unstable platform. Relocate device to stable location and try again
- External objects interfering with measurement 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

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 high)** Signal from loadcells too high	Error normally caused by faulty loadcell or wiring. Please contact distributor
	**Counting Error (too low)** Signal from loadcells too low	Error normally caused by faulty loadcell or wiring. Please contact distributor
	Zero count over calibration zero range +10% while power on	Re-calibration required. Please contact distributor
	Zero count under calibration zero range -10% while power on	Re-calibration required. Please contact distributor
	**Program Error** Fault with device software	Error normally caused by faulty loadcell or wiring. Please contact distributor

VII. Product Specifications

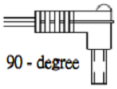
A. Device Information

Model		MS3500
Weight Measurement	Capacity / Graduation	0-10 kg x 5g 10-20kg x 10g
	Accuracy	±2e
	LCD Screen	1.0-inch LCD screen (5 digits)
	Unit	kg/lb
Dimensions	Total	560(W) x 342(D) x 105(H) mm
	Tray	560(W) x 290(D) x 65(H) mm
	Platform	320(W) x 310(D) x 35(H) mm
Device Weight		2.6 kg
Key Functions		On/Zero/Off, Hold, Unit
Data Transmission		N/A
Power Supply		9V battery / Power adapter
Operation Environment		+5℃~+35℃ 15% / 85% RH 700 hPa ~1060 hPa
Standard Accessories		User manual*1 Power adapter*1
Optional Accessories		Carrying bag, Height rod

B. Power Adapter Standards .

Warning

The device is only compatible with themanufacturer's power adapters

AMP VOLTAGE	DRAWING NO.:	CE APPROVED TYPE NO. / MODEL NO.:	TYPE	**Adapter plug**
12V 0.5A	CD-AD-00028	UES06WOCP-120050SPA	EU	
12V 0.5A	CD-AD-00028	UES06WOCP-120050SPA	US	
12V 0.5A	CD-AD-00028	UES06WOCP-120050SPA	UK	
12V 0.5A	CD-AD-00028	UES06WOCP-120050SPA	AU	

Notes

Notes

VIII. Declaration of Conformity

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

CE 2460	**(EU) 2017/745 Regulation on Medical Devices**
CE M year	**2014/31/EU Non-automatic Weighing Instruments Directive** (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:

EC REP **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

CD-IN-1114 9078R 08/2024